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Rural-urban labour statistics

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Contents

Abbreviations and acronyms

DWMF	Decent Work Measurement Framework
EES	Employment-based establishment surveys
FAO	Food and Agriculture Organization of the United Nations
EC	European Commission
EU	European Union
Eurostat	Statistical office of the European Union
GHS Pop	Global Human Settlements Population Layer
GSARS	The Global Office of the Global Strategy to improve agricultural and rural statistics (FAO)
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organization
ILOSTAT	ILO labour statistics repository
LAU	Local Administrative Unit
LFS	Labour force survey
LU	Labour underutilization
MDGs	Millennium Development Goals
NSO	National Statistics Office
NUTS classification	Nomenclature of territorial units for statistics (used by EU countries)
OECD	Organization for Economic Cooperation and Development
SDGs	Sustainable Development Goals
TERCET	Territorial typologies (used by EU countries)

UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNSD	United Nations Statistics Division
UN SDSN	United Nations Sustainable Development Solutions Network
US NAS	United States National Academy of Sciences
WDR	World Development Report
World Bank	World Bank Group of five funding and knowledge institutions, including the International Bank for Reconstruction and Development
WorldPop	WorldPop project

1. Introduction

1.1 The importance of rural-urban labour statistics

The access of women and men to productive employment and decent work is one of the most important challenges of sustainable development today. Measuring and monitoring decent work requires the production of timely and reliable labour statistics that can support analysis and inform decision-making at national as well as subnational levels, including both rural and urban areas. In countries around the world, rural and urban areas are dynamic geographical zones whose diverse and changing populations, economic activities and work characteristics can be uniquely captured over time through the development and analysis of statistical indicators.

National data users often require estimates for monitoring labour markets and decent work in specific administrative regions of the country, as well as data more generally distinguishing rural and urban areas. Decisions concerning programme implementation or resource allocation at the subnational level call for geographically-disaggregated indicators with a high level of precision, for example to monitor the impact of a particular government programme on the rural and/or urban labour market over time.

Rural-urban labour statistics are important to support national macro-economic monitoring and to formulate and implement policies and programmes, including coherent, sustainable rural and urban development policies. Such statistics support the promotion of employment creation and human resource and skills development as appropriate to rural and urban regions. Rural-urban labour statistics are important inputs for analysing poverty reduction by helping inform decisions regarding income support and social assistance programmes, as well as investment and employment promotion programmes that may be needed in specific geographic subregions. They serve as inputs to help monitor the progress towards specific goals such as those outlined in decent work country programmes that target rural or urban areas. The future world of work will bring opportunities and also challenges to subregions within countries, and it will be essential to have timely and reliable indicators to assess the wellbeing of workers and their families over time, particularly among the most vulnerable groups in rural and urban areas.

At the global level, there has been an increasing awareness of the importance of monitoring labour markets and decent work at the subnational level, including by rural and urban areas. The Decent Work Measurement Framework (DWMF) which was discussed in an International Labour Organization (ILO) Tripartite Meeting of Experts and presented to the International Conference of Labour Statisticians in 2008[2] allows for disaggregation of most of the statistical indicators by rural-urban area. Indeed, the intention of the framework is to monitor progress towards decent work particularly among the most vulnerable groups in each country, including vulnerable workers in rural and urban areas. Moreover, the framework includes

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[2] See Report of the Working Group on the Measurement of Decent Work, contained in the *Report of the Conference, 18th International Conference of Labour Statisticians*, Geneva 24 November-5 December 2008. The report link is available at:
https://www.ilo.org/wcmsp5/groups/public/@dgreports/@stat/documents/meetingdocument/wcms_101467.pdf

a specific substantive element on "Equal opportunity and treatment in employment" that establishes a statistical indicator targeting rural workers.[3]

In follow up to the Millennium Development Goals (MDGs), in 2017 the United Nations (UN) General Assembly adopted a global indicator framework to support monitoring of the 2030 Sustainable Development Goal (SDG) Agenda. Specific goals, targets and indicators in the SDG framework are aimed at supporting the monitoring of decent work, including Goal 8, "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all".[4] In their commitment to the SDGs, UN Member States are bound not to leave anyone behind. Concretely, this implies that indicators should cover specific population groups mentioned in the goals. Moreover, according to the principle of data disaggregation of the SDGs, the indicators should be disaggregated where relevant by income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics, in accordance with the *Fundamental Principles of Official Statistics*.[5] The UN Sustainable Development Solutions Network (SDSN) has proposed that disaggregation of SDG indicators by location or spatial disaggregation (that is, by geographic location) be identified for example by metropolitan areas, urban and rural areas, or districts.[6]

1.2 Global population growth and poverty trends in rural and urban areas

The importance of producing labour statistics by geographic location reflects concerns about population growth and linkages to decent work for sustainable growth and poverty reduction in rural and urban areas. It is important for a discussion on labour statistics by geographic area to understand the changing dynamics of rural and urban population growth, and also the changing dynamics of rural and urban poverty which is so closely associated with productive employment and decent work by geographic area.

According to the *2018 Revision of World Urbanization Prospects* produced by the Population Division of the UN Department of Economic and Social Affairs (UN DESA)[7], worldwide, more people live in urban areas than in rural areas today, with 55 percent of the world's population living in urban areas in 2018 compared with 30 percent in 1950. The global urban population is estimated in 2018 at close to 4.2 billion

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[3] The statistical indicator was established as an "additional" indicator that was intended as a measure of discrimination against various demographic subgroups, including rural workers, to be produced where relevant and where data are available. See *Decent Work Indicators - Guidelines for producers and users of statistical and legal framework indicators,* 2013, available at: https://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm

[4] See UN DESA webpage on SDG Indicators, Global Indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development, available at:
 https://unstats.un.org/sdgs/indicators/indicators-list/

[5] See UN DESA, UN Statistics Division, Fundamental Principles of Official Statistics, 2014, available at: https://unstats.un.org/unsd/dnss/gp/fundprinciples.aspx

[6] See UN SDSN, 2015 *Leaving No One Behind: Disaggregating Indictors for the SDGs*, available at: http://unsdsn.org/wp-content/uploads/2015/10/151026-Leaving-No-One-Behind-Disaggregation-Briefing-for-IAEG-SDG.pdf

[7] See *World Urbanization Prospects: The 2018 Revision* available at: https://www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects.html

while the global rural population has reached 3.4 billion. Close to 90 percent of the world's rural population lives in Africa and Asia. India is the country with the largest rural population (893 million), followed by China (578 million). The rural population of the world has grown slowly since 1950 and is expected to reach its peak within a few years and then decline to around 3.1 billion by 2050. The world's urban population is projected to continue growing, reaching almost 6.7 billion by 2050, or about 68 percent of the world's total population in that year. The trends in world population growth and projections by rural and urban area from 1950 to 2050 are presented in Figure 1 below.

Figure 1. Estimates and projections of the world population residing in urban areas and rural areas, 1950-2050[8]
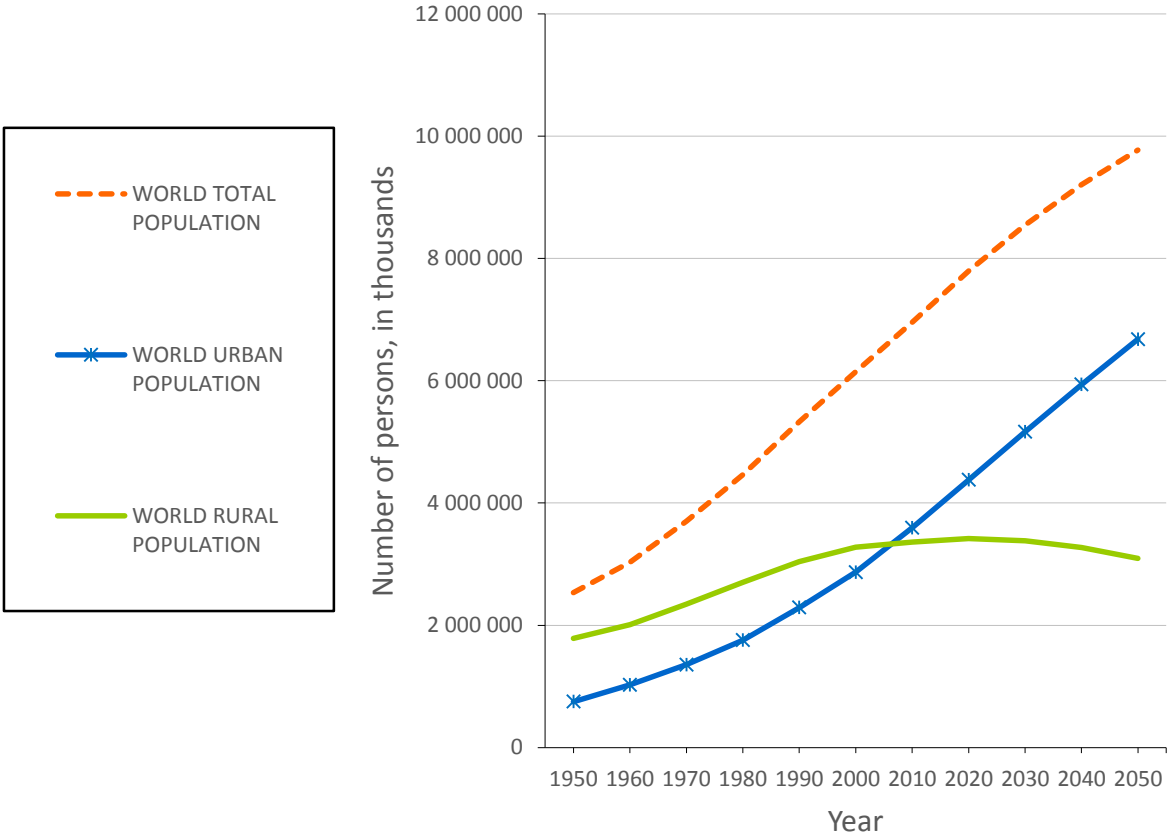
Source: United Nations, Department of Economic and Social Affairs, Population Division (2018). *World Urbanization Prospects: The 2018 Revision*. Custom data acquired by ILO via website.

Growth in the share of the urban population is projected to increase between now and the year 2050 for all major world regions as depicted in Figure 2. According to UN DESA, growth of the urban population is driven by an overall population increase and by the upward trend in the percentage living in urban areas. Together, these two factors are projected to add 2.5 billion to the world's urban population by 2050, with

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[8] The world population estimates and projections by urban and rural areas depicted in Figure 1 should be seen as indicative since they are based on nationally reported data in which the underlying definitions of urban areas are not harmonized across the countries and areas.

almost 90 percent of this growth taking place in Asia and Africa. Even Oceania, which experienced a modest decline in the percentage of population residing in urban areas since 1980, is projected to undergo an increase in this share once again by 2050.

Figure 2. Estimates and projections of the percentage of population residing in urban areas by major world regions, 1950-2050[9]
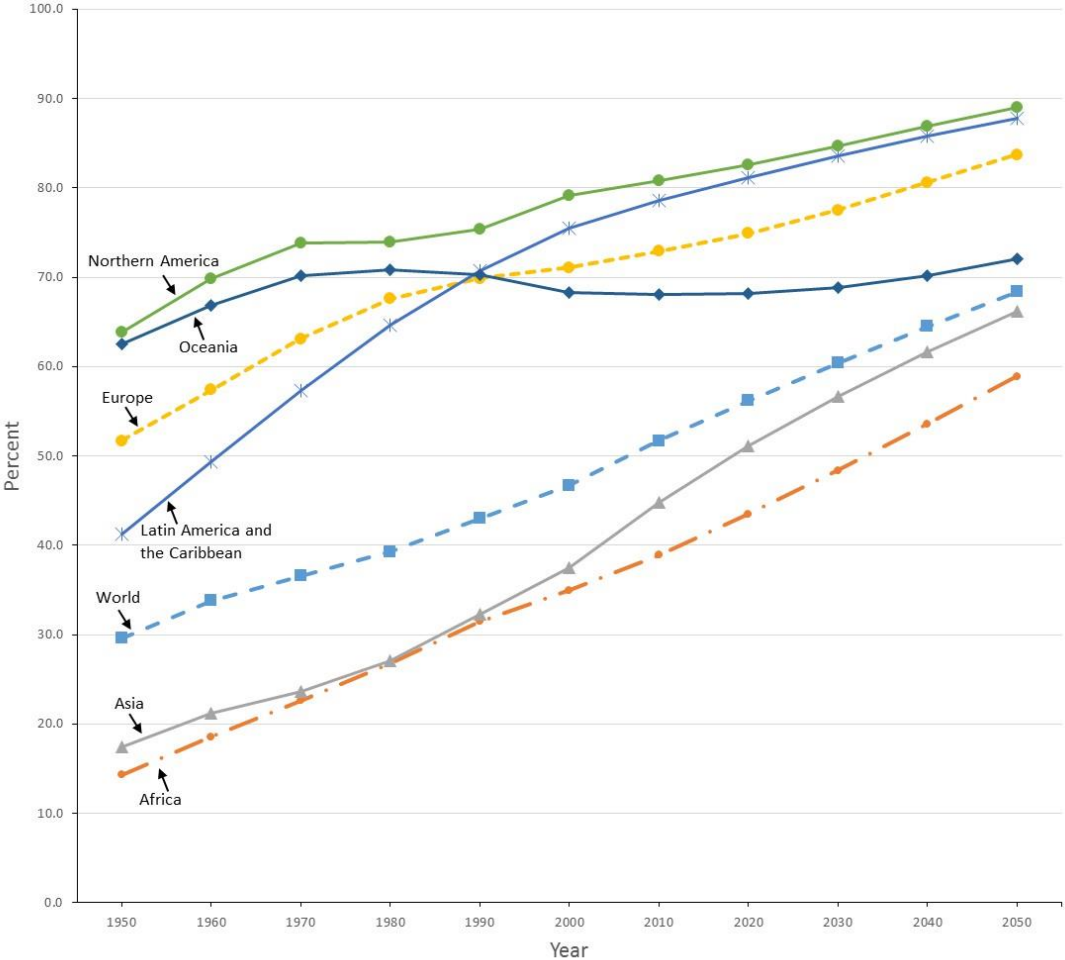
Source: United Nations, Department of Economic and Social Affairs, Population Division (2018). *World Urbanization Prospects: The 2018 Revision*. Custom data acquired by ILO via website.

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[9] The estimates and projections by major world regions depicted in Figure 2 should be seen as indicative since they are based on nationally reported data in which the underlying definitions of urban areas are not harmonized across the grouped countries and areas.

Figure 3 below displays global growth rate projections of urban agglomerations[10] from 2018 to 2030, showing strong urban expansion particularly in Eastern Asia as well as South-Central Asia and Africa. According to UN DESA, by 2030, the world is projected to have 43 megacities with more than 10 million inhabitants, most of them in developing regions. However, some of the fastest-growing urban agglomerations are cities with less than one million inhabitants, many of them located in Asia and Africa.

Figure 3. Global growth rate projections of urban agglomerations by size class, 2018-2030
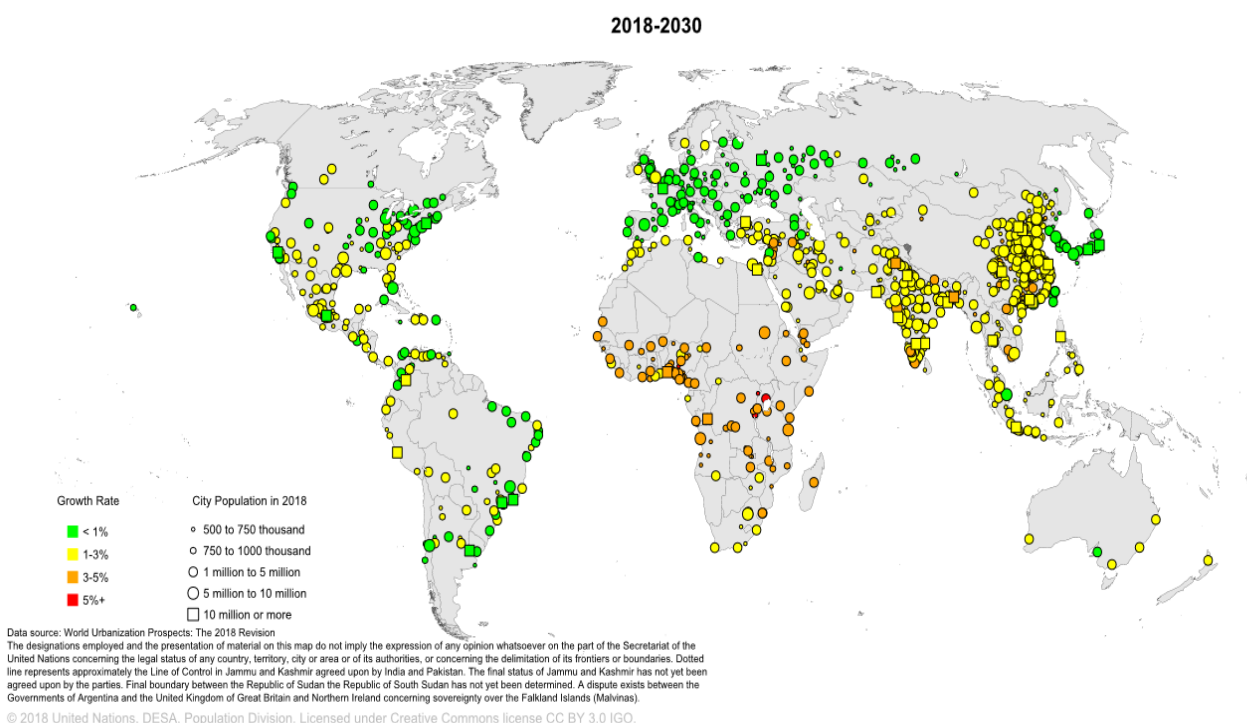
Source: United Nations, Department of Economic and Social Affairs, Population Division (2018). *World Urbanization Prospects: The 2018 Revision*.

The population growth projections may be complemented with information on key characteristics of rural and urban populations, in order to better understand the importance of developing rural-urban labour statistics to inform policy. In particular, it is useful to consider poverty characteristics of rural and urban populations which has important linkages with labour markets and decent work.

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[10] According to UN DESA's glossary of demographic terms, an *urban agglomeration* is a type of urban settlement defined by the de facto population contained within the contours of a contiguous territory inhabited at urban density levels without regard to administrative boundaries. It usually incorporates the population in a city or town plus that in the suburban areas lying outside of but being adjacent to the city boundaries. See: https://population.un.org/wup/General/GlossaryDemographicTerms.aspx

As observed in World Bank estimates in Table 1 below, there has been overall considerable progress in reducing poverty in developing countries in the world since 1990 in both rural and urban areas using a US$1.25 per day poverty threshold. Nonetheless, progress has not been even across regions. Notably, the regions of South Asia and Sub-Saharan Africa have not experienced sufficient progress in reducing poverty.

Table 1. Poverty rates in rural and urban areas by region, 1990, 1996, 2002 and 2008

Region	1990		1996		2002		2008	
	Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**
East Asia and Pacific	67.5	24.4	45.9	13.0	39.2	6.9	20.4	4.3
Europe and Central Asia	2.2	0.9	6.3	2.8	4.4	1.1	1.2	0.2
Latin America and the Caribbean	21.0	7.4	20.3	6.3	20.3	8.3	13.2	3.1
Middle East and North Africa	9.1	1.9	5.6	0.9	7.5	1.2	4.1	0.8
South Asia	50.5	40.1	46.1	35.2	45.1	35.2	38.0	29.7
Sub-Saharan Africa	55.0	41.5	56.8	40.6	52.3	41.4	47.1	33.6
Total	**52.5**	**20.5**	**43.0**	**17.0**	**39.5**	**15.1**	**29.4**	**11.6**

Source: World Bank *Global Monitoring Report 2013, Rural-Urban Dynamics and the MDGs*, page 87.[11]
Note: Poverty rates by region in selected countries are given as the share of the population living with less than USD$1.25 a day. High-income OECD economies and other high-income economies are excluded. (See Annex Table A1.1 of the World Bank Report for their classification of economies by region and income, fiscal 2013.)

According to the most recent estimates published by the World Bank, in 2013, 10.7 percent of the world's population lived on less than US$1.90 a day, compared to 12.4 percent in 2012.[12] The decline from 1990 to 2013 has been estimated at 35 percent. Using US$1.90-a-day and the US$3.10-a-day global poverty lines, the World Bank estimates that poverty rates are more than three times higher among rural residents compared with those of their urban counterparts: 18.2 percent versus 5.5 percent, respectively. The World Bank notes that a vast majority of the global poor live in rural areas and are poorly educated, mostly employed in the agricultural sector, and over half are under 18 years of age.[13]

However, the fact that many people are migrating to more urbanized areas to escape rural poverty does not necessarily mean that more concentrated urbanization provides a means to further poverty reduction.[14] Very

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[11] World Bank *Global Monitoring Report 2013, Rural-Urban Dynamics and the MDGs*, available at: http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1327948020811/8401693-1355753354515/8980448-1366123749799/GMR_2013_Full_Report.pdf

[12] World Bank. *Poverty and Shared Prosperity 2016. Taking on Inequality.* Available at: http://www.worldbank.org/en/publication/poverty-and-shared-prosperity

[13] World Bank website, "Understanding poverty - Overview". Available at: http://www.worldbank.org/en/topic/poverty/overview

[14] See Martin Ravallion, Shaohua Chen, and Prem Sangraula. *New Evidence on the Urbanization of Global Poverty. 2007.* Population and Development Review Volume 33, Issue 4. Available at: https://openknowledge.worldbank.org/bitstream/handle/10986/7277/wps419901update1.pdf?sequence=1

generally, there are strong variations by regions, as for example in Africa where urbanization has been weakly associated with reduced poverty. Latin America can be characterized by the most urbanized poverty, and Eastern Asia least of all. Over the past several decades, there is evidence of poverty becoming more "ruralized" in Eastern Europe and Central Asia.

In the European Union (EU), Eurostat has reported that in 2015 a higher proportion of the EU-28 population living in rural areas faced the risk of poverty or social exclusion as compared with the urban-dwelling population.[15] In 2015, 25.5 percent of the rural population was at risk of poverty or social exclusion, while lower shares were recorded for people living in cities (24.0 percent) followed by those living in towns and suburbs (22.1 percent).[16] Eurostat nonetheless reports a differentiated picture by region in 2015, with a higher risk of poverty or social exclusion among rural populations in eastern, Baltic and southern EU Member States, while people in cities in many of the western and northern Member States were often at higher risk.

Thus, while population growth trends suggest growing concentrations of people living in urban areas, higher poverty rates continue to characterize rural populations as compared with urban populations across the world in many countries and regions, requiring attention from policymakers. Nonetheless, urban populations in some countries may experience higher rates of poverty than their rural counterparts. As there are direct linkages between reduced poverty and employment-related income and decent work, improved labour statistics by geographic area can help inform policy to support poverty reduction goals by geographic area. There may also be differences between rural and urban labour statistics by sex, age and household structures which may be linked to poverty and household well-being by rural-urban area. Important gaps persist between rural and urban areas in various statistical domains, including those related to productive employment and decent work, but statistics are not regularly produced to permit monitoring of trends. Labour statisticians will increasingly be asked to produce high quality, timely statistics to support analysis and policy in both urban and rural areas in support of decent work and sustainable development by geographic area.

This room document is intended to serve as a point of departure for discussion about methods for developing rural-urban labour statistics. It is organized into the following sections: (1) Introduction, (2) National definitions of rural-urban areas used in statistics, (3) Rural-urban definitions and typologies used or proposed by international organizations, (4) Linking work statistics concepts and variables with rural or urban areas, (5) Urban-rural classification used in labour statistics and work statistics concepts by rural-urban area, (6) Data sources for labour statistics by rural-urban area, (7) Questionnaire design in labour force surveys for rural-urban statistics: Review of questions and criteria used by selected countries, (8) Key elements in labour force survey sampling design in support of rural-urban indicators and selected country practices, (9) Data items and the challenge of changing geographical boundaries to produce longer time series, and (10) Conclusions and issues for discussion.

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[15] *Eurostat regional yearbook 2017*. Links available at: http://ec.europa.eu/eurostat/en/web/products-statistical-books/-/KS-HA-17-001 and http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Statistics_on_rural_areas_in_the_EU

[16] It is worth noting that Eurostat has developed a three-category typology of rural-urban areas. This is further discussed in Section 3 of this room document.

2. National definitions of rural-urban areas used in statistics

The traditional distinction between urban and rural areas within a country has been based on the assumption that, regardless of how they are defined, urban areas are characterized by a different way of life and usually a higher standard of living than rural areas.[17] Certain types of administrative areas or localities such as cities or towns are very often associated with urban life in many countries of the world.

In many developed countries, the distinction between urban and rural areas has become somewhat less evident. Rural dwellers in developed countries may in some instances enjoy similar standards of living, employment opportunities and working conditions as their urban counterparts, and are not subject to certain ills associated with urban life such as higher rates of crime, air pollution, noise and heavy road traffic. In developed countries, a key difference between urban and rural areas tends to be the degree of population size and density associated with specifically defined geographic areas.

In developing countries, sharp differences continue to characterize the world of work and standards of living between rural and urban areas. At the same time, developing countries in particular are experiencing ever increasing challenges due to high rates of urbanization. Many developing countries perceive differences between urban and rural areas on the basis of factors such as whether or not a given area is defined as an administrative area (however defined in the national context), population size and density criteria, predominance of non-agricultural/agricultural activities and/or the existence of certain types of infrastructure and services such as schools and access to health centers. Rural areas in developing countries are more often characterized by traditional work activities in the agricultural sector.

The definition of rural and urban areas as used in labour statistics or other statistical domains is a complex issue as currently there are no international statistical guidelines that would allow coherent, harmonized reporting across all countries in the world. Countries use various criteria to define urban areas, such that rural areas are defined *de facto* as a residual category based on the total national territory. Currently, a broad array of different criteria is applied in national definitions of rural-urban areas reflecting a myriad of geographic and socio-economic realities in countries across the globe. This situation presents serious challenges when attempting to make cross-country comparisons of labour statistics by rural/urban area or even regional or global estimates of different indicators, for example, labour force participation rates, gender pay gaps, youth unemployment rates, or child labour rates, to name just a few.

Based on updated definitions of urban areas at the country level (and also for selected territories) published by UN DESA in 2018, the ILO has developed a set of summary criteria used in statistical definitions of urban areas for 222 countries and territories. (Annex Table A.1.1)[18] The set of summary criteria confirm

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[17] See UN Statistics Division, *Principles and Recommendations for Population and Housing Censuses, Revision 3*, available at: https://unstats.un.org/unsd/demographic/sources/census/census3.htm

[18] See Annex Table A.1.1 which displays the ILO summary criteria categories by country and territory based on the information published by UN DESA in 2018 on country- and area-level definitions of urban areas.

that the definitions are highly heterogeneous across countries and territories. As depicted in Figure 4 below, a slight majority of countries and territories (53.2 percent) base their definitions of urban areas on multiple summary criteria, with virtually all of the remainder using a single summary criterion only.[19]

Figure 4. Percentage of countries and territories in the world applying single or multiple criteria to define urban areas, 2018
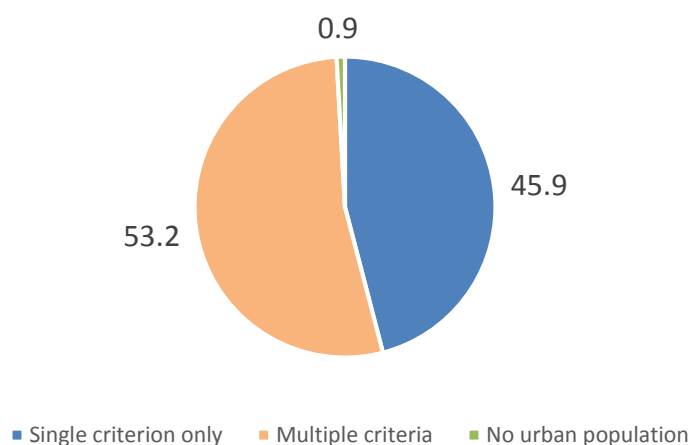
Source: ILO analysis of criteria based on country and territorial definitions of urban areas published by UN DESA (2018), *World Urbanization Prospects: The 2018 Revision*. Note: Values are given as a percentage of 222 countries and territories with reported own definitions.

Among countries that apply a single summary criterion to define urban areas, there are two types of criteria applied: (1) administrative areas and/or specific types of localities and (2) population size and/or density. "Administrative areas" and "specific types of localities" were combined in the analysis as a single criterion given the overlapping nature of these categories. According to the *Principles and Recommendations for Population and Housing Censuses (Revision 3)* published by the UN Statistics Division[20], a "locality" should be defined as a distinct population cluster (also designated as inhabited place, populated centre, settlement etc.) in which the inhabitants live in neighbouring or contiguous sets of living quarters, and that has a name or a locally recognized status. "Administrative areas" in the present analysis is intended to capture localities that have or may be assumed to have a recognized local administrative structure that governs or takes decisions on behalf of the locality.[21] The two types of areas (administrative areas and

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[19] The analysis in this section was intended to present the types and number of summary criteria used in different countries and territories. Thus, the information is presented as a share of the set of 222 countries and territories that reported their own definition of urban areas rather than according to weighted proportions of the urban population in the countries/territories. The latter would have favored the summary definition criteria applied by countries with large urban populations.

[20] See United Nations Statistics Division, Op. cit.

[21] Examples of "administrative areas" used in the analysis include: provincial or district centers, towns, agglomerations, parishes, capitals, cities, regional centers, communes, municipalities, administrative centers or headquarters, government seat and governates, among others. Examples of places included under "localities" include: centers, settlements, villages, cities without municipal status, population center, barrios, settlements officially designated as urban, urban localities.

specific types of localities) were combined as a single criterion in the analysis given the lack of certainty regarding whether a given identified administrative area in fact has a local administrative structure and the possibility of overlap between the two categories.

The administrative areas and specific localities used as criteria to define urban areas in many countries are, by definition, very heterogeneous geographic areas not only in terms of any association with local administrative structures but also because of differences in land area and population size. Moreover, administrative area and locality boundaries may change rapidly, posing particular problems for monitoring the impact of labour market policies or decent work programmes on urban and rural areas over time when defined according to such criteria. Urban growth and development in such areas involves changing demographics (including rural-to-urban migration) as well as opportunities for economic development and job growth within the context of local laws or customs. Growth in administrative areas and localities may involve strategic development planning, but in some contexts, it may reflect unregulated urban growth and even sprawling urban slums.

The common use of administrative areas and localities as the main criterion in defining urban areas worldwide suggests their unique importance which may be linked to legal frameworks, local governance, fiscal structures or customs within national contexts. The use of this criterion is nonetheless problematic for monitoring indicators over time in any given country due to changing administrative area and locality definitions and boundaries. It also yields a lack of comparability of urban-rural disaggregated statistics across countries that use the criterion in their national statistics.

Population size and population density were combined as a single criterion in the present analysis since a number of countries closely combined the two criteria in their definitions.[22] It is important to bear in mind that although countries were grouped together according to these summary criteria, the thresholds used by country vary widely. For example, whereas Japan uses a population size threshold of 50,000 inhabitants or more as one of its multiple criteria to define urban areas, Denmark, Greenland, Iceland and Sweden use a size threshold of 200 inhabitants or more. A total of sixteen population size thresholds were used in the country and territorial urban definitions. Moreover, some countries use multiple population size thresholds coupled with distinct criteria. The most commonly used population size threshold used to define urban areas is that of 2000 or more inhabitants (25 countries and territories), followed by 5000 or more and 10 000 or more (used by 21 and 13 countries and territories, respectively). (Annex Table A.1.2)

Population density thresholds used to define urban areas also present large differences across countries. For example, Germany and Cambodia use relatively low thresholds (150 and 200 inhabitants per square km, respectively) while Bhutan, China, and Taiwan (Province of China) use thresholds of 1000, 1500, and 2000 inhabitants per square km, respectively. India and Canada both apply population density thresholds of 400 inhabitants per square km.

Similar to the case of administrative areas and localities, population size and density thresholds do change over time reflecting new perceptions of what is considered urban in the context of rapidly growing urban

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[22] "Population size" in the analysis refers to a specified population size threshold over which the area is considered urban. "Population density" in the analysis refers to specific density criteria as for example the number of inhabitants per square kilometer or simply noted as a densely settled territory for example.

populations. Changing population size and density thresholds create challenges for monitoring indicator trends in urban and rural areas when such criteria are applied in the definition. Moreover, at any given point in time, the use of different population size and density thresholds to define urban areas across selected countries presents challenges for international comparability of statistical indicators.

Figure 5 below shows that among countries and territories that apply a single criterion, 9 out of 10 used some type of administrative area and/or other specific type of locality, while population size and/or density was used in the remaining countries.

Figure 5. Percentage of countries and territories applying a single criterion to define urban areas by type of criterion, 2018
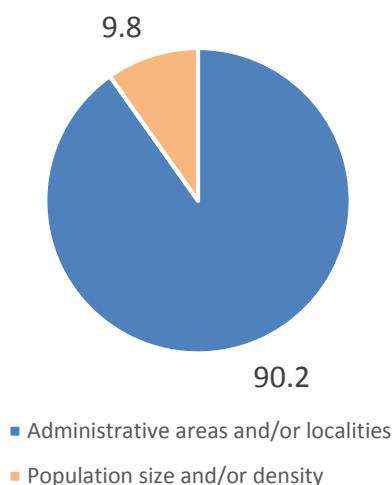
9.8

90.2

- Administrative areas and/or localities
- Population size and/or density

Source: ILO analysis of criteria based on country and territorial definitions of urban areas published by UN DESA (2018), *World Urbanization Prospects: The 2018 Revision*. Note: Values are given as a percentage of 102 countries and territories that apply a single summary criterion to define urban areas.

When reviewing jointly the various single and multiple summary criteria used to define urban areas, it was found that three main categories corresponded to those used by about 75 percent of the countries and territories, namely: (1) Administrative areas and/or localities, (2) Administrative areas/localities + population size/density and (3) Administrative areas/localities + population size/density + predominance of non-agricultural activities or workers (Figure 6). The fact that in all three of these categories urban areas are defined on the basis of administrative areas or specific types of localities suggests that countries and territories overwhelmingly associate urban areas with administrative centers or localities with urban characteristics, ahead of any other summary criterion. The population size and density criterion is nonetheless present in two of the three main categories, also signalling its importance.

Figure 6. Percentage of countries and territories applying a single criterion or multiple criteria to define urban areas by the main types of summary summary criteria used, 2018
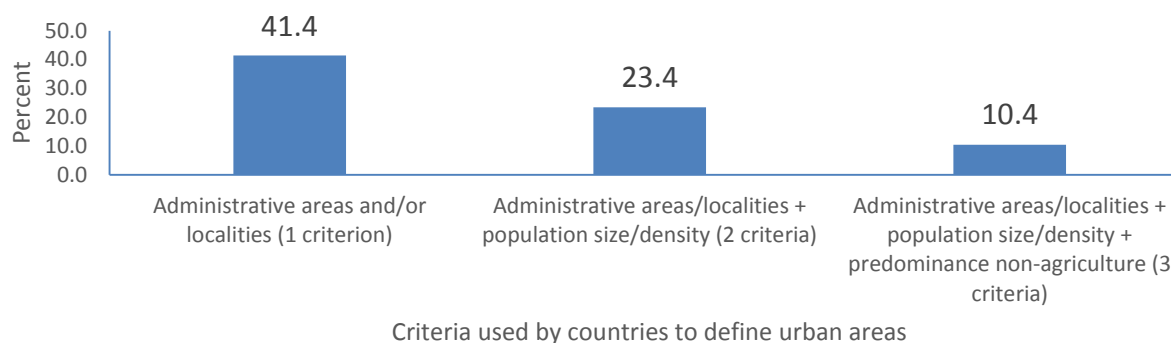
Criteria used by countries to define urban areas

Source: ILO analysis of criteria based on country and territorial definitions of urban areas published by UN DESA (2018), *World Urbanization Prospects: The 2018 Revision*. Note: Values are given as a percentage of 222 countries and territories with reported own definitions.

"Predominance of non-agricultural activities and/or workers"[23] (abbreviated in Figure 6 as "predominance non-agriculture") was applied as the third most commonly used summary criterion to define urban areas, always in conjunction with other criteria. The continuing importance of this criterion reflects the fact that traditionally rural areas have been closely associated with farming activities and agricultural workers and this remains the case in many countries, particularly developing countries. However, many non-agricultural economic activities and even a predominance of non-agricultural activities may take place in rural areas in some contexts, so that this criterion should be carefully evaluated before adopting it.

Another somewhat less important summary criterion applied by countries to define urban areas was "infrastructure and other amenities".[24] This criterion was used in combination with administrative areas/specific localities and population size/density criteria by 3.6 percent of countries and applied jointly with all three of the main summary criteria previously mentioned by 3.2 percent of countries.

Other criteria infrequently applied but nonetheless worth noting include "number of dwellings" and "contiguous dwellings" or "dwelling density".[25] Dwelling density refers to the maximum amount of physical space separating the dwellings or amount of physical space occupied by the contiguous dwellings. "Population growth rate" and "identified potential for future growth" represented another set of criteria applied to define urban areas by selected countries. Moreover, a few countries use the criterion of

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[23] Predominance of non-agricultural activities and/or workers refers in the analysis to definitional criteria of urban areas that make reference to a predominance of non-agricultural economic activity or of non-agricultural workers.
[24] The summary criterion "infrastructure and amenities" refers in the analysis to various types of physical infrastructure or population services that in some contexts may be more closely associated with urban areas, and include for example: roads, electricity, water-supply and sewerage systems, waste management, medical centers, educational facilities, communications facilities, road transport services and postal service.
[25] Contiguous dwellings and dwelling density were not equated to the population density criterion in the analysis since the latter typically refers to the number of inhabitants per square area.

populations or dwellings in "built-up areas" which, depending on how defined may allow mapping using various technologies, including aerial photography or remote sensing.

In summary, the highly heterogeneous criteria used to define rural-urban areas in different countries around the world reflect the different perspectives of what urban and rural areas are at any given point in time and present the unique challenges that each brings. It is clear that countries need to have their own definition of urban and rural areas that can be implemented in their statistical systems and used to disaggregate indicators by rural-urban areas for different national policy purposes including decent work. Nonetheless, in order to have meaningful cross-country comparisons of different work-related statistical indicators by rural-urban areas that could be reported to international agencies such as the ILO for monitoring decent work and related SDG indicators, countries should be encouraged to move forward with establishing an internationally recognized definition and statistical framework regarding urban and rural areas.

3. Rural-urban definitions and typologies used or proposed by international organizations

While policy makers at the national level have sought to advance the quality and availability of statistics about rural and urban populations, international and multilateral organizations have been seeking to apply a harmonized definition of urban and rural areas that is nationally relevant and internationally comparable. Such a harmonized definition would be particularly beneficial for the purposes of international reporting of statistical indicators to international organizations, including decent work indicators disaggregated by rural-urban area. Despite these efforts, challenges persist across countries in the use of common concepts, definitions and classifications that could facilitate the coherence of the results. Having comparable statistical information is fundamental for more solid evidence-based policy making to promote decent work and measure progress towards the sustainable development goals in both rural and urban areas.

Section 2 presented an analysis of ILO summary definition criteria of urban areas based on national and territorial definitions published by UN DESA in 2018. This section summarizes the definitions and typologies of urban and rural areas of national territories intended for statistical purposes as used or proposed by various international organizations.

The Department of Economic and Social Affairs (Statistics Division) of the United Nations (UN DESA). At its forty-sixth session, the United Nations Statistical Commission (UNSD) adopted the *Principles and Recommendations for Population and Housing Censuses, Revision 3*.[26] These Principles and Recommendations mention that because of national differences in the characteristics that distinguish urban from rural areas, the distinction between urban and rural population does not allow for a single definition that would be applicable to all countries. They recommended that countries establish their own definitions in accordance with their own needs when there are no regional recommendations on the matter. Moreover, it also mentions that although the traditional urban-rural dichotomy is still needed, classification by size of locality can usefully supplement the dichotomy, or even replace it where the major concern is with characteristics related only to density along the continuum from the most sparsely settled areas to the most

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[26] See United Nations Statistics Division, Op. cit.

densely built-up localities. Additionally, the classification of areas as urban or rural should be done at the smallest administrative unit of the country, or the smallest census collection unit. The classification should be made on a measure of population density. However, population density may not be a sufficient criterion in many countries. Some of the additional criteria that may be useful are the percentage of the population engaged in agriculture, the general availability of electricity or piped water in living quarters and the access to medical care, schools, recreation facilities and transportation.

UN DESA - UNSD also collects population data based on the various definitions of urban areas from national statistical agencies, and projects these figures forward from the latest census year to form the time series compiled in the World Urbanization Prospects.[27] This is the source of data for most studies of global urbanization, as well as for the World Bank's World Development Indicators data. Global estimates of the world's level of urbanization are achieved by simply adding these figures, based on varying national definitions. The challenges arising from these conflicting definitions, including the inability to make meaningful cross-country comparisons or consistent global estimates of urbanization levels, have been noted by other international organizations, including the World Bank (2009) and European Commission (Dijkstra and Poelman, 2014). The rural population is calculated as the difference between total population and urban population. Consequently, the definition of both urban and rural areas across countries is very heterogeneous and is not based on any standardized methodology. The aggregate population figures and projections by urban and rural areas across regions and the world should be cautiously used since they lack a common underlying definition of urban areas.

The World Bank. The World Development Report (WDR) on *Agriculture for Development* (2008)[28] devised a rural typology with the dichotomous urban/rural typology as its starting point, but nonetheless acknowledged the heterogeneity across countries and within rural areas. The report uses the country-specific definition of an urban area (United Nations, World Urbanization Prospects, and World Bank estimates) and the rural population is calculated as the difference between total population and urban population. A list of national definitions reveals a wide variety of object choice, types, and criteria. However, the WDR 2008 devised a more differentiated scheme so as to enable comparison of "like with like." By plotting the contribution of agriculture to overall economic growth against the portion of the country's poor living in rural areas, the WDR 2008 placed each country into one of three "settings": agriculture-based; transforming; and urbanized. Within each setting, more and less favored areas for agricultural development were identified with respect to access to markets and to agro-climatic potential. These two criteria were used to sort rural areas into two types in each of three groupings of countries. The underlying objects were whatever unit a given country's national statistical system had used in making its initial delineation of urban versus non-urban. The classification was used to support analysis of appropriate targeting of policy interventions to support development and poverty alleviation.

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[27] United Nations, Department of Economic and Social Affairs. Population Division. 2018. *World Urbanization Prospects*. New York, available at: https://population.un.org/wup/

[28] World Bank, 2008. *World Development Report, Agriculture for Development.* Office of the Publisher. The World Bank. Washington, DC. http://documents.worldbank.org/curated/en/587251468175472382/World-development-report-2008-agriculture-for-development

The WDR on *Reshaping Economic Geography* (2009)[29] identified as urban all settlements above a certain minimum population size and population density that are within a certain travel time by road to a sizeable settlement. The residual areas considered non-urban or rural would thus be different from those identified in the WDR 2008. The WDR 2009 emphasized the importance to development of agglomeration economies, that is, the benefits that come when firms and people locate near one another together in cities and industrial clusters, effectively lowering the costs of transporting goods and sharing knowledge. Remote populations will find it more costly to take advantage of the benefits associated with urbanization. While there are surely negative aspects of urbanized areas, such as pollution and overcrowding, they also present unique opportunities to advance economic wellbeing. An alternative to country-specific information on access to urbanized areas is provided in a map created for the WDR 2009 by the European Commission and the WB. It uses an urban/rural gradient to show travel time to large cities, set as those with 50,000 or more inhabitants. Whether or not this threshold is acceptable requires a judgment about relevance to each country's distribution of concentrated urban settlement and also regarding evidence about the minimum size of cities required for significant agglomeration economies. The WDR 2009 presented a continuous classification that arrayed developing countries according to settlement concentrations. This "agglomeration index" used a global population grid to define equal size spatial units. The index itself was constructed as the proportion of a country's population living in areas that met thresholds for population density and size and for travel time to urban areas.

United Nations Food and Agriculture Organization (FAO). The State of Food and Agriculture (SOFA) 2017: Leveraging Food Systems for Inclusive Rural Transformation.[30] The approach in the SOFA 2017 report is aligned to that of the World Bank's WDR 2009 agglomeration index, which used spatial data on population density, agglomeration size and travel time to urban centres as thresholds to estimate the urban population. The approach in the SOFA 2017 report was refined by adapting it to the "rural–urban spectrum" concept. This concept recognizes that urban and rural sectors form a continuum from the capital and other major cities to larger regional centres at one end, to smaller market towns and ultimately rural spaces at the other. Rural and urban areas have many interlinkages created by households residing in settlements that range from individual farms and isolated small villages to very large cities. The SOFA analysis proposed that multiple pathways of rural transformation are possible for a country with a given set of agglomerations, associated geographic constraints and level of institutional development. The SOFA 2017 approach adapted the WDR agglomeration index by calibrating the thresholds in order to produce a breakdown of population that centers around cities of different sizes, and differentiating them by travel time. The SOFA report suggests that the result is a full rural–urban spectrum, with a consistent definition across all countries.

The Organization for Economic Cooperation and Development (OECD), OECD Regional Typology.[31] The OECD in 2011 endorsed a definition of urban-rural areas to apply to its mostly developed country

[29] World Bank, 2009. *World Development Report, Reshaping Economic Geography.* Office of the Publisher. The World Bank. Washington, DC.
http://documents.worldbank.org/curated/en/730971468139804495/World-development-report-2009-reshaping-economic-geography
[30] United Nations Food and Agriculture Organization, 2017. *The State of Food and Agriculture 2017: Leveraging Food Systems for Inclusive Rural Transformation.* Rome. http://www.fao.org/3/a-I7658e.pdf
[31] Organisation for Economic Co-operation and Development, 2011. *OECD Regional Typology.* Directorate for Governance and Territorial Development. OECD Publishing. Paris.
https://www.oecd.org/cfe/regional-policy/OECD_regional_typology_Nov2012.pdf

membership. The objects to be sorted are administrative units specific to each country. The tiered sorting used two criteria, starting with classification by population density and then further by the size of urban centers within a region. This typology classifies regions of member countries into three types of areas: predominately urban, intermediate, and predominantly rural. A predominately urban area is one in which fewer than 15 percent of the population lives in rural local units, intermediate if between 15 and 50 percent, and predominately rural if more than 50 percent. A local unit is considered rural if its population is below 150 inhabitants per square kilometer (500 inhabitants for Japan and Korea). These local units are aggregated into larger areas using a consistent scheme. The final step adjusts these classifications depending on the presence and relative size of urban centers within an aggregated area. It considers an area otherwise deemed rural by virtue of low population density to be intermediate between urban and rural if it contains an urban center of more than 200,000 inhabitants representing at least a quarter of the population (500,000 inhabitants for Japan and Korea). To recognize the heterogeneity of areas outside of the predominately urban areas, an extension of this methodology added the dimension of remoteness, represented by the driving time needed to reach a highly populated center, and results in five types of regions rather than three, such as, predominantly urban, intermediate close to a city, intermediate remote, predominantly rural close to a city and predominantly rural remote.

The European Commission (EC) / Eurostat urban-rural typology. Eurostat employs a variant of the OECD urban-rural typology. The urban-rural typology uses a three-step approach (Eurostat, 2017).[32] The first step is to identify populations in rural areas, where rural areas are all areas outside urban clusters. Urban clusters are clusters of contiguous grid cells of 1 km² with a density of at least 300 inhabitants per km² and a minimum population of 5,000. In the second step, regions are classified on the basis of the share of their population in rural areas. Regions are classified as "Predominantly rural" if the share of the population living in rural areas is higher than 50 percent; "Intermediate" if the share of the population living in rural areas is between 20 and 50 percent; and "Predominantly urban" if the share of the population living in rural areas is below 20 percent. To resolve the distortion created by extremely small regions, for classification purposes, regions smaller than 500 km² are combined with one or more neighboring regions. In a third step**,** the size of the urban centers in the region is considered. A predominantly rural region which contains a city of more than 200,000 inhabitants making up at least 25 percent of the regional population becomes intermediate. An intermediate region which contains an urban center of more than 500,000 inhabitants making up at least 25 percent of the regional population becomes predominantly urban.

When the EC / Eurostat urban-rural typology was developed, it did not include the extended remoteness dimension of OECD. However, Lewis Dijkstra and Hugo Poelman (European Commission, DG Regio) defined a new classification that combines elements from the OECD classification with the urban-rural typology developed by the EC and that is applied by Eurostat, *Regional typologies overview* (2017).[33] The classification is combined with a distinction between areas located close to city centers and areas that are remote. It creates five categories of regions: (1) predominantly urban regions; (2) intermediate regions, close to a city; (3) intermediate remote regions; (4) predominantly rural regions, close to a city; and (5) predominantly rural, remote regions. According to the remoteness dimension, all predominantly urban

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[32] Eurostat. *Archive: Urban-rural typology*. Statistics Explained. https://ec.europa.eu/eurostat/statistics-explained/index.php/Archive:Urban-rural_typology

[33] Eurostat. *Regional typologies overview*. Statistics Explained. http://ec.europa.eu/eurostat/statistics-explained/index.php/Regional_typologies_overview

regions are considered close to a city. A predominantly rural or intermediate region is considered remote if less than half of its residents can drive to the center of a city of at least 50,000 inhabitants within 45 minutes. If more than half of the region's population can reach a city of at least 50,000 within 45 minutes, it is considered close to a city.

In pursuit of a more effective territorial development policy, the European Observation Network for Territorial Development and Cohesion (ESPON, 2014)[34] used the EC/Eurostat urban-rural typology and presented a new layer that differentiated among rural areas. The urban-rural split was based on the criteria of vicinity and remoteness above with five categories. Within the two categories of predominately rural, the areas were further divided into four classes. "Agrarian" areas were those characterized by primary sector (chiefly agriculture) dominance. Areas classed as "consumption countryside" were characterized by having visitors for recreational purposes. "Secondary sector" and "private service sector" areas were economically diversified and exhibited employment structures like those of urban areas. This structural typology makes delineations based on the characteristics of a region's economic activity.

The EC has produced a harmonized definition of cities and rural areas that presents a "new degree of urbanisation" (Dijkstra and Poelman, 2014).[35] The new degree of urbanization takes advantage of a new tool, the population grid, to create a more accurate classification. It takes account of the population distribution within and between local administrative units. In addition, the switch to the new classification allows a further harmonization of spatial concepts by ensuring that the cities/densely populated areas and thinly populated areas/rural areas are identical. It creates a three-category typology using the settlement dimension: densely populated area (cities); intermediate density area (towns and suburbs); and thinly populated area (rural area). The spatial units of one square kilometer each are contained in a population grid based on population registers or other detailed sources of where people live. For countries that have not constructed such a grid, the EC disaggregated larger population data sets according to land use or land cover information (Global Human Settlement Layer, 2017)[36] which was released at the Habitat III conference. The new degree of urbanization also uses the same building blocks as the urban-rural regional typology. As a result, the data collected for example in rural areas are linked to the data collected for rural regions as they are both defined by the share of population in rural grid cells, but treat a different territorial level.

Measuring Global Urbanization using a Standard Definition of Urban Areas: Analysis of Preliminary Results (Chandan Deuskar and Benjamin Stewart, World Bank, 2016).[37] The authors replicated the EC's gridded population distribution methodology using WorldPop,[38] for all 53 countries for which recent

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[34] European Commission, 2014. *ESPON Atlas – Mapping European Territorial Structures and Dynamics.* Brussels. https://www.espon.eu/topics-policy/publications/atlas/espon-atlas-2013

[35] Dijkstra, L. and H. Poelman, 2014. *A harmonized definition of cities and rural areas: the new degree of urbanization*. European Commission Regional Working Paper 01. http://ec.europa.eu/regional_policy/sources/docgener/work/2014_01_new_urban.pdf

[36] For more information about the European Commission Global Human Settlement Layer, see the weblink: https://ghsl.jrc.ec.europa.eu/ghs_pop.php

[37] Deuskar, C. and B. Stewart, 2016. *Measuring Global Urbanization using a Standard Definition of Urban Areas*. 2016 World Bank Land and Poverty Conference. The World Bank. Washington, DC.

[38] The WorldPop project was initiated in 2013 and provides open access to population distribution datasets. For more information, see the weblink: http://www.worldpop.org.uk

WorldPop layers were available. This means that results are available for 80 countries, including the 27 European Union (EU) countries. The WorldPop uses high-resolution census data together with data from a wide range of other sources, including data on built-up areas, topography, locations of hospitals and schools, among other factors to model the population at a 100m x 100m grid cell resolution. In addition, the approach has been tested globally on the Global Human Settlements Population Layer (GHS Pop) produced by the EC's Joint Research Center. Both the WorldPop and GHS Pop analysis used input population data for circa 2015, projected forward from the circa 2010 round of censuses.

In addition, a range of other population density and size thresholds were also applied. For the analysis on WorldPop data, 15 density thresholds ranging from 100 to 5000 people per sq. km. were tested using Geographic Information System (GIS) technology. The GIS outputs included urban clusters of all population sizes (i.e. with no population threshold applied) and high-density clusters of 50,000 people and above. Similarly, for the GHS Pop analysis, 26 density thresholds ranging from 0 to 2500 people per square km. were tested in GIS, with all population size thresholds applied afterwards. The quality of the outputs rely on the quality and resolution of its input data, especially census data.

A key result of this work has been the acknowledgement that no definition of 'urban' is definitive. The goal of standardized global definitions is to enable the comparison of like with like across countries, not to suggest that the definitions used by countries are invalid or should be replaced, as these may be well-suited to their own national contexts. Even with these standardized demographic threshold-based approaches, there is no established consensus yet on which thresholds to use. More broadly, it is important to note that in the interest of standardization, this approach to defining urban areas uses criteria based on data that are widely available (population distribution data) and does not include other possibly meaningful criteria for defining urban areas, such as commuting time, access to roads, goods, and services, type of economic activity, etc. which many countries include in their own urban definitions, but which have not been mapped as reliably and consistently across the world as population has.

OECD, Eurostat and European Commission (DG Regio: Definition of Functional Urban Areas (FUA). These institutions have jointly developed a harmonised definition of urban areas as "functional economic units" as a means to overcome the limitations associated with administrative units. The concept of FUA uses as building blocks the smallest administrative units for which national commuting data are available in both European OECD countries and non-European OECD countries. Approved by OECD in 2011, the FUA methodology is applied to 29 OECD countries, identifying over a thousand urban areas of different size. The OECD metropolitan database includes a set of annual variables related to 275 functional urban areas with at least 500 000 inhabitants. The definition of urban areas in OECD countries uses population density to identify urban cores and travel-to-work flows to identify the surrounding areas whose labour market is highly integrated with the cores.[39] The FUA methodology consists of three main steps: (1) identification of core municipalities through gridded population data, (2) connecting non-contiguous cores belonging to the same functional urban area, and (3) the identification of the urban hinterlands. Testing among selected EU countries in the use of labour force surveys to produce statistics at the level of FUAs suggests that due caution should be exercised in producing such estimates using microdata since the surveys

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[39] The particular interest in Functional Urban Areas for labour statistics lies in their definition as densely populated urban centers that include the surrounding work commuting area.

are not designed to produce estimates at such small geographic levels. Unemployment estimates at the FUA level in particular are problematic.[40]

Related to the concept of Functional Urban Area is the concept of the Labour Market Area, a concept used by the U.S. Department of Labor-Bureau of Labor Statistics (USBLS) and Eurostat. A Labour Market Area (LMA) has been defined by the US Department of Labor as a geographic area or region defined for purposes of compiling, reporting, and evaluating employment, unemployment, workforce availability, and related topics. Moreover, it can be defined as an economically integrated region within which residents can find jobs within a reasonable commuting distance or can change their employment without changing their place of residence.[41] In short, according to the USBLS, a LMA is a contiguous geographical area in which individuals can live and work and change jobs without having to relocate.[42] The Local Area Unemployment Statistics (LAUS) program of the USBLS was designed around the labor market area concept and has produced monthly series for most substate areas since January 1990. The LAUS program uses government designated metropolitan and micropolitan areas as its core labor market areas, then examines commuting data for counties not included in the government delineations to define its own small labor market areas.

In the European Union context, Eurostat notes that while the FUA focuses on specific cities and includes only those areas in which it is evident that people commute into a given city, the LMA is a broader concept conceived as a regional phenomenon which is not tied to any specific city.[43] More than one city can thus be part of a LMA. The FUAs are based on commuting flows to a central place and cover a limited territory around the cities, while the LMA concept covers the entire territory of the country as well as the territory of the EU and is a result of the commuting flows between local administrative units.

The Wye Group, 'Rural Households' Livelihood and Well-being: Statistics on Rural Development and Agriculture Household Income.[44] Active between 2007 and 2011, the Wye Group was established to promote the refinement and adoption of international standards in statistics for rural areas and agriculture household incomes. Within this broad scope, more specific objectives were to evaluate challenges to consistency of adoption of comparable methods of data collection across countries, give special focus to the application and value of the data standards in developing countries, assess and explore the potential for the use of improved statistics as policy-relevant indicators and in empirical analysis of policies for agricultural and rural households, natural resources, and regional economic development. It also assessed the need for changes or updating to the handbook, *'Rural Households' Livelihood and Well-being: Statistics on Rural Development and Agriculture Household Income'* and, if indicated, organise and execute the

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[40] Workshop on City Data in EU Labour Force Surveys, 24-25 September 2018, Valletta, Malta. Workshop report forthcoming.

[41] See Wikipedia, definition of Labor market area: https://en.wikipedia.org/wiki/Labor_market_area

[42] See U.S. Department of Labor, U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics program, Federal Statistical Area Delineations: https://www.bls.gov/lau/lausmsa.htm

[43] See Eurostat, *The concept of Labour Market Areas – Summary Report.* Draft document of Eurostat, Unit E-4: Regional statistics and geographical information. June 2017 (v.2), available at: https://ec.europa.eu/eurostat/cros/content/eurostats-final-report-20162017-lmas-grant-programme_en

[44] Participants in the Wye Group included the Organisation for Economic Cooperation and Development, Food and Agriculture Organization of the United Nations, United Kingdom, United States of America, Italy, Canada, Netherlands, Poland, World Bank, and academic researchers. For more information on the Wye Group, see the weblink: https://unstats.un.org/unsd/methodology/citygroups/wye.cshtml

revision. The Wye handbook was prepared by Eurostat, OECD, UNECE, United Nations Food and Agriculture Organization (FAO), and World Bank in 2007. Among other topics covered, the handbook outlined various definitions and typologies of rural areas or "rurality" based on those developed by various international organizations. Work to further define rural areas has since been followed up by FAO in collaboration with other institutions as discussed below.

United Nations Food and Agriculture Organization (FAO). The Global Office of the Global Strategy to improve agricultural and rural statistics (GSARS). (The approach described here was developed in collaboration with OECD, EU/Joint Research Centre and the World Bank.) According to the document *Conceptual Framework and Territorial Definitions for Improving Rural Statistics* (Offutt, 2016),[45] a single international definition should be put forward as a basis for a consistent comparison of policy relevant indicators across countries. The definition proposed has two measures (irregular and equal size spatial units) and variations within each due to the different dimensions of *rurality*. Equal size spatial units requires gridded data for making international comparisons while irregular size spatial units is based on domestic political or administrative boundaries, thereby limiting comparability. Both measures envision the incorporation of three dimensions of rurality in the definition to anticipate the heterogeneity in circumstances across developing countries, such as (1) sparse settlement which includes population density, population size, and built up area; (2) remoteness which includes road travel distance, and straight line distance; and (3) land cover which includes cultivated and managed vegetation, artificial surfaces, and vegetated areas plus natural surfaces, snow and glaciers, and water bodies. Proposals are made for alternative variables to represent each of the three dimensions of rurality. Which ones are chosen will depend on a country's circumstances and the data available. In addition, a continuous aggregate index is proposed to emphasize the relative nature of rurality and to promote its interpretation as a gradient.

During the workshop on Rationalizing Rural Area Classifications organized by US National Academy of Sciences (US NAS) in 2015, Waldorf and Kim[46] provided a general perspective which was subsequently adopted by Offutt (2016) to put forward a suggested single international definition. According to Waldorf and Kim (2015), the traditional design of a typology or classification for places or regions should consist of three components: objects, types and criteria. The spatial units (objects) to be assigned to discrete types can be an administrative area census tract of irregular area or a cell in a grid with uniform cell area. The number of different categories to which an object could be assigned (types) can be mutually exclusive types of objects, like urban and non-urban (two type), or to a continuous measure that allows comparison of the degree of rurality across spatial units. The criteria used to assign objects to types can be density or size of settlement. The criteria provide the rationale for sorting objects and for delineating among types. Variables are chosen to represent each dimension, dependent on data availability. The set of options is the following:

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[45] Offutt, S., 2016. *Conceptual Framework and Territorial Definitions for Improving Rural Statistics*. The Global Office of the Global Strategy to improve agricultural and rural statistics. Working paper No. 10. Revised November 2016. Rome. Available at: http://gsars.org/wp-content/uploads/2016/08/WP_Conceptual-Framework-and-Territorial-Definitions-for-Improving-Rural-Statistics-040816.pdf

[46] Waldorf, B. and A. Kim, 2015. *Defining and Measuring Rurality in the US: From Typologies to Continuous Indices.* Commissioned Paper for National Academies Workshop on Rationalizing Rural Area Classification. National Academies. Washington, DC. Available at: https://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse_168031.pdf

Table 2. Four alternative choices using combinations of spatial units, measures, and dimensions that could be used to define what is rural

Option number	Spatial units/Objects	Measure/Types	Dimensions/Criteria
I	Irregular	Discrete	Density, size of settlement
II	Irregular	Continuous index	Density, size of settlement
III	Regular	Discrete	Density, size of settlement
IV	Regular	Continuous index	Density, size of settlement

Source: Offutt, S., *Conceptual Framework and Territorial Definitions for Improving Rural Statistics*. Global Strategy Working Papers, FAO, Rome. November 2017.

In conclusion, the literature review reveals that there is neither an internationally agreed definition on rural/urban areas for statistical purposes nor a methodology that is commonly applied across countries. Currently, in most countries urban is defined first, making what is rural a residual of the remaining national territory. Nonetheless, the rural-as-residual-approach is often employed at the national level even though it creates a sensitivity to the criteria chosen for delineating what is urban.

At this time, several definitions can be put forward as a basis for a consistent comparison of policy relevant indicators across countries. The adoption of an international definition based on a grid cell typology is being implemented by many international organizations, particularly by the European Commission, because it enables the comparison of "like with like" areas. However, this methodology is still limited to developed economies. Most countries are still basing their urban-rural definitions on irregular administrative areas as reflected in the work on the topic produced by UNSD, the World Bank and the ILO.

Whilst efforts should continue to develop and refine approaches to defining urban and rural areas for statistical and analytical use, there should be efforts to seek the development of statistical guidelines or standards that could be adopted by a recognized international standard-setting body on a definition of urban-rural areas and an accompanying framework to support its use in data collection instruments which could be applicable across different statistical domains in order to facilitate international reporting of statistical information, as for example, reporting of decent work indicators and related SDG indicators by urban and rural area to the ILO. Such a definition should not replace national definitions of urban and rural areas, but complement such definitions with a view to promoting international comparability of statistics by urban and rural area.

4. Linking work statistics concepts and variables with rural or urban areas

4.1 Proposed conceptual framework for linking work statistics with rural-urban areas

Measuring work statistics by rural-urban areas at the national level requires bringing together a target set of work statistics concepts, creating variables and disaggregating by rural or urban area (currently on the basis of national definitions of geographic areas) as depicted in Figure 7 below:

Figure 7. Disaggregation of work statistics concepts by rural-urban area

Work statistics concepts relate to those defined by the most recent international statistics standards, including the 19th ICLS *Resolution concerning statistics of work, employment and labour underutilization* (hereafter referred to as the "19th ICLS Resolution I") adopted in 2013.[47] For labour statistics measured through a labour force survey or related employment-based household survey, traditionally countries which have produced rural-urban disaggregated estimates have used the location of the dwelling to determine the rural or urban location associated with the estimates. Thus for example, employment estimates disaggregated by rural-urban area generally reflect the location of the household or dwelling, providing valuable information on the number of employed persons whose households are in a rural or urban area. This "residence-based" approach which relies on the survey sampling design provides useful information and is encouraged as an important means to produce rural-urban disaggregated labour statistics.

Nonetheless, it's important to bear in mind that workers may commute short or long distances to reach their place(s) of work, and may commute from one geographic region (rural or urban) to another. For those countries that seek to estimate the number of jobs or employed persons according to the *actual* workplace location, a second approach involving asking employed respondents about the geographic location of their place of work would allow such information to be produced, complementing information obtained using the residence-based approach. Among employed persons and persons engaged in unpaid forms of work, it is appropriate to capture the geographic location (rural or urban area) of a particular job or work activity by

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[47] For more information on the 19th ICLS *Resolution concerning statistics of work, employment and labour underutilization,* see: https://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_230304/lang--en/index.htm

its actual geographic location and not merely by a proxy such as the rural or urban location of the worker's dwelling.

Workers may live in either rural or urban areas and may also work in either rural or urban areas. The possible combinations of rural-urban location of households and jobs or work activities are shown below in Figure 8.

Figure 8. Possible combinations of geographic location of dwelling (or household premises) and geographic location of rural/urban job or work activity, considering rural-urban areas

	Urban household	Rural household
Urban job or work activity	Urban household and urban job or work activity (1)	Rural household and urban job or work activity (2)
Rural job or work activity	Urban household and rural job or work activity (3)	Rural household and rural job or work activity (4)

Source: ILO

When a worker commutes to a job located in an urban area from their dwelling which is located in a different urban area, the situation would be captured in cell (1) above for purposes of classifying the rural-urban location of the dwelling and the job. A similar situation holds for a worker who lives in a rural area and commutes to work in another rural area, as they would be captured in cell (4) above. (Information on commuting patterns between "like" geographic areas (e.g. one urban area to another urban area) may nonetheless be captured in the survey to inform policy.)

An additional dimension not depicted in Figure 8 relates to whether the job or work activity is usually carried out in single geographic location or in dual geographic locations. A *single or fixed geographic workplace location* makes reference to a situation in which the usual place of work for a given job or work activity is uniquely in either a rural or an urban location. A *dual workplace location* refers cases in which the place of work of a given job or work activity is located in *both* urban and rural areas during a given

reference period.[48] This may be the case for example of transportation jobs that may regularly be carried out in both urban and rural areas during a given reference week. To the extent that this dimension is important to measure in the national context, it might be best to try to seek to identify which is the predominant rural or urban location in cases of dual workplace location, for example on the basis of the geographic location in which the longest hours are usually worked (as defined by the international statistical standards on working time[49]).

Turning back to the two dimensions depicted in Figure 8, by obtaining information on the location of the dwelling or place of usual residence of the worker, one of the dimensions (urban or rural household) is captured. Obtaining information on the second dimension (rural-urban job or work activity location) requires seeking additional information about the workers living in households. The two dimensions may be captured in a dual approach for producing household-based labour statistics by rural and urban areas that includes a "residence location" approach and a "workplace location" approach, defined as follows:

Residence location approach: An approach used to produce labour statistics by rural and urban area in household-based surveys which identifies the rural or urban location of the usual place of residence within selected dwellings (or household premises) and links the geographic location with the corresponding survey estimates.

Workplace location approach: An approach used to produce labour statistics by rural and urban area in household-based surveys which identifies *both* the rural and urban location of (1) the usual place of residence within selected dwellings (or household premises) and (2) that of the workplace (i.e., location of the job or work activity) and links the geographic location with the corresponding survey estimates. In this approach, the rural or urban location of some estimates will correspond to that of the usual place of residence, while that of others will correspond to that of the workplace. (Which types of estimates use one or the other location is described in more detail below).

The two approaches are valuable for producing rural-urban disaggregated labour statistics as they can produce complementary information that is useful for informing policy. For example, applying the dual approach may permit comparing information on employed persons that live in rural areas but whose jobs

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[48] Furthermore, dual rural-urban workplace locations for any given job or work activity may involve work carried out jointly between one distinct urban area (e.g. a unique urban administrative unit as per the national definition) and one distinct rural area, or it may involve working in combinations of single or multiple distinct urban area(s) jointly with single or multiple distinct rural area(s). To the extent that such situations are important in the national context, countries may wish to separately identify such dual workplace location types involving combinations of multiple urban and rural areas.

[49] See the *Resolution concerning the measurement of working time* adopted by the 18th ICLS (November-December 2008) available at: https://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang--en/index.htm

are in urban areas (including their wages, household income, working time and commuting time) against that of employed persons who both live and work in urban areas.

The residence location approach is the current standard practice among countries that disaggregate labour force estimates by rural-urban area and is the more readily implemented of the two approaches, requiring geographic location information defined by the sampling design and place of usual residence information, when available, to be linked to the estimates. A key benefit of this approach is that it is possible to apply constraints in the weighting procedure, whereas in the workplace location approach this is not possible, hence estimate accuracy may be lower in the latter approach. Countries are encouraged to disseminate information with the relevant metadata noting the approach (or approaches) and methods used.

The workplace location approach starts by differentiating between different labour force statuses. Since this approach seeks to identify the workplace location of employed persons as a primary reference group, persons identified as being in employment would need to be asked a question(s) in the questionnaire to help identify the rural or urban location of their job(s). A similar approach would be used to identify the geographic location of unpaid work activities of persons engaged in unpaid forms of work, for example, unpaid apprentices and volunteer workers. In this approach, the rural or urban location of the job or work activity associated with persons who work from home (i.e. those who perform the work on the premises of their household) will be identical to that of the usual place of residence within the selected dwelling. Similarly, in this approach the rural-urban location associated with persons in unemployment or persons outside the labour force (including potential labour force) would be captured by the rural or urban location of the usual place of residence within the selected dwelling.[50]

The workplace location approach is thus somewhat more complex to apply than the residence location approach. Figure 9 below depicts how this approach could be used to link work statistics concepts and related variables with their associated geographic location (rural or urban area).

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[50] It could be argued that it may also be useful for policy purposes to understand the main rural or urban location(s) in which unemployed persons are seeking a job (for example, the rural or urban location of job banks, employment centers, targeted employers, etc.). Nonetheless, this document proposes establishing the rural or urban location of unemployed persons according to the location of the dwelling or household premises where they live.

Figure 9. Workplace location approach: Linkages between key work statistics concepts, variables and rural-urban area
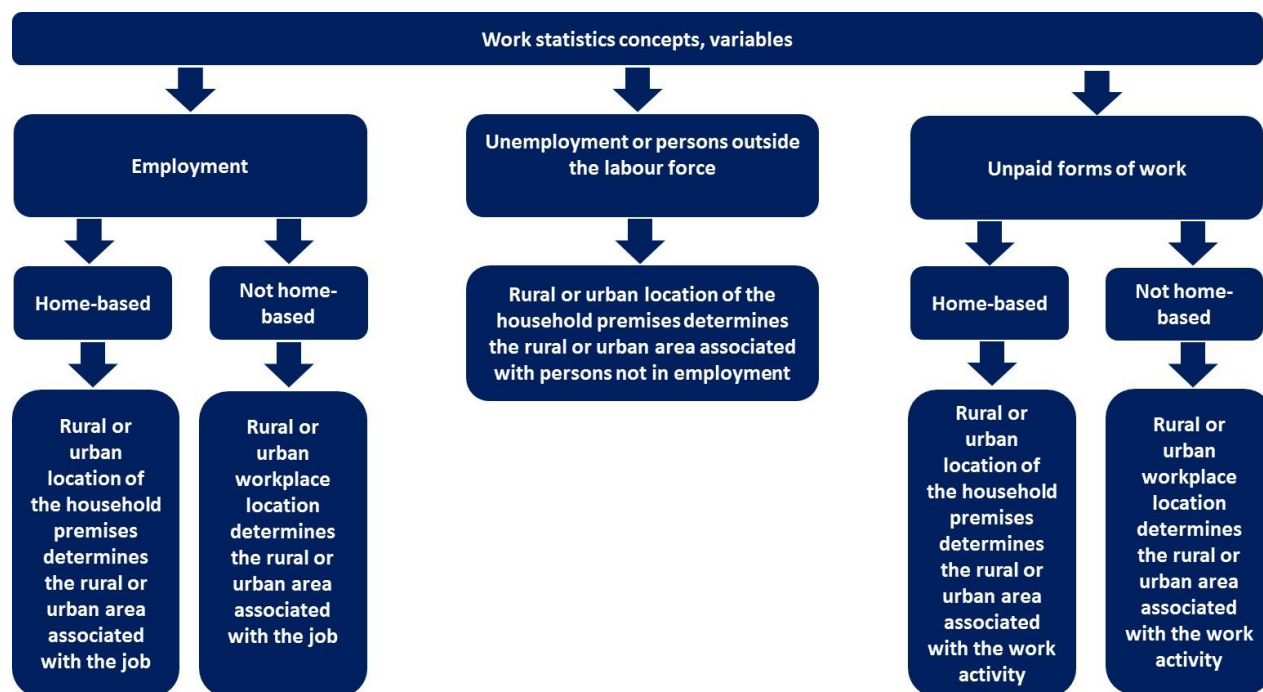
Source: ILO

4.2 Process of integrating a national definition of rural-urban area in a labour force survey or related household survey

It is important to understand the process of integrating a national definition of rural-urban area in the labour force survey (LFS) or related household survey in each of the two approaches outlined above. As both approaches are valuable for producing rural-urban disaggregated labour statistics, application of both approaches would be recommended. For countries that have not yet begun producing labour statistics by rural-urban area, it would be recommended to apply these approaches in a phased-in manner, starting with implementation of the residence location approach and subsequently implementing the workplace location approach. In the case of the residence location approach, the process involves obtaining dwelling geographic location information from the survey sampling design as well as supplementary information (if available) from the questionnaire to help establish whether the dwelling is the usual place of residence of survey respondents (see Figure 10).

Figure 10. Residence location approach: Process of application of a national definition of rural-urban area in a labour force survey or related household survey

National definition of rural-urban areas is established
(Clear set of criteria identified)

Set of criteria is applied to the national territory for mapping and use
in the Labour Force Survey (LFS) or related household survey

Survey Measurement:
Questionnaire design

Survey Representation:
Sampling design

Question(s) introduced in LFS or household survey to identify place of usual residence as well as full set of LFS questions

Stratification variables and estimation domains are defined (e.g. rural-urban areas) and sample size is determined

Responses on place of usual residence are used to define the rural-urban location of the household members of working age which can be linked to the full set of labour statistics estimates

Information is used jointly to define the usual residence of respondents based in selected households to associate with the full set of survey estimates

Multistage stratified cluster sampling is carried out (defines rural-urban location of selected households) to associate with the full set of labour statistics estimates

Source: ILO

The workplace location approach involves the same processes as outlined above in the residence location approach, but also requires some additional information gathering from the survey measurement part of the process as compared with the residence location approach (see Figure 11).

Figure 11. Workplace location approach: Process of application of a national definition of rural-urban area in a labour force survey or related household survey

National definition of rural-urban areas is established
(Clear set of criteria identified)

Set of criteria is applied to the national territory for mapping and use
in the Labour Force Survey (LFS) or related household survey

Survey Measurement:
Questionnaire design

Survey Representation:
Sampling design

Question(s) introduced in LFS or household survey to identify (1) place of usual residence and (2) the rural or urban location of job(s) (of employed persons) or of work activities

Stratification variables and estimation domains are defined (e.g. rural and urban areas) and sample size is determined

Responses to questions on: (1) place of usual residence are used to help identify the rural or urban location of the household members of working age which can be linked to home-based jobs, home-based work activities, unemployed persons, and persons outside the labour force (2) non home-based job location or non-home based work activity location are mapped to rural or urban areas as per the national definition

Information from survey measurement is used jointly with sampling information to help identify the usual residence of respondents based in selected households to link with home-based jobs and home-based work activities, unemployed persons, and persons outside the labour force

Multistage stratified cluster sampling is carried out (defines rural and urban location of selected households) to associate with home-based jobs and home-based work activities, unemployed persons, and persons outside the labour force

Source: ILO

5. Urban-rural classification used in labour statistics and work statistics concepts by rural-urban area

Although geographic areas represent a continuum of various characteristics where blurring occurs in some "in-between" zones, in practice for statistical purposes the dichotomous classification of urban and rural areas is the main classification used by countries to inform policy targeting urban and rural areas. It is also the main classification used for reporting of statistics by subnational geographic area to international organizations that are part of the United Nations (UN) system, including the ILO. In the case of labour statistics, the intention is to associate the dichotomy of rural-urban areas to labour force status (and related variables such as wages and working time of employed persons) and also to the different forms of work in which survey respondents are engaged.

Both the residence location approach and the workplace location approach are recommended depending on national policy information needs and resource constraints. The national definition of rural-urban areas in both approaches should be applied to the national territory for mapping and used in the LFS or related household-based survey.

In the workplace location approach, questions should be included in the household survey questionnaire to help identify the rural or urban place of usual residence of respondents (in the selected dwellings) as well as to identify the rural or urban location of jobs and work activities in accordance with the national definition of urban and rural areas. Once the association between jobs (or work activities) and rural or urban areas is established, the rural-urban linkages to other labour statistics variables such as those related to wages, working time, subsistence foodstuff producers, occupational injuries, trade union membership, among others, can be readily established.

The proposed conceptual framework of work statistics by rural-urban area takes into account concepts and definitions in the 19th ICLS Resolution I and associates these with specific geographic locations (that is, rural and urban areas). It has as its foundation the basic urban-rural classification used to disaggregate labour statistics and seven statistical concepts which are particularly relevant to work statistics by rural-urban area, as follows:

1. Urban-rural area classification in labour statistics
2. Usual place of residence by rural-urban area (or alternatively, "dwelling where present at time of data collection" as discussed below)
3. Home-based jobs and work activities by rural-urban area
4. Workplace location by rural-urban area
5. Job or work activity by rural-urban area
6. Employed persons by rural-urban area
7. Unemployed persons by rural-urban area
8. Persons outside the labour force by rural-urban area

The following paragraphs discuss each of these topics in turn. Moreover, the issue of how to approach persons in different work statistics categories who may have associations with different geographic locations as well as addressing composite measures by rural-urban area is discussed below.

5.1 Urban-rural area classification in labour statistics

An urban-rural classification is fundamentally a geographic delineation of the national territory according to a national definition which establishes a particular set of criteria as previously described in Section 2, allowing the identification of both urban areas and rural areas of a country. For most countries, categorizing households, jobs and work activities according to the following (essentially) dichotomous classification would be essential for the analysis of labour statistics by rural-urban area.

> Urban-rural area classification
> a. Urban area
> b. Rural area
> c. Not classifiable by urban or rural area

The ordering of the categories in the classification reflects the fact that virtually all countries define urban areas while rural areas are defined as a residual category within the national territory. The dichotomous classification is the one currently most commonly used by countries at the national level and is also the one most often used for international reporting purposes by UN organizations such as the ILO, for example, for reporting of decent work indicators and related SDG indicators disaggregated by rural and urban area.

The third category "Not classifiable by urban or rural area" is intended to capture situations where a given variable cannot be classified as being either urban or rural. The type of situation where such a category may be applicable could be exemplified for example by countries that define urban and rural areas on the basis of criteria applied to the land territory but whose total national territory also includes important bodies of water. For example, a country which is an archipelago which is a cluster of islands surrounded by sea in which the sea is part of the national territory may exclude the territorial waters from the scope of its definition of urban and rural areas. Linking with work statistics concepts, to the extent that the workplace location associated with certain jobs or work activities is identified as such a body of water, it could be classified under the third category of the classification.

It should be noted that in very small countries or island states that do not have distinctly defined rural and urban areas and in labour force surveys whose coverage scope includes for example only urban areas, it will not be possible to classify household premises, dwellings, jobs or work activities by urban or rural area.

Alternative classifications such as the multiple category typologies used by EUROSTAT and OECD (described in Section 3) are also valuable, but may be difficult to implement in countries that lack the resources to produce estimates even according to the basic dichotomous classification.

5.2 Usual place of residence by rural-urban area

The "usual place of residence" is defined in this room document in accordance with the recommendations by the United Nations Statistics Division in the document, *Principles and Recommendations for Population and Housing Censuses, Revision 3*,[51] as presented below using original text and paragraph number sections:

> 2.48. In general, **usual residence is defined** for (data collection)[52] purposes as the place at which the person lives at the time of the (data collection), and has been there for some time or intends to stay there for some time.[53]
>
> 2.49. Most individuals enumerated have not moved for some time and thus defining their place of usual residence is unambiguous. For others, the application of the definition can lead to many interpretations, particularly if the person has moved often.
>
> 2.50. It is recommended that countries apply a threshold of 12 months when considering place of usual residence according to one of the following two criteria:
>
> (a) The place at which the person has lived continuously for most of the last 12 months (that is, for at least six months and one day), not including temporary absences for holidays or work assignments, or intends to live for at least six months;
>
> (b) The place at which the person has lived continuously for at least the last 12 months, not including temporary absences for holidays or work assignments, or intends to live for at least 12 months.

The usual place of residence should be assigned to a rural or urban area according to the urban-rural classification given above in 5.1.

Note: Some countries might wish to produce rural-urban labour statistics according to the "**dwelling where present at time of data collection**". For example, some countries may wish to apply this approach if there are numbers of seasonal agricultural workers who may live temporarily (e.g. one to three months) in places close to the farms where they work during the harvest season. To the extent that such seasonal agricultural workers may live and work in rural areas for short durations, using the usual place of residence as defined above will undoubtedly undercount them. Further discussion is perhaps needed on this topic in order to develop recommendations for countries.

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[51] UN Statistics Division, Op. cit.

[52] Originally was "the census" instead of "data collection".

[53] One minor modification has been introduced in section 2.48, as the word "census" was substituted by "data collection" to allow application to different data collection instruments for use in labour statistics.

5.3 Home-based jobs and work activities by rural-urban area

The 19th ICLS Resolution I, paragraph 12(b) defines the concepts of "job" and "work activity" as follows:

*A **job or work activity is defined** as a set of tasks and duties performed, or meant to be performed, by one person for a single economic unit. The term job is used in reference to employment. This statistical unit, when relating to own-use production work, unpaid trainee work, and volunteer work is referred to as work activity.*[54]

"Home-based jobs and work activities" are defined in this room document on the basis of recommendations by the United Nations Statistics Division (UNSD) in the document, *Principles and Recommendations for Population and Housing Censuses, Revision 3*.[55] In the UNSD document, "type of workplace" refers to the nature of the place where the person performed his or her main job and distinguishes between the home and other workplaces, whether fixed or otherwise.

In this room document, the concept of "home-based jobs and work activities" closely aligns with the UNSD type of workplace subcategory of "work at home" with the exception that the UNSD concept focusses on employment (and main jobs), that is, on work for pay or profit while the concept here applies to jobs (in work for pay or profit) *and* also to work activities (associated with unpaid forms of work).

Home-based jobs refers to those jobs performed from within the home or household premises, such as jobs carried out by farmers who work for pay or profit and live on their farms, paid homeworkers, independent workers producing goods and services inside their own homes, and other jobs performed within the home by employed persons.

Home-based work activities refers to those work activities performed from within the home or household premises, such as subsistence farmers working and living on their subsistence farms, work activities involving production of other goods for own household consumption, or work activities providing services for own household consumption, such as preparing own meals, caring for own children or own house cleaning.

The rural or urban area associated with home-based jobs or work activities refers to the geographic location of the respondents' dwelling or household, according to the urban-rural classification given above in 5.1.

5.4 Workplace location by rural-urban area

The "workplace location" is defined in this room document on the basis of recommendations on "place of work" by the United Nations Statistics Division (UNSD) in the document, *Principles and Recommendations for Population and Housing Censuses, Revision 3*.[56] UNSD recognizes two main topics related to the place of work of persons in employment, namely: (1) the type of workplace and (2) its

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[54] 19th ICLS *Resolution concerning statistics of work, employment and labour underutilization,* Op. cit.
[55] UN Statistics Division, Op. cit.
[56] UN Statistics Division, Op. cit.

geographic location. Note that for purposes of this room document, *the workplace location may apply to both jobs and work activities,* as defined by the 19th ICLS Resolution I (see section 5.4 below).

In this room document, the concept of "workplace location by rural-urban area" partially aligns with that of the "geographic location of the place of work" recommended by UNSD, which is presented in the following sections with original text and paragraph number sections included.

> 4.363. The geographic location of the place of work can provide useful information for planning when used together with information on place of residence. To this end, countries may collect, for employed persons with a fixed place of work outside the home, information on the location of the place of work (or the reporting place) during the reference period. The information collected should relate to the smallest civil division in which the job is performed, for example, in order to establish commuter flows from the place of residence to the place of work. Some countries investigating this topic in the population census have recorded the actual address of the place of work, allowing detailed tabulations and mapping of place of residence by geographic location of place of work. Information on actual address of the place of work can also be useful for industry coding in countries where a business register has been developed that shows the industry code of each recorded establishment.
>
> 4.364. In some countries there may be concerns about the sensitivity of questions on the address of place of work owing to fears that there may be follow-up to a respondent's employer. In many developing countries, it may not be possible to gather information on actual address of place of work because street addresses do not exist, and for proxy responses, the address may not be known. In those situations, it would be useful to consider collecting information on the village, suburb, or similar low level of geography.
>
> 4.365. Additional questions may also be asked on the method of travel to work in order to produce statistics on travel-to-work patterns, valuable as basis for transportation planning.

The main difference proposed in this room document concerning workplace location by rural-urban area vis-à-vis the "geographic location of the place of work" recommended by UNSD (for purposes of the population and housing census) is that here, rather that suggesting to collect information solely on the basis of employed persons with a fixed place of work outside the home, labour statisticians may wish to consider allowing measurement of both fixed and dual workplace locations.[57] In many countries, there may be important numbers of jobs and work activities that are associated with dual workplace locations, and that should perhaps not be excluded from national rural-urban labour statistics. This is a topic which requires further discussion in order to provide guidance to countries.

Workplace location by rural-urban area is defined according to the geographic location of the place of work as given by the urban-rural classification given above in 5.1.

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[57] Dual workplace location refers to situations in which the place of work of a given job or work activity is located in *both* urban and rural areas during a given reference period.

5.5 Job or work activity by rural-urban area

The 19th ICLS Resolution I, paragraph 12(b) defines the concepts of "job" and "work activity" as follows:

*A **job or work activity is defined** as a set of tasks and duties performed, or meant to be performed, by one person for a single economic unit. The term job is used in reference to employment. This statistical unit, when relating to own-use production work, unpaid trainee work, and volunteer work is referred to as work activity.*

Regarding linking the national definition of urban and rural areas to jobs or work activities, as with the full set of labour statistics, countries are recommended to first implement the residence location approach in the LFS or related household survey. This would provide information for example on the number of jobs carried out by employed persons whose usual place of residence is in urban or rural areas.

If short-term seasonal jobs or work activities are present in a country (for example, jobs carried out by seasonal agricultural workers) in which workers temporarily live near the place of work, to the extent that statistical information is needed about such situations countries should evaluate whether to base the place of residence on the "usual place of residence" or the "dwelling where present at time of data collection". As noted above, using the "usual place of residence" concept will undercount seasonal agricultural workers who live and work in places for short periods of time, affecting the measurement of jobs in rural areas.

The question(s) in the questionnaire should allow the opportunity for identifying employed persons who work from home or on the household premises, in which case the rural-urban location of the job is the same as that of the household or dwelling. Similarly, in the case of persons in unpaid forms of work, a specific question or couple of questions may be introduced in the questionnaire to allow such respondents to identify the location of their work activity (is). Here too, work activities performed at the respondent's home or household premises would assume the same rural-urban location identity as that of the household or dwelling.

Once countries have successfully implemented the residence location approach in their LFS or related household surveys, countries would be encouraged to implement the workplace location approach in the survey. Under this approach, the location of a job or work activity by rural-urban area is determined by identifying the workplace location and linking it to the corresponding rural or urban area as per the national definition (based on a specific set of criteria). A specific question or couple of questions may be introduced in the survey questionnaire to allow respondents who meet the conditions of employment to identify the location of their job(s), that is, the location where the job is carried out and similarly to allow respondents in unpaid forms of work to identify the location where the work activity (ies) is (are) carried out. Ideally the question(s) should not directly ask the respondent whether their job or work activity is located in a rural or urban area, but rather should allow identification of specific locations (for example, name of the locality

where they work, work address or postal code) which can be linked to the corresponding rural or urban area.[58]

With the implementation of 19th ICLS Resolution I, countries are no longer encouraged to measure unpaid work activities within the SNA production boundary as jobs. According to the Resolution, unpaid forms of work includes own-use production of goods that comprises the subcategory of subsistence foodstuff producers. Subsistence foodstuff production work activities are most often carried out in rural areas of developing countries, and to the extent that these are an important share of productive activities in a country and previously measured as jobs means that the number of rural jobs in the country is likely to decrease with the implementation of the 19th ICLS Resolution I standards.

Job or work activity by rural-urban area (using the workplace location approach) is defined according to the geographic location of the job or work activity as given by the urban-rural classification given above in 5.1.

5.5.1 Special situations that pose challenges to classification of jobs and work activities by rural-urban area

There are some situations which may create difficulties for identifying the rural or urban location of the job or work activity. This reflects the fact that various types of jobs and work activities are difficult to classify on the basis of the actual location of the place of work since the work involves different locations in either fixed or unfixed locations. For example, there are some jobs characterized by part of the working time spent in fixed locations in urban areas with the remainder spent in fixed locations in rural areas. This includes workers engaged in teleworking, for example, whose main work location could be in an urban area but who sometimes work from their home in a rural area. In such cases, a possible approach to classify the geographic location of the job would be to consider in which area (urban or rural) the most hours are usually worked during a given reference period.

There are also persons whose work is carried out in unfixed geographic premises, such as those whose work involves movement across land, airspace or water within the national territory or even combinations of these. The implications for the geographic associations with work concepts are that a given job may involve moving across different geographic (rural-urban) areas and even across air and water. Such is the case for example with transportation jobs mainly carried out in territorial waters (e.g. ship or boat crewmembers), over national airspace (e.g. flight crew) or on land (e.g. long-distance truck drivers and train personnel). To the extent that certain areas of bodies of water, such as parts of a river, are considered as rural or urban within the national territory, productive activities carried out there may be considered either rural or urban. There are also other types of jobs and work activities that may have unfixed or multiple work locations (such as traveling salespersons, road and electrical maintenance workers, journalists, musicians etc.) that

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[58] Another type of information on geographic location associated with jobs of certain employees or dependent contractors could involve asking respondents about the location from which the work is organized or supervised, if different from the location where the job is carried out. This information would supplement the information on the actual workplace location of these types of employees or dependent contractors.

may move and work across rural-urban areas. Similarly, migrant or itinerant workers (who may cross international borders) and nomadic workers may move across different geographic regions within the country in which the survey is conducted. It should be noted, however that workers in unfixed premises may include also ambulatory street vendors and others who are not likely to move across one geographic area to another (e.g. rural to urban).

In some countries, it may be important to identify whether the job (or work activity) is carried out in dual workplace locations (that is, both in rural and urban areas) during the reference period in the survey questionnaire. In cases of independent worker jobs or work activities with dual workplace locations, it might be best to try to seek to identify which is the predominant rural or urban location, perhaps on the basis of the geographic location in which the longest hours are usually worked (as defined by the international statistical standards on working time).

Among employees working in dual workplace locations (for example, an employee transporting goods to both urban and rural areas), where an employer work address exists within the national territory, this location could be used to identify the rural or urban location of the job. Thus, in these types of situations the rural or urban area associated with the job could be taken to be the place from which supervision or instructions emanate or from where the job or work activity is organized. However, if the intention is to obtain information about the *actual* geographic workplace location which in such cases is not carried out on the employer's premises but rather moving across rural and urban areas during a given reference period, perhaps the best approach would be as suggested above for independent workers, that is, to seek to identify which is the predominant rural or urban location on the basis of the geographic location in which the longest hours are usually worked.

Additional thought and discussion should be devoted to these special situations in order to provide clear recommendations to countries on classifying the geographic areas associated with such jobs and work activities.

5.6 Employed persons by rural-urban area

The narrower concept of employment as reflected in the 19th ICLS Resolution I sets the reference scope for labour force statistics. The resolution states that:

Persons in employment are defined as all those of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit. They comprise: (a) employed persons "at work", i.e. who worked in a job for at least one hour; (b) employed persons "not at work" due to temporary absence from a job, or to working-time arrangements (such as shift work, flexitime and compensatory leave for overtime).

Countries that begin by first implementing the residence location approach in the LFS or related household survey to produce rural-urban disaggregated statistics on jobs will be able to produce information for example on the number of employed persons whose usual place of residence is in urban or rural areas.

Thus, using the residence location approach, employed persons by rural-urban area refers to the geographic location of the household premises or dwelling of persons in employment according to the urban-rural classification given above in 5.1.

Following implementation of the residence location approach, countries would be encouraged to implement the workplace location approach in their LFS or related household surveys. When implementing this approach, it's important to bear in mind that employed persons may have one or multiple jobs. In cases of multiple job-holding, the main job is that with the longest hours usually worked, as defined in the international statistical standards on working time. Barring the special situations described in section 5.4.2 above, each job may be associated with a unique rural or urban area by means of a question(s) included in the labour force survey or related household survey questionnaire. If an employed person has just one job, the rural or urban area associated with the person corresponds to that of the job. However, if an employed person has multiple jobs, it is proposed that the associated rural or urban area should correspond to that of the main job. The urban-rural location of the employed person (using the workplace location approach) would then be defined according to the urban or rural workplace location of the (main) job using the urban-rural classification given above in 5.1, based on the national definition of urban-rural areas.

As noted previously, subsistence foodstuff production work activities are most often carried out in rural areas in developing countries. To the extent that this type of work activity represents an important share of overall productive activities in a country and previously measured as jobs suggests that the number of rural jobs and hence rural employment (as now measured according to the 19th ICLS Resolution I) in the country are likely to decrease. This will impact not only employment but also unemployment in the affected developing countries, as noted in the following section.

5.7 Unemployed persons by rural-urban area

The 19th ICLS Resolution I defines unemployed persons as follows:

Persons in unemployment are defined as all those of working age who were not in employment, carried out activities to seek employment during a specified recent period and were currently available to take up employment given a job opportunity, where: (a) "not in employment" is assessed with respect to the short reference period for the measurement of employment; (b) to "seek employment" refers to any activity when carried out, during a specified recent period comprising the last four weeks or one month, for the purpose of finding a job or setting up a business or agricultural undertaking. This includes also part-time, informal, temporary, seasonal or casual employment, within the national territory or abroad.

Following the priority rule and 1-hour criterion, some persons previously classified as employed will now be excluded from employment and will be asked questions allowing them to be classified as unemployed persons if they meet all three of the above criteria during specific reference periods (i.e., the person was not in employment, they carried out a job search and are available to start a job). The result of this factor is that unemployment will tend to increase.

However, some countries have been applying a "relaxed definition" of unemployment that was permitted under some circumstances under the previous (1982) ICLS standards in which the criterion of seeking work was not applied for measuring unemployment. This is no longer recommended under the 19th ICLS Resolution I standards in which all three criteria must be met to measure unemployment. The result of this second factor is that unemployment levels will tend to decrease in countries that previously used the relaxed definition of unemployment and now apply the strict definition that uses all three criteria to define unemployment.

The final impact on unemployment for a given country will thus depend on whether these two factors are relevant and, if relevant, the extent of their impact on the measurement of unemployment. Most countries don't use the "relaxed" definition of unemployment, so unemployment will tend to increase particularly in rural areas among developing countries that previously included subsistence foodstuff producers among employed persons. Hence, while unemployment rates have historically been lower in urban areas as compared with rural areas in many developing countries, this situation is expected to be reversed following implementation of the 19th ICLS Resolution I.

Turning to the issue of establishing the rural or urban location of unemployed persons, it is proposed that the location should be measured by the corresponding urban or rural location of the usual place of residence of unemployed respondents in the sampled dwellings. This follows the residence location approach and is also consistent with the workplace location approach as regards treatment of unemployed persons. The location of the usual place of residence of the unemployed person (in the dwelling or household premises) is the one most commonly used to analyse unemployment by rural-urban area.[59] The rural or urban area associated with unemployed persons thus refers to the geographic location of the dwelling or household premises according to the urban-rural classification given above in 5.1.

5.8 Persons outside the labour force by rural-urban area

The standards adopted by the 19th ICLS Resolution I provide a definition of persons outside the labour force as follows:

Persons outside the labour force *are those of working age who were neither in employment nor in unemployment in the short reference period.*

Previously a similar category adopted in the 1982 ICLS standards[60] which targeted persons who were not "economically active" was defined but included all persons not counted as "economically active"

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[59] While the rural or urban location of the usual residence of unemployed persons is the main proposed geographic location to be used for analysis of unemployment by rural-urban area, there are other geographic locations that could potentially be associated with unemployed persons, including: (1) geographic location from which the unemployed person mainly carried out activities to seek employment (if different from their usual residence), for example, the rural or urban location of a job or employment center, local library, internet cafe, etc.); (2) rural or urban location where unemployed respondents desire potential future jobs to be located; and (3) rural or urban location of the previous job for unemployed persons formerly employed.

[60] See the *Resolution concerning statistics of the economically active population, employment, unemployment and underemployment* adopted by the 13th ICLS (October 1982), available at: https://www.ilo.org/global/statistics-

irrespective of age. (The concept of the economically active population was replaced by that of the "labour force" with the adoption of the 19th ICLS Resolution I in 2013.) The change in definition of persons outside the labour force under the new standards reduces the overall number of persons outside the labour force as compared with the not-economically-active category as previously defined. However, the fact that the definition of employment is now narrower vis-à-vis the previous ICLS standards means that there is a greater likelihood of persons formerly classified as employed now being measured either as unemployed or not in the labour force, thus favoring an increase in the number of persons outside the labour force. The overall impact on the number of persons outside the labour force in any given country will depend on the relative weight of each of these two factors.

Similar to unemployed persons, it is proposed that the rural or urban location of persons outside the labour force (including components such as the potential labour force) be defined according to the corresponding rural or urban location of the usual residence of respondents of working age who are outside the labour force in the sampled dwellings. This follows the residence location approach and is also consistent with the workplace location approach as regards treatment of persons outside the labour force. The rural or urban area associated with persons outside the labour force thus refers to the geographic location of the dwelling or household premises according to the urban-rural classification given above in 5.1.

5.9 Persons in different work statistics categories, associations with multiple geographic locations and composite measures by rural-urban area

In the proposed framework on rural labour statistics, an individual person may be associated with different geographic locations reflecting the fact that they may be in different work statistics categories (as defined by the 19th ICLS Resolution I) simultaneously. For example, an unemployed person who is available to work in a part-time job, whose dwelling is in a rural area and who carries out a part-time unpaid internship located in an urban area could be associated with both rural and urban areas if the workplace location approach is applied to the unpaid work activity (in this case, the internship).

For measures that involve combining categories of jobs and work activities on the one hand with categories of persons in unemployment or persons outside the labour force on the other, one needs to decide whether to use the residence location approach for both indicators or combine this approach with the workplace location approach. For example, the measurement of persons in the labour force by rural or urban area could involve either (1) measuring both employed and the unemployed persons by rural-urban area based on the residence location approach (the most straightforward option) or (2) measuring employed persons by geographic location using the workplace location approach and separately using the residence location approach to measure the geographic location of unemployed persons. A similar approach would be used to classify the working age population by rural and urban areas. Similarly, different indicators of labour underutilization (i.e., LU2, LU3, and LU4, defined according to the 19th ICLS Resolution I standards[61])

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and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087481/lang--en/index.htm

[61] LU2 refers to a combined rate of time-related underemployment and unemployment. LU3 refers to a combined rate of unemployment and potential labour force. LU4 refers to a composite measure involving time-related underemployment, unemployment and potential labour force. For more information on ICLS recommendations

disaggregated by rural-urban area would require combining different variables (such as time-related employment with unemployment in the case of LU2) which could be produced by strictly using the residence-based location approach or, alternatively, by combining the two approaches. The residence location approach would be the simplest to measuring such indicators, and could be encouraged as the main way to produce the indicators. However, this is a topic that should be investigated and discussed further for final recommendations to be proposed.

A similar situation relates to rural-urban disaggregated indicators that involve combining employment with characteristics of the household, for example rural-urban working poverty rates. Measurement of rural or urban based households whose income is below the poverty line is best captured using the residence location approach. The number of employed persons living in such households could be measured using either approach, but for purposes of producing the rural-urban disaggregated poverty rate would probably best be captured using the residence location approach. Here too, further review and discussion is needed for any final recommendations to be proposed.

6. Data sources for labour statistics by rural-urban area

Given that rural-urban labour statistics is a specialized area of labour statistics, different official sources of labour statistics may be used to produce these types of estimates and indicators. It is important to recognize that no single data source can meet all needs and that different sources help to contribute to an overall system of rural-urban labour statistics. Data producers and users alike should be aware of the relative strengths, limitations and complementarities of different data sources for producing high quality statistics in this specialized area.

Labour statistics surveys that focus exclusively on rural areas or only on urban areas may be useful to inform rural or urban-labour policy by producing estimates on phenomena that may exclusively or primarily be associated with rural areas or alternatively, with urban areas. When household surveys are conducted exclusively in urban areas or in the largest cities, it often reflects the fact that most of the population is concentrated in urban areas and/or that rural populations are quite disperse and thus costly to reach for interviewing. Latin America is a region that has in recent decades been characterized by high concentrations of urban populations and some countries continue to have an urban population coverage scope in their labour force or related household surveys. However, surveys with urban-only coverage have the obvious disadvantage of not allowing comparisons with rural areas.[62]

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related to these indicators, see the 19th ICLS *Resolution concerning statistics of work, employment and labour underutilization.*

[62] The ILOSTAT repository metadata reveals that since the year 2000 for the yearly indicator collection on employment, 16 countries have reported an "urban coverage" or "main cities and metropolitan area coverage" in their labour force survey or other household survey. Eleven of the countries are in the Latin America region while five are located in Africa. Additional countries reported total national coverage excluding some areas, but it is not clear what types of areas are excluded.

The main data sources of labour statistics by rural-urban area include the population and housing census, household surveys (such as labour force surveys (LFS) and household income and expenditure surveys (HIES)), establishment-based censuses and surveys, and administrative records. Agricultural censuses and surveys are also often key sources of information in the national statistics system, and such sources can provide useful information about agricultural holding assets and productive activities that may complement labour statistics from other sources. Nonetheless, it is important to note that while there may be a substantial amount of agricultural activity carried out in rural areas, this is not always the case since rural areas may be associated with a diverse set of economic activities, and agricultural activities are not synonymous with rural productive activities.

Each data source has a unique set of objectives, coverage scope, periodicity, measurement units and other unique features. The coverage scope includes geographic coverage of the survey, worker and enterprise coverage and job coverage. In the case of the population and housing census, there is generally universal coverage of the civilian population living in households while an economic census is a census of establishments whose coverage depends on the objective and frame. Household surveys that cover the entire national territory draw a sample of the population living in both urban and rural households (associated with jobs in rural-urban areas). Establishment surveys covering the entire national territory draw a sample of rural and urban establishments. In both types of surveys that produce labour statistics, rural-urban area coverage depends on survey objectives and sample design. Administrative registers that can be used to produce labour statistics (for example, on occupational injuries) are defined by legal or administrative obligations and cover the registered or contributing population, preferably associated with both rural and urban areas. Thus, in theory each of the above types of data sources may produce estimates by rural and urban area if so designed.

A well-designed, integrated national labour statistics system targeting estimates by rural-urban area requires a sound labour statistics framework defined by international statistics standards for example, standards adopted by the ICLS. To the extent possible it requires coherence and complementarity between the different national data sources, including the definitions and classification of rural-urban areas, as well as coherence of other classifications used in labour statistics, work statistics concepts and definitions, reference periods and other survey methods including sampling design.

The sections below outline the key characteristics, strengths and limitations of the main data sources that may produce labour statistics by rural-urban area, including population and housing census, household surveys (and in particular, LFS), establishment-based surveys, and administrative records.

6.1 Population and housing census

The population and housing census is the official procedure of systematically acquiring and recording information about the members of the population, normally at regular, long-term intervals such as every ten years. In addition to its importance for permitting the collection of data on the economic characteristics of the population, the population census is critical for providing benchmark data on economic characteristics to which statistics from other sources, such as the labour force survey, can be related over time. As regards supporting rural-urban estimation, the population census is important for its role in

establishing the enumeration areas (EAs) that often serve as the primary sampling frame in a household survey, facilitating rural-urban stratification at the first stage of sampling. The population census may provide auxiliary variables that can also be used for sample stratification. The population census complements other sources of data on economic characteristics.

The population and housing census has some advantages as a data source for producing basic economic characteristics of the entire population, both in rural and urban areas. Extensive cross-tabulations may be produced, including detailed rural-urban breakdowns. The census allows the production of statistics for administrative divisions, small geographical areas and small population groups.

However, its limitations include the fact that it is conducted only once every ten years and thus is of limited use for monitoring the economic characteristics of rural and urban populations between censuses. It is costly to produce and questions on economic characteristics of the population compete for space on the questionnaire with other topics. Also, some labour statistics concepts are too complex to be properly measured in a census, including topics of particular relevance for rural and/or urban areas such as labour underutilization, informality and subsistence foodstuff producer rate.

6.2 Labour force surveys

Labour force surveys (LFS) are probability-based sample surveys of households that seek to collect coherent information on the total working-age population and its components. LFS constitute the main data collection instrument for statistics on employment, unemployment and persons outside the labour force and, if well designed, can provide high quality labour force estimates by rural and urban areas. The LFS may be used to collect information related to certain unpaid forms of work including own-use production of goods work (includes subsistence foodstuff production) which is relevant in some country contexts, particularly in rural areas. LFS permit the measurement of persons in employment who may have multiple jobs in different geographic locations.

The coverage scope of persons in LFS is defined by the relevant set of topics and decent work indicators to be produced. For indicators whose coverage scope targets employed persons (or subgroups such as employees), it is proposed that the rural or urban location be identified initially using the residence location approach. Subsequently, the workplace location approach could be added as a complementary approach, identifying the rural or urban location of the main job of employed persons. Identification of the geographic location of main jobs can be used to gain insight about labour demand trends by urban and rural area, including employment and working time. The hours, earnings and other topics associated with employed persons would correspond to the rural or urban area as identified by the corresponding approach which is used. In the case of home-based workers, unemployed persons, and persons outside the labour force, the rural or urban location is proposed to be that of the respondent's household premises or dwelling as identified using the residence location approach.

There are many advantages of LFS for producing rural-urban labour statistics. LFS are flexible instruments that can cover a very large set of labour topics, and if designed for rural and urban estimates separately, they permit the construction of a range of decent work indicators by rural-urban area. Personal interviews

involving detailed questions allows precise measurement of concepts, for example, to help identify the rural or urban location of employed respondents' jobs when using the workplace location approach. If conducted frequently, LFS can provide estimates to monitor short-term labour force trends in rural and urban areas. LFS provide estimates on persons and their households, and by associating unemployed persons and persons not in the labour force with the corresponding geographic location of the household premises, it is possible to identify the rural or urban location of such persons. Moreover, LFS has the advantage of covering all workers, including those in self-employment and those in unpaid forms of work found in both rural and urban areas. LFS allow disaggregations by demographic variables including by sex, age group and ethnic group, which if disaggregated further by geographic area can provide policy makers with valuable information regarding decent work deficits by demographic and rural-urban breakdowns.

There are some limitations associated with LFS. Sample surveys such as LFS often prevent the production of reliable estimates for small groups or geographic areas such as individual cities or particular rural areas. Nonetheless, modelling techniques may be applied to LFS results to produce modelled estimates for small geographic areas. Such methods are applied for example in the United States[63] and there is a Eurostat project plan underway among EU countries.[64] Due to cost considerations, some LFS have limited geographic coverage, for example covering only urban areas or the largest cities in the national territory. In such cases, no rural estimates from the LFS are available for comparison with urban estimates, eliminating the possibility of any analysis of decent work trends in rural areas. LFS are prone to measurement error regarding identification of jobs by industry or occupation, particularly when involving proxy respondents. LFS are also prone to item nonresponse on sensitive topics such as employment-related income. Yet, despite these limitations, LFS are considered the best data source for labour force estimates and, more broadly, many decent work indicators disaggregated by rural-urban area.

6.3 Employment-based establishment surveys

Employment-based establishment surveys (EES) are probability-based sample surveys of establishments that seek to obtain statistical information on topics such as employment (often measured by number of employee jobs), hours, earnings, labour cost, job vacancies, skills gaps and employee training and employee benefits. EES may have a short-term purpose to produce current statistics and trends or serve needs for structural statistics such as the distribution of earnings or occupational employment by detailed industry. EES allow the measurement of jobs held by persons working in establishments, not the number of employed persons. They generally cover employees, that is, not all employed persons are covered.

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[63] See the Local Area Unemployment Statistics (LAUS) program of the United States Bureau of Labor Statistics which uses information from the Current Population Survey (the monthly LFS) as well as other official data sources to produce modelled local area estimates. The weblink is available at: https://www.bls.gov/lau/lauov.htm.

[64] See the Eurostat project plan on the Establishment of a European set of Labour Market Areas (LMAs) which aims to compile comparable labour statistics at the European level on small geographic areas within each country. See more at: https://ec.europa.eu/eurostat/cros/content/labour-market-areas_en

The sampling design of EES often involves stratification by geographic region, including by administrative regions and in some cases by rural and urban areas. Sample stratification of EES is also often carried out by size class, that is, according to the number of employees in the establishments. The rural or urban location of the employee jobs (and associated variables such as hours and earnings) and job vacancies is identified on the basis of the location (address) of the corresponding establishments which can be linked to rural or urban areas as per the national definition.

EES are characterized by a number of advantages. Assuming that rural-urban estimation domains for key indicators are targeted, the rural-urban estimates from the survey will be quite reliable. EES permit the collection of coherent data on employees who work in the sampled establishments of different size classes in both rural and urban areas. Since information may be derived directly from employee payroll and financial data, they can be a good source of periodic data on wages and hours statistics. Similarly, since establishment managers are able to accurately identify their economic activity and the occupations in the establishment, there may be less likelihood of measurement error in identifying these as compared with household surveys that may use proxy respondents and coding from open-ended responses to identify industries and occupations associated with employed persons in the household.

There are also some limitations of EES, including the fact that sometimes the smallest establishments (i.e. those with fewest employees) are excluded from the sampling frame. To the extent that rural areas are associated with smaller establishments, this could be an important impediment to accurately analysing and comparing the decent work characteristics associated with establishments in each geographic region. It may be difficult to obtain reliable estimates for small industries and in many cases EES estimates may not allow data disaggregation by demographic variables including by sex, age group, and ethnic group. EES often excludes self-employment in sampled establishments which can represent a high percentage of total employment in developing countries.

Although the informal sector may be present in both rural and urban areas, if the establishments are not part of the EES sampling frame (often based on a business register) they will not be sampled along with the registered formal sector. Moreover, EES often exclude the agricultural sector. Agricultural employment still represents a sizable share of total employment in many developing countries and is generally more often located in rural areas so that excluding this sector from an EES will yield an incomplete picture of the employment situation in rural establishments. The non-farm employment-related estimates by rural-urban area produced from the EES can be supplemented by similar estimates produced by agricultural surveys with an appropriate employment module.

6.4 Administrative Records

Administrative records are systematic registers related to administrative procedures maintained by institutions of the public sector. They are often used to carry out the administration or operationalization of government programmes and serve to control, verify and monitor compliance with legal and/or administrative obligations. As government programmes and legal or administrative obligations are often targeted to different geographic regions, if designed to collect information from both rural and urban areas, the administrative registers may allow information to be disaggregated by such geographic areas to support

targeted monitoring. Social protection information is most commonly collected through administrative records, and statistical information could potentially be disaggregated by rural and urban areas depending on the scope of coverage. Decent work statistics information that may be collected through administrative records includes topics such as occupational injuries, trade union membership, collective bargaining coverage, and population covered by health care provision.

Business registers and agricultural holding registers can provide good sampling frames for employment-based establishment and farm surveys, but they may have more limited relevance in contexts where a sizable share of the establishments operate within the informal sector. Some countries maintain administrative records on workers in the agricultural sector which may be important for supplementing statistical information on employment in rural areas. For example, records may be maintained on migrant farm workers who are granted work permits for the duration of the crop harvest period.

While the residence location and workplace location approaches are perhaps best suited to household surveys, an adaptation of these could be applied to administrative records associated with labour statistics. Thus, administrative records that seek to identify the location of the individual's home and also establish that of their workplace could be used to produce rural-urban disaggregated labour statistics.

The coverage scope of persons or workers in administrative records is defined by the relevant set of topics or decent work indicators produced. Thus for example, in the case of the population covered by health care provision, it is proposed that since the entire population is considered as the reference population (including children, persons of working age and the elderly), the rural or urban location of persons should be assigned according to the location of the household premises. For variables whose coverage scope targets employed individuals (or subgroups such as employees), if it is possible to apply the adapted residence location and workplace location approaches, it should be possible to link specific variables to the corresponding rural or urban location of the individual's residence and also that of their job. This includes variables on topics such as occupational injuries, trade union membership and collective bargaining coverage. For variables related to registered unemployment, it is proposed that the rural or urban location should be based on the residence location of the unemployed person.

Among the advantages of administrative records it is worth noting that they are generally a relatively low-cost source of statistics that allow a broad coverage of different topics and disaggregation of information. Due to continuous collection of information, they allow for frequent production and dissemination of data. They are not subject to sampling errors inherent to surveys and in some cases can be used to benchmark sample survey estimates. Administrative records are a good source of information on small groups that may for example be more prevalent in rural areas. Population registers and business registers serve as sampling frames for sample surveys.

There are also some limitations to the use of administrative records for rural-urban labour statistics. Administrative records are generally structured for administrative rather than statistical purposes and may need restructuring to a user-friendly database to be useful for statistical needs, for example if estimates by rural-urban area are required by users. Concepts, definitions and classifications often reflect legal frameworks which are not always consistent with statistical standards. Sometimes access to data can be an issue, requiring coordination with relevant agencies and ministries. Depending on the topic, geographic

coverage of the data may be limited, for example if registration takes place primarily in urban centers mostly accessible to urban dwellers. Coverage of the target population is defined by legal and administrative procedures rather than by international statistical standards. Moreover, the quality of the data may depend on incentives and penalties for registration.

7. Questionnaire design in labour force surveys for rural-urban statistics: Review of questions and criteria used by selected countries

As noted above, LFS are considered the best data source for labour force estimates and, more broadly, for many decent work indicators disaggregated by rural-urban area. This section presents information regarding questionnaire design in labour force surveys and related household surveys intended to help support the production of labour statistics disaggregated by rural-urban areas. When applying the workplace location approach, carefully considered questions in LFS and related household survey questionnaires will be essential for measuring the rural-urban workplace location of jobs and work activities.

The ILO conducted a review of selected LFS and related household survey questionnaires from countries of major world regions with the aim of identifying questions that could *potentially* be used to measure the rural or urban location of respondents' jobs or work activities, that is, their place of work. The review covered a sample of countries and thus was not intended as an exhaustive review of all countries that regularly include these types of questions in their LFS. The purpose was to share examples from countries in different world regions on the types of questions that could potentially be used to identify the rural or urban job location and evaluate the types of criteria contained in the sample questions.[65]

It is important to highlight that no evaluation of the intended aim of the survey questions was carried out during the review nor was any evaluation of the suitability of the questions for actual measurement of rural-urban location in any of the countries undertaken to ensure alignment with national definitions of urban and rural areas. This was outside the scope of the desk review but could be considered as part of a future work programme on this topic.

It is also important to note that there has been no testing of the types of questions identified in the review with the exception of the testing in Cote d'Ivoire (see next section), so that the following discussion is based on an initial analysis of how the different question criteria might be used in different contexts. Clearly however, countries should consider their national circumstances and conduct proper testing before adopting any particular set of criteria for measuring job or workplace location by rural-urban area.

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[65] Many additional examples across the world could have been analyzed and cited here. In the EU region, the EU-LFS seeks to identify the work place location at the country and subregional (NUTS 2) level and several EU countries regularly ask more detailed questions that could potentially be used to measure the rural or urban location of the job. For clarification, the Eurostat NUTS classification (Nomenclature of territorial units for statistics) is a hierarchical system for dividing up the economic territory of the EU for the purpose of the collection, development and harmonisation of European regional statistics and socio-economic analyses of the regions. NUTS 1: major socio-economic regions; NUTS 2: basic regions for the application of regional policies; NUTS 3: small regions for specific diagnoses. The current NUTS 2016 classification is valid from 1 January 2018. Weblink: https://ec.europa.eu/eurostat/web/nuts/background

A sample of eighteen selected countries[66] whose questionnaires included the type of question (or questions) that could potentially be used to identify the rural or urban location of the place of work was included in the analysis. "Place of work" was targeted in the questions identified since most countries have not yet implemented the 19th ICLS Resolution I standards that could allow separate measurement of job or work activity geographic location. The example questions that were identified targeted the place of work of those currently employed with the exception of one case (Morocco) where respondents were asked about various location options where they would like to work. Results of the types of summary criteria used in survey questions among the selected countries are given in Table 3 below.

Table 3. Types of summary criteria used in question(s) in LFS and related household surveys that could potentially allow identification of urban or rural location of the workplace

Name of the organization or entity where the respondent works
Name of the workplace if a specific workplace name exists
Street address or post office box number associated with the establishment where the respondent works
Name of the regency, city, municipality, postal area, town or village in which the work place is located
Name of canton, district, governate or emirate in which the work place is located
Work place located in a rural town
Work place is in a rural area or an urban area

Source: ILO summary criteria based on information from questionnaires of selected labour force surveys or related household surveys of 18 selected countries. Some countries used multiple summary criteria in the question(s). **Note:** See Annex Table A.2 for the questions from which summary criteria were derived.

By far, the most common types of criteria identified in the questions were those associated with the name of the city, municipality or town in which the work place is located. Eleven of the 18 countries analysed used this approach and was common across different regions. Six of the countries sought to identify the larger administrative division in which the work place was located, including for example the associated canton, district, or governate. Identifying a particular local or somewhat larger administrative area may be a straightforward means of allowing the respondent to identify the workplace location and may provide a

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[66] The eighteen countries included: Chile, Colombia, Costa Rica, Denmark, Egypt, Finland, Indonesia, Malawi, Morocco, Nicaragua, Norway, Oman, Pakistan, Panama, Sweden, Uganda, United Arab Emirates and United Kingdom.

means of mapping workplace (or job) location to the respective rural or urban areas in the country if the responses allow mapping according to the national definition of urban and rural areas. It seems that this type of question would be best suited to situations where the name of a specific administrative area or locality can be mapped directly to rural and urban areas as per the national definition. However, if the question asks about work place location in very large administrative divisions in the country, it is likely that the responses will not be useful for mapping to rural-urban areas as per the national definition.

Approaches involving criteria that target the actual street address or post office box number of the establishment where the respondent works provide the most detailed information for mapping responses to corresponding rural-urban areas as per the national definition. This approach was identified in four Northern European countries. This type of question is best suited to country contexts where street address information is well established and where respondents are willing to provide the information in a survey interview. In Denmark where this approach is used in the LFS, Google Maps is used during the interview process to help pinpoint the location of the place of work. The Google Maps software is used both during telephone interviewing and during self-administered web-based surveys by respondents.

There are country contexts where identifying the actual street address or post office box would not be suitable since the information cannot be provided, for example in situations where work places do not have an identifiable address. Such an approach may not be advisable when proxy respondents are used in the survey, but this may depend on national circumstances and proper testing would need to be carried out to evaluate the effectiveness of such a question with proxy respondents.

The name of the business, organization, entity or workplace name where the respondent works could be a useful approach in countries that maintain updated business registers containing information on the business, including a means to identify its rural-urban location that can be linked with the responses of the LFS. However, if the organization or entity where the respondent works is large and has multiple establishments in different locations, such a question by itself will not provide adequate information to map responses to the corresponding urban or rural area as per the national definition. It is perhaps best to include such a question together with information regarding the address of the work place if such information exists and can be readily obtained from the respondent.

Given that terms such as "urban" or "rural" area or location or even "urban town" or "rural town" may not be understood by respondents as intended and using them in an LFS question may yield different rural-urban mapping results vis-à-vis those that would have been provided had a more objective set of measurement criteria been targeted in the question, it is suggested that countries give careful consideration to whether such an approach might be substituted by a more objective approach of measuring the rural or urban job or workplace location. In countries where rural areas and their populations suffer discrimination and are viewed negatively by the larger, urban population, some respondents may not wish to identify with rural areas even though their place of work is in fact located in a rural area.

In conclusion, the review of country LFS questionnaires indicated that there are a number of countries in different regions that include questions that could potentially be used to identify the rural or urban location of jobs or workplaces. Various types of criteria are used in the questions that were identified among the selected countries, but the ILO has not reviewed the questions together supplementary information to

evaluate their suitability for actually mapping the reported workplace location responses to rural and urban areas as per national definitions. A more in-depth study would be required to allow for development and dissemination of LFS questionnaire guidance to countries on measuring rural-urban location of jobs and work activities.

8. Key elements in labour force survey sampling design in support of rural-urban indicators and selected country practices

The primary data sources of labour statistics disaggregated by rural-urban areas are household surveys, and in particular labour force surveys (LFS). The full set of LFS estimates and indicators produced with reference to the national territory can also be disaggregated by urban and rural area defined according to the location of the usual residence within the sampled dwellings. In this section, the focus is on the residence location approach specifically as regards identification of the geographic location of dwellings associated with interviewed households as determined by the sampling design in LFS or related household surveys.

Household surveys that produce labour statistics are commonly produced using complex household survey sampling designs reflecting stratified multistage cluster probability sampling methods. Countries develop sampling frames for their household surveys using maps of the national territory together with the estimated measures of household size associated with specific administrative/geographic areas of the territory. Many countries use data from the latest population census and carry out listing operations within the selected PSUs in order to select dwellings and households from updated lists. Some countries use up-to-date population registers in combination with maps of specific administrative/geographic areas of the national territory to produce the sampling frame, eliminating the need for a listing operation prior to selection of the dwellings or households in the sample. In the case of very small countries or island states that do not have designated rural and urban areas, it may not be practical to carry out complex sampling designs involving geographic stratification.

In labour force surveys, the geographic location of the dwelling or household can best be determined from the survey sampling design, and relates in particular to the sample stratification by rural and urban areas. The topic of LFS sampling design in support of rural-urban indicators is divided into two sections below. The first describes key elements in labour force survey sampling design that supports development of rural-urban-disaggregated indicators, while the second presents related sampling practices used in selected countries.

8.1 Key elements in labour force survey sampling design in support of rural-urban indicators

This subsection provides a brief overview on the use of explicit stratification in labour force surveys that may be used to identify the rural/urban location of dwellings or households, defining primary sampling units, and domain estimation targeting rural/urban areas. It also discusses the use of Geographic Information System technologies and Global Positioning System technologies in sampling.[67]

Explicit stratification by rural and urban area. Explicit stratification divides the units in the population into mutually exclusive and exhaustive subgroups or strata. Separate samples are then selected from each stratum. While stratification may be used at each stage of sampling in a multi-stage survey design, the greatest benefits in terms of gains in precision are obtained when sampling Primary Sampling Units (PSUs), that is, at the first stage of sampling. Under explicit stratification, the strata should be created so that units in the same stratum are as homogeneous as possible with respect to the characteristics of interest to the survey.

Whenever estimates are needed not only at the national level but also separately for each administrative region or subregion (such as province) and further by rural/urban area, stratification may be used to control the distribution of the sample based on these domains of interest. This ensures sample selection for example from each defined subregion and rural/urban area.

In stratified sampling that uses geographically-defined strata, explicit stratification may be carried out by dividing the national territory according to designated administrative areas (for example provinces, districts or counties) of relatively large size (that is, according to the measure of size or estimated number of households in each) as well as according to groups of midsized or smaller administrative areas that are in close proximity to one another.

The number of administrative areas in each stratum can range from one (in the case of self-representing strata that are often large metropolitan areas and are selected with certainty) to dozens or even hundreds for the groupings of the more sparsely populated administrative areas. The largest, sometimes self-representing administrative areas and groups of midsized and smaller administrative areas can be classified into urban or rural areas according to national definitions, creating mutually exclusive geographic strata that will be targeted during sampling.

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[67] Reference sources for this section included the following:
(1) Department of Economic and Social Affairs Statistics Division, 2008. *Designing Household Survey Samples: Practical Guidelines*. Studies in Methods Series F No. 98. United Nations, New York, New York, available at: https://unstats.un.org/unsd/demographic/sources/surveys/Series_F98en.pdf,
(2) Heeringa, Steven, Andrew Hupp and Kat Donahue, 2014. *Survey Research Center National Sample: Design and Development. Workshop in Survey Sampling Techniques*. University of Michigan, Survey Research Center, Ann Arbor, Michigan, and
(3) Yansaneh, Ibrahim S., 2005. *Overview of sample design issues for household surveys in developing and transition countries*. Chapter 2, Household Sample Surveys in Developing and Transition Countries. Studies in Methods Series F No. 96. Department of Economic and Social Affairs Statistics Division. United Nations, New York, New York, available at: https://unstats.un.org/unsd/hhsurveys/pdf/chapter_2.pdf

In a two-stage cluster sampling design, sampling units selected at the first stage from each of the strata (or PSUs) are usually enumeration areas established during the population census while the clusters selected at the second and final stage are the selected households or dwellings.

Defining Primary Sampling Units (PSUs). In the case of self-representing strata, a particular PSU is equivalent to the corresponding stratum. However, PSUs are most often small geographical area units within the strata. Thus, in labour force surveys where the strata often consist of non-overlapping groups of geographic areas differentiated by estimated population size and, in some cases also by rural-urban areas, the PSUs represent smaller area units within the strata. The PSUs thus share the same types of characteristics (including rural or urban classification where applicable) as the strata from which they are selected.

If population census information is available for sampling in the survey, the PSUs may be the enumeration areas identified and used in the census. Whereas in rural areas villages may be used to define the PSUs, in urban areas PSUs may be based on wards or blocks. Units designated as PSUs should be of good quality and be efficiently selected for the survey. In order for PSUs to be considered of acceptable quality, they must, in general:

(a) Have clearly identifiable boundaries that are stable over time
(b) Cover the target population completely
(c) Have a measure of size for sampling purposes
(d) Have data for stratification purposes
(e) Be large in number

Domain estimation targeting rural and urban areas. In order to produce reliable labour statistics, countries should have up-to-date population figures to benchmark the survey estimates. Population totals and distribution by sex and age groups are essential for demographic breakdowns of the estimates. Survey estimates are often required not only at the national level, but also for subnational levels or geographic domains including administrative regions and rural and urban areas. This reflects the fact that decisions concerning programme implementation or resource allocation at the subnational level require indicators with a high level of precision, for example to monitor the impact of a particular government programme on the rural and urban labour market over time.

To obtain such disaggregated estimates, calibration estimators can be very useful as they allow the possibility to establish different sets of constraints with varying levels of detail for each domain. The auxiliary information used for this purpose may derive from different data sources and be available for selected target groups, including data on dwellings, households or persons for the entire country, regions, governorates, municipalities, rural and urban areas, etc.

For example, it should be feasible to weight sample data introducing simultaneous constraints at the national level by sex and age group and also at the regional level by these variables, perhaps using differentiated age groups between the national and regional level. Similarly, it may be possible to add constraints for rural and urban areas, either for the entire country or within each region, by sex and age group. The number and the size of the age groups within each domain can be decided depending on the sample size within the

adjustment cells or groups and the availability and quality of population figures (generally there are fewer age groups available for small domains).

A domain can be defined as any subset of the population for which separate estimates are planned in the survey design. However, domains are often more specifically defined as the analytical sub-groups for which *equally reliable* estimates are desired. In a household survey, a domain could be a stratum, a combination of strata, an administrative region, or urban, rural or other subdivisions within these regions. (Domains can also be demographic subpopulations defined by such characteristics as age, ethnic group and sex.) In the case of labour statistics disaggregated by rural-urban areas, domain estimation by rural-urban area is determined by the usual household residence or dwelling location.

The number of domains of interest in a household survey should be kept manageable. A very large sample size would be required to provide reliable estimates for each of a large number of domains. Whenever the same degree of precision is needed for each of the domains, it is recommended that the sample size be increased by about a factor equal to the number of desired domains. Thus, when only national-level estimates are needed there is a single domain, and the calculated sample size applies to the sample over the entire national territory. For equally reliable results in urban and rural areas separately, the calculated sample size must apply to each domain, i.e. it should be doubled reflecting the two domains. To avoid that the sample size increases too much, usually the precision required for estimates produced for smaller domains (e.g. rural areas within regions) is lower than the precision required for bigger domains (e.g. regions).

Moreover, whenever estimates of equal reliability are required by data users for the selected domains, disproportionate sampling rates may be required. Thus, when the distribution of households is not evenly divided as will likely be the case for urban-rural domains, deliberate over-sampling of the less-populated geographic area (rural or urban areas depending on the country) will likely be necessary to achieve equal sample sizes and equal reliability. Small regions usually require a bigger sample size, but this also depends on the variability of the phenomenon in the region. If the variability is low, the required increase in the sample size would not necessarily be so large.

Different sampling fractions across domains can be dealt with during the weighting procedure by using specific selection probabilities and benchmarks for different domains. Specific software is available for this purpose and is generally straightforward to use. In many cases the software also allows estimation of the precision (or sampling error) of the estimates corresponding to the different domains and demographic subgroups of the population.

Use of Geographic Information System and Global Positioning System technologies in sampling. There has been an increasing use of Geographic Information System (GIS) technologies to support stratification and linking of smaller administrative areas to form PSUs. Without such technologies, the process of cumulating data and linking geographically adjacent administrative areas requires many lists and up-to-date paper maps. Thanks to GIS technologies, demographic and geographic data for a given administrative rural-urban area can be viewed simultaneously on a computer screen. Thus, the viewer can decide which administrative areas can be added or removed from a stratum as necessary to meet sampling criteria.

A database can be created from the stratification, for example, that includes the administrative rural-urban area assignments that can then be merged with other databases related to the national sample. Maps presenting the stratified administrative areas can be printed from the database for ease of reference.

Similarly, GIS technologies allow linking undersized administrative areas to other adjacent administrative areas to form PSUs of adequate size. Maps of administrative areas can be printed that highlight the undersized administrative areas, allowing one to determine the linkages that would yield optimal "of size" PSUs. In some large countries, PSUs are formed using computer algorithms rather than building manually.

In some household surveys, countries link small PSUs in rural areas that are below an adequate size threshold to adjacent metropolitan or large urban administrative areas since they are assumed to be part of the "greater" metropolitan area. Doing this would create inefficiencies for sampling rural areas, but not necessarily introduce bias (assuming that a national sample is drawn). Those areas would still be covered (i.e. on the sampling frame), but might be sampled at a lower rate than would be the case if they had been correctly identified as rural.

Global Positioning System (GPS) technologies may be used by household survey field operations staff to accurately record geolocation information. Survey staff carrying out the listing operations or household interviewing may use GPS to identify the exact location of the dwelling or household premises. This allows verification that the clusters or segments in which the listing operation is conducted correspond to the intended areas, and similarly that the interviewed households were those intended by the sample selection process. Identifying the coordinates of the household premises location allows for accurate mapping to rural and urban areas as per the national definition.

8.2 Selected country practices in labour force survey sampling design

In this subsection, summarized sampling practices used in selected country labour force surveys (LFS) are presented, specifically to showcase the various ways countries apply the classification of rural-urban areas in sampling (especially in stratification) and weighting, including targeting of rural-urban estimation domains for key indicators, and use of Geographic Information System and Global Positioning System technologies.

A Eurostat statistical working paper[68] reporting the main characteristics of national LFS in 2015 indicates that several EU and EU candidate countries explicitly adopt an urban-rural area classification in the LFS survey design. This is used either for stratification of primary sampling units, and/or in specific procedures for adjustment of the total non-response and/or in the weighting procedure for benchmarking final estimates to population figures.

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[68] Eurostat, 2016 edition. *Labour Force in EU, candidates and EFTA countries: Main characteristics of national surveys 2015.* Statistical Working papers. https://ec.europa.eu/eurostat/en/web/products-statistical-reports/-/KS-TF-18-002

In EU countries where the urban-rural classification is applied for stratification purposes, it is often used to further stratify larger geographical domains defined by administrative boundaries. In some cases, urban-rural classification criteria based strictly on population size/density are used for building the strata. In addition, non-response adjustment in selected EU countries may include the use of adjustment cells based on rural-urban areas, or the use of logistic regression models where such a classification is used as an explanatory variable. Moreover, the final step of the weighting procedure is often carried out using calibration or post-stratification where the adjustment cells can be based on the distribution of population by sex, age-groups and regions combined in different ways with urban-rural areas.

Some countries like Cyprus, France, Greece and Ireland use such criteria only during stratification. Greece uses three strata in the LFS according to the degree of urbanisation: Urban, semi-urban, and rural. Latvia, Poland and Turkey stratify their LFS sample according to an urban and rural classification and also use it for calculation of quarterly weights. Romania uses urban-rural criteria to stratify the sample and also to correct for nonresponse and for weighting. The Former Yugoslav Republic of Macedonia uses urban-rural areas for stratification, and the information is also used for non-response adjustment but not in the final step of weighting. Croatia stratifies the sample by two NUTS2 regions and further stratifies by urban and rural areas to create four strata; urban and rural areas are also used in non-response adjustment. Bulgaria uses rural-urban population estimates (at NUTS1 and NUTS3 levels)[69] to correct for total non-response. Estonia uses the variable rural-urban area in a logistic regression model to correct for non-response, and population figures for urban-rural areas are also used for calculating final weights. Lithuania uses rural-urban population figures as a final benchmark in the weighting procedure.

The reviewed practices used by national statistics offices (NSOs) in other countries also suggests the use of various approaches for selection of primary sampling units (PSUs) in LFS sampling, which may or may not specifically target urban-rural areas. Some NSOs target rural and urban estimation domains for selected LFS indicators, while others make public use microdata available that can allow individual users to produce essentially rural-urban disaggregated LFS indicators.

In Australia, administrative areas are not considered when designing the LFS sample. Rather, the definition of differently sized urban centres is used in conjunction with other geographic classifications such as "Remoteness" and "Greater Capital City Statistical Areas" (not necessarily administrative areas) to define area types for other forms of sample design. While the Australian LFS does not target urban and rural areas as estimation domains in the LFS, the Statistical Areas Level 4 (SA4) on which the regional Labour Force data is released are designed around labour markets. Smaller rural labour markets are combined together, to ensure there is sufficient sample, into predominantly rural/outback SA4 areas.

In Jamaica, "sampling regions" (or strata) are defined as wholly urban or wholly rural, that is, they contain only urban or only rural enumeration districts (EDs). Moreover, rural and urban areas are specifically

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[69] As noted previously, the Eurostat NUTS classification (Nomenclature of territorial units for statistics) is a hierarchical system for dividing up the economic territory of the EU for the purpose of the collection, development and harmonisation of European regional statistics and socio-economic analyses of the regions. NUTS 1: major socio-economic regions; NUTS 2: basic regions for the application of regional policies; NUTS 3: small regions for specific diagnoses.

targeted as estimation domains in the Jamaican LFS sampling design for key indicators, and estimates of equal reliability for rural and urban domains are produced.

In Namibia, PSU geocoding used in the LFS is designed in such a manner that each PSU is assigned to a unique "region" and "constituency". The geocode "type" determines whether a PSU falls under a uniquely urban or rural area. The Namibia LFS targets rural and urban areas as estimation domains in the LFS sampling design for key indicators. However, LFS estimates are not produced with equal reliability for rural and urban domains as proportionate sampling rates are used in each domain.

In the Republic of Korea, "dong areas" (regarded as urban) and "eup areas" (regarded as rural) represent the smallest administrative units in the country. Seven metropolitan areas and ten provinces are included in the LFS sample. The provinces are divided into "dong" areas and "eup" areas to form PSUs at the first stage of sampling, whereas the metropolitan areas consist mostly of dong areas. The dong areas and eup areas are not targeted as estimation domains for key LFS indicators. However, since the two areas are recognized to have different demographic characteristics, Statistics Korea makes available public use micro data from the labour force survey which allows users to produce estimates by dong and eup areas.

In the South Africa quarterly LFS, the enumeration area (EA) frame is stratified by province and within each province by Census Metropolitan Area (CMA), i.e. metro/non-metro area. EAs within each of the CMAs are further stratified by census EA geographic area type (previously called settlement type). PSUs are then formed based on the census EA frame within each primary stratum.

In Thailand, PSUs are defined by census enumeration areas that are constituted according to the administrative areas in the country. Selected LFS estimates are produced for municipal (essentially urban) and non-municipal (essentially rural) area domains. LFS estimates of equal reliability are produced for municipal area domains and non-municipal area domains.

In the United States, PSUs are composed of contiguous county and county-equivalent geographies but urban-rural areas do not explicitly appear in PSU definitions. Metropolitan Statistical Areas (MSA) do factor into PSU creation in the United States. In the United States, stratification of non self-representing PSUs in the LFS sample is carried out algorithmically.

Geographic Information System (GIS) technologies are sometimes used in LFS sampling as they permit accessing and viewing geographic and demographic data simultaneously. GIS technologies are used in LFS sampling for example in Australia, Jamaica, Namibia and the Republic of Korea. In Australia, the NSO uses GIS to identify geographic attributes (specific area types) and associate these with small areas such as "Mesh Blocks". This enables the integration with other demographic data without the need for a GIS if desired.

In Jamaica, GIS technologies are used to assist in the demarcation of enumeration district (ED) boundaries and the merging of EDs to form PSUs based on the specifications provided by the NSO sampling unit.
In Namibia, the national statistics office uses GIS when developing or updating the national sampling frame. The sampling frame is updated annually, including PSUs that are mainly in areas that are rapidly changing such as urban informal areas. Field teams are sent to these areas to take a rough count of structures and indicate the necessary changes to be made and these will be implemented using a GIS software (ArcGIS and or Quantum GIS).

In South Africa, where GIS technologies are not currently used in LFS sampling, collected demographic data can be linked back to the respective geographic areas using Geomedia. Statistics South Africa will be using a Geographic Information Frame in the near future in which the use of GIS might be possible.

Global Positioning System (GPS) technology is used in the LFS by some countries to provide geolocation information about dwellings or to monitor enumerator performance. In Namibia, GPS technology is used during the listing operation of the LFS. During the listing, the enumerator uses a GPS-enabled tablet to capture all the structures that are in the selected PSU and they are able to verify if the point they captured falls within the PSU or not, as the CSPro application is linked to Google Earth. However, Namibia does not use GPS technologies during the LFS interview process.

In Thailand, the NSO uses GPS technology in the LFS during the household interview process to monitor performance of enumerators but not to provide geolocation information about the households.

In Australia, each individual address in the address register has an associated geocode across three levels. Geocodes are attached to addresses via the Geocoded National Address File or field canvassing. During LFS enumeration, interviewers in rural areas initially had difficulty finding addresses with street level (Level 2) geocoding as original workload maps would plot a point in the street but not the target address. This situation has been addressed by adding an additional symbol to maps alerting interviewers to street level geocodes indicating that if the dwelling is not located at the plotted point it could be along the street. The NSO also maintains specific latitude and longitude details of each address that is contained in the address register.

9. Data items and the challenge of changing geographical boundaries to produce longer time series

9.1 Data items relevant for labour statistics by rural-urban area

This subsection presents information on data items that could be collected as a starting point for construction of rural-urban disaggregated labour statistics estimates and indicators produced from a labour force survey (LFS) or related household survey. Data items should be further disaggregated whenever possible by demographic variables such as sex and age group.

Taking into consideration the **residence location approach** as the starting point for producing such proposed estimates, key data items relevant for work statistics[70] by urban-rural areas should refer to specific reference periods and could include:

- Working age population by urban-rural residence location, according to the usual place of residence
- Employed persons by urban-rural residence location, according to the usual place of residence

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[70] Many other data items are relevant for work statistics by rural-urban areas using the residence location approach. This list provides a suggested initial set of data items.

- Persons in unpaid work activities by urban-rural residence location, by form of unpaid work according to the usual place of residence
- Working age population by urban-rural residence location, according to main activity and the usual place of residence
- Unemployed persons by urban-rural residence location, according to the usual place of residence
- Labour force by urban-rural residence location, according to the usual place of residence
- Persons outside the labour force by urban-rural residence location, according to the usual place of residence
- Employment-related income by urban-rural residence location, according to the usual place of residence
- Working time of persons in employment by urban-rural residence location, according to the usual place of residence
- Working time of persons in unpaid work activities by urban-rural residence location, by form of unpaid work according to the usual place of residence

It is worth reiterating that countries should evaluate whether the "usual place of residence" approach or the "dwelling where present at time of data collection" approach is better suited to national circumstances when producing these data items, given the possibility of undercounting seasonal jobs and work activities of workers who may live and work in places for short periods of time.

Taking into consideration the **workplace location approach** as an additional approach for producing such proposed estimates, key data items relevant for work statistics[71] by urban-rural areas should refer to specific reference periods and could include:

- Jobs by urban-rural workplace location
- Employed persons by urban-rural workplace location, according to location of main job
- Work activities by urban-rural workplace location, by form of unpaid work
- Persons in unpaid forms of work by urban-rural workplace location, according to location of main work activity
- Employment-related income by urban-rural workplace location, according to location of main job
- Working time of persons in employment by urban-rural workplace location, according to location of main job
- Working time of persons in unpaid forms of work by urban-rural workplace location, according to location of main work activity

As discussed previously, some rural-urban disaggregated composite measures produced from a LFS could be produced either using the residence location approach alone or using this approach in combination with the workplace location approach. For example, indicators produced using labour force estimates (e.g. the

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[71] Many other data items are relevant for work statistics by rural-urban areas using the workplace location approach. This list provides a suggested initial set of data items.

unemployment rate) would require either using the residence location approach alone to establish the rural-urban location of employment and unemployment or applying both approaches in order to establish the workplace location of the main job of employed persons while using the usual residence to identify the location of the unemployed person. The residence location approach is suggested to be implemented initially to produce all estimates and indicators with subsequent implementation of the workplace location approach, as required to meet policy information needs.

Many indicators in the Decent Work Measurement Framework as well as related indicators in the SDG indicator framework may be disaggregated by rural-urban area, as well as by sex and age group. Data producers are encouraged to produce such indicators in line with national policy needs and in close consultation with the relevant stakeholders. Moreover, countries may wish to develop a unique set of indicators that targets urban areas separately from indicators for rural areas, reflecting decent work policy information needs related to urban and rural areas, respectively.

9.2 The challenge of changing geographical area boundaries for producing longer time series of statistical indicators

With reference to measuring and monitoring decent work indicators and related SDG indicators by geographic area, an important issue to be addressed is how frequently the national rural-urban classification should be changed. When comparing indicators over time, it should be decided whether the indicators should be calculated using "constant historical boundaries" or "current updated boundaries". This is relevant for national-level statistics as well as for internationally reported indicators. The two criteria respond to different perspectives of analysis, and both are valuable. Different data users may have preferences for one type of criteria over the other.

In order to monitor or assess over the medium or longer term if a labour policy implemented in a given geographic area has been effective, the statistical indicators used for the assessment should be calculated with reference to exactly the same area. Using a "constant boundary approach", historical boundaries of particular rural and urban areas would be kept constant over a number of years. Such an approach would allow monitoring of whether the population residing or working in rural or urban areas as defined in the base year, as well as businesses and farms operating in those areas, could have benefitted from a policy targeting those areas. Changing the boundaries or the area under evaluation could lead to either excluding some of these "actors" from the assessment, or including others that could not have directly benefitted from the policy.

The constant boundary approach could be used to carry out international comparisons over time using rural-urban disaggregated decent work indicators or related SDG indicators. One could consider for example a comparison of employment-to-population ratio trends by urban (or rural) area for a set of countries for the period 2010-2020, using annual indicators calculated on the basis of the rural-urban boundaries defined in 2010. International repositories that disseminate such statistics would contain indicators that have the same reference base year, in a way similar to that in which national accounts estimates are reported to international organizations. Following this approach, methods for calculation of rural-urban disaggregated estimates and indicators would allow a recalculation of previous data with new boundaries when a new

base year of the classification is introduced at the international level. In this way, the relevance of historical time series data could be preserved.

It is worth noting however that for many countries this approach would not be a viable option. Countries may no longer have estimates based on the boundaries established from a given "base" period (e.g., from 2010 using the previous example). Moreover, countries may not have estimates for a base period by the urban-rural typology. It may actually be more relevant for countries to develop longer time series based on "current updated boundaries" and current classifications. Thus, for example, in the EU context, there is discussion regarding the use of geo-referencing in LFS and other social surveys to address the issue of changing geographic boundaries for longer time series.[72] Grid concepts (such as 1 km grid cells) are included in the EU territorial typologies (or TERCET) and have the benefit of being unique and not changing over time. A grid cell geo-referencing approach would imply independence from frequent NUTS and Local Administrative Unit (LAU) changes, and respondents could be coded with the unique number of the grid cell. Point-based coding of the buildings and households living there would offer flexibility to aggregate LFS data to grid cells using any version of NUTS or LAU classifications, using the geographical coordinate codes assigned to LFS respondents.

Further discussion on this topic is needed if there is interest in moving forward with international guidelines on how to best address the issue of changing geographical area boundaries for producing longer time series of labour statistics for national purposes and also for international reporting of comparable estimates. Any future guidelines should take into account the needs for longer rural-urban time series estimates, whether for "constant historical boundaries" and/or "current updated boundaries" and the feasibility of methods across different types of statistical systems in countries around the world.

10. Conclusions and issues for discussion

National data users often require estimates for monitoring labour markets and decent work in specific administrative regions of the country as well as rural and urban areas. International reporting of statistical indicators to the ILO such as selected decent work indicators and related SDG indicators disaggregated by rural-urban area is intended to ensure that information is made available on the most vulnerable populations, leaving no one behind. Although the growth of urban populations is expected to continue to outpace that of rural populations in countries around the world, issues related to population well-being, poverty and opportunities for productive and decent work will remain major challenges in both rural and urban areas within countries for the foreseeable future.

This room document is intended to serve as a point of departure for discussion about methods for developing rural-urban labour statistics. Several aspects of this topic have been discussed in the document, and various challenges and issues have been identified. In particular, the key challenges and issues identified are the following:

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[72] Angelova, V. et al, Eurostat, Poelman, H., DG REGIO European Commission, 2018 "Geocoding of LFS for longer time series and some other benefits", Power Point presentation. Workshop on City Data in EU Labour Force Surveys, 24-25 September 2018, Valletta, Malta.

- Whether an international definition of urban-rural could be established that could be used in parallel with the national definitions for purposes of international reporting. This is actually not within the mandate of ILO, as such a task would fall within the mandate of the UN Statistics Division, UN DESA, but the challenge seems to clearly exist.
- Whether a dual approach involving a residence location approach and a workplace location approach could be considered as a feasible way forward to produce rural-urban disaggregated labour statistics using labour force surveys or related household surveys.
- If the workplace location approach is considered an appropriate complementary approach to the recommended initial approach identifying the residence location, what types of criteria might be most appropriate to include in questionnaires to identify workplace location?
- Is the dichotomous urban-rural classification the most appropriate one or could others also be considered for national purposes and perhaps international reporting (e.g. Eurostat typology)?
- What recommendations should be put forward regarding whether to use the "usual place of residence" approach or the "dwelling where present at time of data collection" approach, given the possibility of undercounting seasonal workers who may live and work in places for short periods of time (possibly affecting in particular counts of rural dwellers and workers)?
- How should classification of those jobs and work activities for which the rural or urban location is difficult to identify be addressed?
- How can sampling design in labour force surveys be carried out to optimize the use of estimation domains for rural-urban areas based on the national definition of rural-urban areas?
- How can issues related to composite measures that could potentially use both the residence location approach alone or in combination with the workplace location approach be addressed to ensure maximum coherence and quality of estimates?
- How can the challenge of changing geographical area boundaries and its impact on the production of longer time series of labour statistics, be addressed?

These issues and others that have been identified suggest that more work should be done on this topic. Given the information presented and the various issues outlined above, participants in the Conference are invited to express their views as to:

(a) whether the topic is of interest to their country;

(b) whether their country already produces rural-urban disaggregated labour statistics as part of the regular programmes; and

(c) whether they consider that this topic should be discussed in greater depth with a view to producing more comparable statistics and if so, what mechanisms should be put in place to facilitate the process.

References

Angelova, V., Schroer, H., Petri, E, Reuter, H., Eurostat; and Poelman, H., DG REGIO, European Commission, 2018 "Geocoding of LFS for longer time series and some other benefits", Power Point presentation. Workshop on City Data in EU Labour Force Surveys, 24-25 September 2018, Valletta, Malta.

Deuskar, C. and B. Stewart, 2016. *Measuring Global Urbanization using a Standard Definition of Urban Areas*. 2016 World Bank Land and Poverty Conference. The World Bank. Washington, DC.

Dijkstra, L. and H. Poelman, 2014. *A harmonized definition of cities and rural areas: the new degree of urbanization*. European Commission Regional Working Paper 01.
http://ec.europa.eu/regional_policy/sources/docgener/work/2014_01_new_urban.pdf

European Commission, 2014. *ESPON Atlas – Mapping European Territorial Structures and Dynamics.* Brussels. https://www.espon.eu/topics-policy/publications/atlas/espon-atlas-2013

European Commission, Global Human Settlement Layer weblink:
https://ghsl.jrc.ec.europa.eu/ghs_pop.php

Eurostat, 2016. *Labour Force in EU, candidates and EFTA countries: Main characteristics of national surveys 2015.* Statistical Working papers.
https://ec.europa.eu/eurostat/en/web/products-statistical-reports/-/KS-TF-18-002

Eurostat, 2017. *The concept of Labour Market Areas – Summary Report.* Draft document of Eurostat, Unit E-4: Regional statistics and geographical information. June 2017 (v.2).
https://ec.europa.eu/eurostat/cros/content/eurostats-final-report-20162017-lmas-grant-programme_en

Eurostat. *Archive: Urban-rural typology*. Statistics Explained. https://ec.europa.eu/eurostat/statistics-explained/index.php/Archive:Urban-rural_typology

Eurostat. Nomenclature of territorial units for statistics (NUTS) classification weblink:
https://ec.europa.eu/eurostat/web/nuts/background

Eurostat. *Regional typologies overview*. Statistics Explained. http://ec.europa.eu/eurostat/statistics-explained/index.php/Regional_typologies_overview.

GeoData Institute, University of Southampton, United Kingdom. WorldPop Project website:
http://www.worldpop.org.uk

Heeringa, Steven, Andrew Hupp and Kat Donahue, 2014. *Survey Research Center National Sample: Design and Development. Workshop in Survey Sampling Techniques*. University of Michigan, Survey Research Center, Ann Arbor, Michigan.

International Labor Organization, Bureau of Statistics, 2008. *Report of the Working Group on the Measurement of Decent Work,* contained in the *Report of the Conference, 18th International Conference of Labour Statisticians*, Geneva 24 November-5 December 2008. Geneva.
https://www.ilo.org/wcmsp5/groups/public/@dgreports/@stat/documents/meetingdocument/wcms_101467.pdf

International Labour Organization, Department of Statistics, 2013. *Decent Work Indicators - Guidelines for producers and users of statistical and legal framework indicators.* Geneva. https://www.ilo.org/stat/Publications/WCMS_223121/lang--en/index.htm

International Labour Organization, 2013. Nineteenth International Conference of Labour Statisticians. *Resolution concerning statistics of work, employment and labour underutilization.* Geneva. https://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_230304/lang--en/index.htm

International Labour Organization, ILOSTAT (labour statistics repository) weblink: https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm

Joint Research Centre and the DG for Regional Development of the European Commission, 2017. *Global Human Settlement Layer*. http://ghsl.jrc.ec.europa.eu/index.php

National Academies, 2015. *Rationalizing Rural Area Classifications for the Economic Research Service*: A Workshop Summary. National Academies Press. Washington, DC. https://www.nap.edu/catalog/21843/rationalizing-rural-area-classifications-for-the-economic-research-service-a

Organisation for Economic Co-operation and Development, 2011. *OECD Regional Typology.* Directorate for Governance and Territorial Development. OECD Publishing. Paris. https://www.oecd.org/cfe/regional-policy/OECD_regional_typology_Nov2012.pdf

Organisation for Economic Co-operation and Development, 2013. *Definition of Functional Urban Areas (FUA) for the OECD metropolitan database.* OECD Publishing. Paris. http://www.oecd.org/cfe/regional-policy/Definition-of-Functional-Urban-Areas-for-the-OECD-metropolitan-database.pdf

Offutt, Susan, 2016. *Conceptual Framework and Territorial Definitions for Improving Rural Statistics*. The Global Office of the Global Strategy to improve agricultural and rural statistics. Working paper No. 10. Revised November 2016. Rome. http://gsars.org/wp-content/uploads/2016/08/WP_Conceptual-Framework-and-Territorial-Definitions-for-Improving-Rural-Statistics-040816.pdf

Owen, D., Li Y., Green A., and Manson, K. *Secondary analysis of employer surveys: Urban and rural differences in jobs, training, and skills.* Evidence Report 75. Institute for Employment Research, University of Warwick. UK Commission for Employment and Skills. London. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/305356/evidence-report-75-urban-rural-report.pdf

Ravallion, M., Chen, S. and Sangraula P. *New Evidence on the Urbanization of Global Poverty. 2007.* Population and Development Review Volume 33, Issue 4. Washington, DC. https://openknowledge.worldbank.org/bitstream/handle/10986/7277/wps419901update1.pdf?sequence=1

Statistical Office of the European Communities (Eurostat), United Nations Economic Commission for Europe (UNECE), Food and Agriculture Organization of the United Nations (FAO), Organisation for Economic Co-operation and Development (OECD) and The World Bank. 2007. *The Wye Group Handbook, 2011. Rural Households' Livelihood and Well-Being. Statistics on Rural Development and Agriculture Household Income.* Rome. http://www.fao.org/docrep/015/am085e/am085e.pdf

United Nations, Department of Economic and Social Affairs. Population Division. 2018. *World Urbanization Prospects*. New York.
https://population.un.org/wup/

United Nations, Department of Economic and Social Affairs. United Nations Statistics Division. 2008. *Designing Household Survey Samples: Practical Guidelines*. Studies in Methods Series F No. 98. New York.
https://unstats.un.org/unsd/demographic/sources/surveys/Series_F98en.pdf

United Nations, Department of Economic and Social Affairs. United Nations Statistics Division. 2014. *Fundamental Principles of Official Statistics.* New York.
https://unstats.un.org/unsd/dnss/gp/fundprinciples.aspx

United Nations, Department of Economic and Social Affairs. United Nations Statistics Division. 2017. *Principles and Recommendations for Population and Housing Censuses Revision 3*. New York.
https://unstats.un.org/unsd/demographic/sources/census/census3.htm

United Nations, Department of Economic and Social Affairs. United Nations Statistics Division. 2018. Webpage on Sustainable Development Goal Indicators, Global Indicator framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development. New York.
https://unstats.un.org/sdgs/indicators/indicators-list/

United Nations Food and Agriculture Organization, 2017. *The State of Food and Agriculture 2017: Leveraging Food Systems for Inclusive Rural Transformation.* Rome.
http://www.fao.org/3/a-I7658e.pdf

United Nations Habitat III Conference, 2016. *Housing and Sustainable Urban Development*.
http://habitat3.org/the-conference/about-habitat-3/

United Nations, Sustainable Development Solutions Network, 2015. *Leaving No One Behind: Disaggregating Indictors for the SDGs*. New York.
http://unsdsn.org/wp-content/uploads/2015/10/151026-Leaving-No-One-Behind-Disaggregation-Briefing-for-IAEG-SDG.pdf

United States Department of Labor, U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics program, Federal Statistical Area Delineations.
https://www.bls.gov/lau/lausmsa.htm

Waldorf, B. and A. Kim, 2015. *Defining and Measuring Rurality in the US: From Typologies to Continuous Indices.* Commissioned Paper for National Academies Workshop on Rationalizing Rural Area Classification. National Academies. Washington, DC.
https://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse_168031.pdf

World Bank, 2008. *World Development Report, Agriculture for Development.* Office of the Publisher. The World Bank. Washington, DC.
http://documents.worldbank.org/curated/en/587251468175472382/World-development-report-2008-agriculture-for-development

World Bank, 2009. *World Development Report, Reshaping Economic Geography.* Office of the Publisher. The World Bank. Washington, DC.

http://documents.worldbank.org/curated/en/730971468139804495/World-development-report-2009-reshaping-economic-geography

World Bank, 2013. *Global Monitoring Report 2013, Rural-Urban Dynamics and the MDGs*. Washington, DC. http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1327948020811/8401693-1355753354515/8980448-1366123749799/GMR_2013_Full_Report.pdf

World Bank, 2016. *Poverty and Shared Prosperity 2016. Taking on Inequality.* Washington, DC. http://www.worldbank.org/en/publication/poverty-and-shared-prosperity

World Bank website, "Understanding poverty - Overview". http://www.worldbank.org/en/topic/poverty/overview

Yansaneh, Ibrahim S., 2005. *Overview of sample design issues for household surveys in developing and transition countries*. Chapter 2, Household Sample Surveys in Developing and Transition Countries. Studies in Methods Series F No. 96. Department of Economic and Social Affairs Statistics Division. United Nations, New York, New York. https://unstats.un.org/unsd/hhsurveys/pdf/chapter_2.pdf

ANNEX

Annex A.1 Summary criteria used to define urban areas by country or territory

Table A.1.1. Summary criteria used to define urban areas by country or territory, 2018

Summary criteria used to define urban areas	Number of countries or territories	Name of country or territory
Administrative areas and/or localities (1 criterion)	92	Afghanistan, Andorra, Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belarus, Belize, Bermuda, Bosnia and Herzegovina, Brazil, British Virgin Islands, Brunei Darussalam, Bulgaria, Burundi, Cabo Verde, Caribbean Netherlands, Cayman Islands, Chad, Channel Islands, China - Hong Kong SAR, China - Macao SAR, Congo, Cook Islands, Curaçao, Cyprus, Dominican Republic, Ecuador, Egypt, Estonia, Faeroe Islands, Falkland Islands (Malvinas), Finland, Gibraltar, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Holy See, Hungary, Iran (Islamic Republic of), Iraq, Isle of Man, Jamaica, Kiribati, Libya, Malawi, Maldives, Marshall Islands, Mauritius, Monaco, Mongolia, Montenegro, Montserrat, Mozambique, Nauru, New Caledonia, Niger, Niue, Northern Mariana Islands, Pakistan, Palau, Paraguay, Poland, Republic of Korea, Rwanda, Saint Helena, Saint Kitts and Nevis, Saint Pierre and Miquelon, Samoa, Sao Tome and Principe, Serbia, Singapore, Sint Maarten (Dutch part), South Africa, Sri Lanka, Suriname, Swaziland, TFYR Macedonia, Thailand, Togo, Tonga, Trinidad and Tobago, Turkey, Turks and Caicos Islands, Tuvalu, United Arab Emirates, Uruguay, Vanuatu, Yemen
Population size and/or density (1 criterion)	10	American Samoa, Canada, Fiji, Guam, Puerto Rico, Solomon Islands, United States of America, United States Virgin Islands, Venezuela (Bolivarian Republic of), Viet Nam
Administrative areas/localities + population size/density (2 criteria)	52	Argentina, Australia, Bahrain, Belgium, Benin, Bolivia (Plurinational State of), Central African Republic, Colombia, Comoros, Czechia, Denmark, Dominica, Eritrea, Ethiopia, Gabon, Gambia, Germany, Ghana, Greece, Greenland, Guadeloupe, Iceland, Ireland, Italy, Jordan, Kuwait, Lebanon, Liberia, Luxembourg, Madagascar, Mali, Martinique, Mauritania, Mexico, Micronesia (Fed. States of), Netherlands, New Zealand, Nigeria, Norway, Portugal, Qatar, San Marino, Saudi Arabia, Senegal, Sierra Leone, Slovakia, Somalia, Spain, Syrian Arab Republic, Tunisia, Uganda, United Kingdom
Other 2 criteria	9	Angola, Austria, Burkina Faso, Chile, Democratic Republic of the Congo, Djibouti, Indonesia, Peru, Romania
Administrative areas/localities, population size/density + predominance non-agriculture (3 criteria)	23	Albania, Armenia, Azerbaijan, Botswana, Cambodia, Côte d'Ivoire, Croatia, Georgia, India, Israel, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, United Republic of Tanzania, Uzbekistan, Zambia, Zimbabwe
Administrative areas/localities + population size/density + infrastructure (3 criteria)	7	Cameroon, Cuba, Honduras, Lao People's Democratic Republic, Oman, Panama, State of Palestine
Other 3 criteria	13	Costa Rica, El Salvador, Equatorial Guinea, France, Kenya, Namibia, Papua New Guinea, Philippines, Réunion, South Sudan, Sudan, Sweden, Switzerland
Administrative areas + population size + predominance non-agriculture + infrastructure	7	Algeria, Bangladesh, China - Taiwan Province of China, Morocco, Nicaragua, Timor-Leste, Western Sahara
Other 4 or 5 criteria	7	Bhutan, China, Japan, Lesotho, Malaysia, Nepal, Slovenia
No urban population	2	Tokelau, Wallis and Futuna Islands

Source: ILO analysis of criteria based on country and territorial definitions of urban areas published by UN DESA (2018), *World Urbanization Prospects: The 2018 Revision*, available at: https://www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects.html

Notes on Table A.1.1.:

1. The analysis was carried out on 222 countries and territories with reported own definitions of urban. Countries or territories that define urban areas according to the whole population were included with the summary criteria "Administrative areas and/or localities (1 criterion)".

2. "Administrative areas" include for example provincial or district centers, towns, agglomerations, parishes, capitals, cities, regional centers, communes, municipalities, administrative centers or headquarters, government seat and governates, among others.

3. "Localities" include for example specific places such as centers, settlements, villages, cities without municipal status, population center, barrios, settlements officially designated as urban, urban localities.

4. "Population size" refers to a specified population size threshold (number of inhabitants) over which the area is considered urban.

5. "Population density" refers to specific density criteria as for example the number of persons per square kilometer or simply noted as a densely settled territory for example.

6. "Predominance non-agriculture" refers to criteria that make reference to a predominance of non-agricultural economic activity or of non-agricultural workers for example.

7. "Infrastructure and amenities" refers to various types of physical infrastructure or population services that in some contexts may be more closely associated with urban areas, and include for example roads, electricity, water-supply and sewerage systems, waste management, medical centers, educational facilities, communications facilities, road transport services and postal service.

8. Contiguous dwellings and dwelling density criteria were not equated to the population density criterion since the latter typically refers to the number of inhabitants per square area. These criteria were not common and appear in the "other" categories.

Table A.1.2. Population size thresholds used to define urban areas by country or territory, 2018 /1

Population size threshold (number of inhabitants)	Number of countries territories	Country or territory name
200	4	Denmark, Greenland, Iceland, Sweden
400	1	Albania
500	2	Papua New Guinea, Philippines
600	1	Lao People's Democratic Republic
1000	9	Canada, Dominica, Fiji, Micronesia (Fed. States of), New Zealand, Nicaragua, Philippines, San Marino, Solomon Islands
1400	1	Slovenia
1500	5	Bhutan, Equatorial Guinea, Ireland, Panama, Somalia
2000	25	Argentina, Bolivia (Plurinational State of), Cambodia, Colombia, Croatia, Cuba, Czechia, Democratic Republic of the Congo, Eritrea, Ethiopia, France, Guadeloupe, Honduras, Israel, Kenya, Liberia, Luxembourg, Martinique, Norway, Philippines, Portugal, Réunion, Sierra Leone, Slovenia, Uganda
2500	11	American Samoa, Bahrain, Guam, Mexico, Oman, Philippines, Puerto Rico, United States of America, United States Virgin Islands, Venezuela (Bolivarian Republic of), Zimbabwe
3000	3	Central African Republic, Gabon, Slovenia
4000	3	Côte d'Ivoire, State of Palestine, Viet Nam
5000	21	Algeria, Bangladesh, Belgium, Botswana, Cameroon, Comoros, Croatia, Gambia, Ghana, India, Jordan, Lebanon, Madagascar, Mauritania, Qatar, Saudi Arabia, Slovakia, South Sudan, Sudan, Tunisia, Zambia
10000	13	Australia, Benin, Côte d'Ivoire, Croatia, Greece, Italy, Kuwait, Malaysia, Senegal, Spain, State of Palestine, Switzerland, United Kingdom
20000	4	Netherlands, Nigeria, Switzerland, Syrian Arab Republic
30000	1	Mali
50000	1	Japan

Source: ILO analysis of criteria based on country and territorial definitions of urban areas published by UN DESA (2018), *World Urbanization Prospects: The 2018 Revision.* Available at: https://www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects.html

/1 The population size thresholds may have been used in combination with other criteria to define urban areas as noted in Table A.1.1. Several countries or territories reported using population size as a criterion but did not report the threshold to UN DESA and are therefore excluded from Table A.1.2. Some may appear more than once in the table since they use multiple population size thresholds to define urban areas (see Notes on Table A.1.2).

Notes on Table A.1.2:

1. Côte d'Ivoire has two population size thresholds: Agglomerations with 10,000 inhabitants or more; agglomerations with between 4,000 and 10,000 inhabitants and with more than 50 per cent of households engaged in non-agricultural activities.

2. Croatia has three population size thresholds: settlements with 10,000 inhabitants or more; settlements with between 5,000 and 9,999 inhabitants and with at least 25 per cent employed in the secondary or tertiary sectors; settlements with between 2,000 and 4,999 in habitants and with at least 25 per cent employed in the secondary or tertiary sectors and with at least 50 per cent non-agricultural households.

3. Philippines has three population size thresholds in its definition of urban areas. Cities and municipalities with at least 1,000 inhabitants per square kilometre; administrative centres, barrios with 2,000 inhabitants or more, and barrios with 1,000 inhabitants or more which are contiguous to the administrative centre, in all cities and municipalities with at least 500 inhabitants per square kilometre; and all other administrative centres with 2,500 inhabitants or more.

4. Slovenia uses three specific population size thresholds: Settlements with 3,000 inhabitants or more; settlements with between 2,000 and 2,999 inhabitants and a surplus of workplaces; settlements that are seats of municipalities and have 1,400 inhabitants or more and a surplus of workplaces; suburban settlements that have fewer inhabitants but are spatially and functionally integrated with the city.

5. State of Palestine uses two population size thresholds. Localities with 10,000 inhabitants or more; governorate and district centres regardless of their size; and localities with 4,000 to 9,999 inhabitants with at least four of the following elements: public electricity network, public water network, post office, health centre with a full-time physician and a school offering a general secondary education certificate.

6. Switzerland uses two population size thresholds: Communes with 10,000 inhabitants or more, including suburbs, and urban agglomerations with contiguous built-up area with 20,000 inhabitants or more.

Annex A.2 Example questions used in selected household survey questionnaires

Table A.2. Questions used in selected country household survey questionnaires that could potentially be used to identify rural - urban place of work

Country	Question(s) used in questionnaire	Name of Survey	<u>Year</u>
1. Chile	<u>**Original question (s):**</u> **B18.** ¿En qué comuna se ubica la empresa, negocio, institución o actividad por cuenta propia donde trabajó? …Más de una comuna …Nombre de la comuna <u>**English translation:**</u> **B18.** In which town is the company, business, institution or own-account activity located where (you) worked? …More than one town …Name of the town	<u>**Original Name of Survey:**</u> Encuesta Nacional de Empleo <u>**English translation**</u> National Employment Survey	2017
2. Colombia	<u>**Original question (s) :**</u> **2A** ¿En qué municipio y departamento realiza… principalmente su trabajo? …<u>Departamento</u> …<u>Municipio</u> <u>**English translation**</u>: **2A** In which municipality and department do (you) mainly carry out (your) work? …Department …Municipality	<u>**Original Name of Survey**</u> Gran Encuesta Integrada de Hogares <u>**English translation**</u> Integrated Household Survey	Second quarter 2016
3 Costa Rica	<u>**Original question (s) :**</u> **C2** ¿En qué provincia y cantón se ubica el establecimiento, negocio, finca o institución donde trabaja (nombre)? …En este mismo cantón …En otro cantón ……En cuál? ………Provincia ………Cantón …En otro país <u>**English translation**</u>: C2 In which province and canton is the establishment, business, farm or institution where (name) works? …In this same canton(corner) …In another canton(corner) ……In which? ………Province ………Canton …In another country	<u>**Original Name of Survey:**</u> Encuesta Continua de Empleo <u>**English translation:**</u> Continuous Employment Survey	2017

4. Denmark	**M4S1.** Select the name of your workplace by writing part of the name and selecting the name on the dropdown search list. Note that the same business may be registered under different names at the same address. Choose the name that best describes your field of work. If the name of your workplace does not appear on the search list, just write the name as accurately as possible **M4S2.** In which municipality is your workplace located? **M4S3.** In which country is your workplace located? **M4S4.** Please state the address of your workplace …Street name …House number …Postal code	Labour Force Survey	2017
5. Egypt	**Q. 221** Work location …Governorate …Urban / Rural …City / District (Write movable in any cell in case of movable employment)	Labour Force Sample Survey	2010
6. Finland	**T7** In which municipality is your place of work located? **T7** In which municipality is your enterprise or farm located? …Name of municipality If work is done in more than one municipality, select the one from which instructions are received for work. **T8** What is the street address or other more precise address of your place of work? If an enterprise with multiple establishments is concerned, ask for the address of the establishment. Necessary if the same employer has several establishments in the municipality. The data is needed for the coding of industry.	Labour Force Survey	2014

7. Indonesia	Where is (NAME) job's location of during the previous week? …Province …Regency/Municipality	National Labour Force Survey	2015
8. Malawi	In which district is your place of work located? …In this district …Another district …Another country …Name of [district/COUNTRY**]**	Malawi labour Force Survey	2013
9. Morocco	**Original question (s) :** **Dans quel endroit souhaiteriez-vous travailler ?** 1. Lieu de résidence 2. Ville la plus proche 3. Autre ville 4. Commune rurale 5. Etranger 6. N'importe quel lieu 7. Autres **English translation**: Where would you like to work? 1. Place of residence 2. Nearest city 3. Another city 4. Rural town 5. Abroad 6. Any place 7. Others	National Labour Force Survey	2011

10. Nicaragua	**Original question (s) :** ¿En qué departamento y municipio se ubica el lugar donde realiza su trabajo (…) ? …En este mismo municipio …En otro municipio ……Departamento ……Municipio …En varios municipios …En otro país **English translation**: In which department and municipality is the place of (your) work located? …In this same municipality …In another municipality ……Department ……Municipality …In different municipalities …In another country	**Original Name of Survey** Encuesta Continua de Hogares **English translation** Continuous Household Survey	2016
11. Norway	What is the street address of the establishment? IF THE RESPONDENT DOES NOT KNOW THE ADDRESS, ASK: Do you have a P.O. Box number for the establishment? What is the name of the postal district or municipality where the establishment is located?	Labour Force Survey	2006
12. Oman	**Original question (s) :** **ف لان ي عمل اي ن** ال سلطنة داخل ال سلطنة خارج **ا سم : ف لان ب هاي عمل ال د تي ال جهة إ سم هو ما** **English translation** **Where does (he) work?** …Within the Sultanate of Oman …Outside the Sultanate of Oman **What is the name of the organization/entity in which (he) works?** …Full name of the enterprise (entity of work)	**Original Name of Survey** الأ سري ال شامل ال م سح ا س تمارة **English translation** Family Survey	
13. Pakistan	What was the location of work place? …Rural …Urban	Labour force Survey	2013-2014

14. Panama	**Original question (s):** **39.** ¿En qué corregimiento o lugar está o estaba localizado su sitio habitual de trabajo? …En este mismo corregimiento ……Provincia ……Distrito ……Corregimiento …En la calle (ambulante) …Otro país **English translation**: **39.** In what town or place is or was (your) usual place of work located? …In this same town ……Province ……District ……Town …In the street (walking salesperson) …Another country	**Original Name of Survey** Encuesta de Mercado Laboral **English translation** Labor Market Survey	August 2016
15. Sweden	**Hu 1 a** Who do you work for? (or: What is the name of the company?) **Hu1aa** Where is your main place of work? (or: What is the name of the company where you have your main job?) …Name **Hu 1b** What is the street address of your workplace? …Street address **Hu 1c** Does your workplace have a particular name? …Name of workplace **Hu 1 d** Postal area	Labour Force Survey	2006
16. Uganda	In which district is your place of work located? …In this district …Another district …Another country …Name of [district/COUNTRY]	Labour Force Survey and Child Labour Survey	2011/2012

17. United Arab Emirates	**Original question (s) :** **309; الرئ يـسي؟ الـ فرد عمل مكان يـ وجد ايـ ن** 01 أبـ وظ بيـ مـنطـقة 02 الـ عـ بن مـنطـقة - 03 الـ غربـ بة مـنطـقة - 04 دبـ ي - 05 الـ شارقـة - 06 عجمان - 07 الـ قـ يويـ ن ام - – 08 الـ خـ يمة رأس 09 الـ فجـ يرة - 10 الـ دولـة حدد/ الـ دولـة خارج - **English translation**: **309;** Where is the individual's main workplace? 1. 01 - Abu 2. 03 - Al Ain 3. 05- Western Area 4. 06 - Dubai 5. 07- Sharjah 6. 09 - Ajman 7. 10 -Umm Al Quwain 8. 11-Ras Al Khaimah 9. 12- Al Fujairah 10. 14- Outside UAE	Labour Force Survey	2016
18. United Kingdom	Which city, town or village is your place of work in? Take nearest, in London try to get name of area (e.g. place within borough, not just the borough) APPLIES IF HOME=4 (works at a location separate from home)	Labour Force Survey	2014, Fourth quarter

Source: Questions compiled by ILO from questionnaires of the respective surveys of each of the countries. Labour Force Survey and related household survey questionnaires are available from the ILO microdata repository at the following website: https://www.ilo.org/surveydata/index.php/home