The 2014 Myanmar Population and Housing Census (2014 Census) was conducted with midnight of 29 March 2014 as the reference point. This is the first Census in 30 years; the last was conducted in 1983. Planning and execution of this Census was spearheaded by the former Ministry of Immigration and Population, now the Ministry of Labour, Immigration and Population, on behalf of the Government, in accordance with the Population and Housing Census Law, 2013. The main objective of the 2014 Census is to provide the Government and other stakeholders with essential information on the population, in regard to demographic, social and economic characteristics, housing conditions and household amenities. By generating such information at all administrative levels, it is also intended to provide a sound basis for evidence-based decision-making, and to evaluate the impact of social and economic policies and programmes in the country.

The results of the 2014 Census have been published so far in a number of volumes. The first was the Provisional Results (Census Volume 1), released in August 2014. The Census Main Results were launched in May 2015. These included The Union Report (Census Report Volume 2), Highlights of the Main Results (Census Report Volume 2-A), and the reports for each of the 15 States and Regions (Census Report Volume 3[A - O]). The reports on Occupation and Industry (Census Report Volume 2-B), and Religion (Census Report Volume 2-C) were launched in March 2016 and July 2016, respectively.

The current set of the 2014 Census publications comprises 13 Thematic Reports and a Census Atlas. They address issues on Fertility and Nuptiality; Mortality; Maternal Mortality; Migration and Urbanization; Population Projections; Population Dynamics; the Elderly; Children and Youth; Education; Labour Force; Disability; Gender Dimensions; and Housing Conditions and Household Amenities. Their preparation involved collaborative efforts with both local and international experts as well as various Government Ministries, Departments and research institutions. The first set of Thematic Reports (Fertility and Nuptiality; Mortality; Maternal Mortality; Migration and Urbanization; Population Dynamics; and Population Projections) has been published.

Data capture for the Census was undertaken using scanning technology. The processes were highly integrated, with tight controls to guarantee accuracy of results. To achieve internal consistency and minimize errors, rigorous data editing, cleaning and validation were carried out to facilitate further analysis of the results. The information presented in these reports is therefore based on more cleaned data sets, and the reader should be aware that there may be some small differences from the results published in the earlier set of volumes.

This Census Atlas is somewhat different in its concept, approach and content from the set of Thematic Reports. Rather than focusing in-depth on one particular topic and examining the variations in the socio-demographic characteristics of different subgroups of the population in Myanmar, the Atlas attempts to present a broader picture of the population as a whole over a wide range of topics, such that the geography of the Census – the way that different characteristics vary in different parts of the country, and among urban and rural populations - is shown graphically in the form of a range of figures and, most importantly, maps. It is often said that a picture tells a thousand words, and that is certainly true of maps, which are an effective way of getting sometimes statistically subtle messages across to a wider audience. Moreover, while the Thematic Reports generally analyse Census data only at the State/Region and District levels, this Atlas probes deeper into Myanmar society by looking at the profiles of the population at the finer and more detailed Township geography, revealing, on the way, some interesting results.

The main geographic feature of the distribution of Myanmar society drawn out by this Atlas is the difference in the demographic characteristics of the people living in the central corridor of Districts and Townships that runs between Yangon and Mandalay compared with those residents living in the surrounding outer ring of areas whether they be to the north, east, west, or south of the corridor. This pattern is persistent across a wide range of Census variables such as school attendance, literacy, prevalence of disability, employment, quality of housing, household size, and access to household services and amenities, such as safe drinking water and electricity. Though some comparisons are made between the profiles of males and females, more emphasis has been put here on comparing the long-standing traditional rural areas, with the more dynamic, demographically diverse and growing urban populations.

Many of the observations made will have an impact on the progress that Myanmar makes in its attempt to meet several of the Sustainable Development Goals. The Atlas thus serves as a visual reminder of not only what has already been achieved, but also the extent of the work that is still necessary over the coming years.

It should be noted, however, that this publication should not be regarded as the definitive Census Atlas. It is just one atlas that can be produced from the Census data. To keep the publication to a practicable size, the set of data presented has had to be highly selective. This is inevitable because of the breadth and depth of the Census data now available. The Myanmar Government encourages other researchers, programme managers and policymakers to explore the geography of the 2014 Census data themselves; to do their own spatial analysis and to integrate the results of the Census with their own data; and to make their own maps and observations.

On behalf of the Government of Myanmar, I wish to thank the teams at the Department of Population, the United Nations Population Fund (UNFPA) and the authors for their contribution towards the preparation of this Atlas. I would also like to thank our development partners, namely: Australia, Finland, Germany, Italy, Norway, Sweden, Switzerland, and the United Kingdom for their support to undertake the Census, as well as the technical support provided by the United States of America.

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List of Acronyms

DoP  Department of Population
FAO  Food and Agriculture Organization of the United Nations
GAD  General Administration Department
GIS  Geographic Information System(s)
ISCED  International Standard Classification of Education
Lao PDR  Lao People's Democratic Republic
LFPRS  Labour Force Participation Rates
SDGs  Sustainable Development Goals
S-T  Sub-Township
UN  United Nations
UN DESA  United Nations Department of Economic and Social Affairs
Introduction
Myanmar’s 2014 Population and Housing Census is the most recent in a long series of countrywide surveys that goes back to the 19th Century. Initially conducted every 10 years, censuses became more sporadic during worldwide armed conflicts and periods of political turbulence in the mid-20th Century. Myanmar did conduct population and housing censuses in 1973 and 1983, but then there was a gap of 31 years when none were undertaken. With Myanmar now embarking on a period of wide-ranging social and political transformation, the signs are encouraging that the successful enumeration in 2014 marks the resumption of decennial population and housing censuses for the country.

National population and housing censuses are important for several reasons. Firstly, the geographic scope of censuses is the entire territory of a country. Secondly, censuses attempt to collect information about every resident and every housing unit in the country on a particular date. Most other social and demographic surveys are forced to limit their geographic coverage and to enumerate only a sample of individuals and households. For providing a comprehensive snapshot of the social and demographic characteristics of the entire population of a country, censuses are invaluable and unique. Consistency in design is a third characteristic that sets censuses apart from other types of surveys. National censuses throughout the world strive to collect a standard set of basic social and demographic indicators. When different countries ask the same questions in the same way at the same time, it becomes possible to make valid comparisons between them. The fourth aspect of censuses that makes them uniquely important is contingent upon them being conducted on a regular basis over a long period of time. Repeatedly updating the socio-demographic profiles of entire national populations allows users to see how people have changed, both as individuals and collectively as members of families and communities. By maintaining consistency from year to year and from country to country, it is possible both to monitor the nature and rates of change in different parts of Myanmar, and also to make international comparisons to see how changes happening in Myanmar compare with changes occurring in other countries.

The process of conducting population and housing censuses follows a similar pattern around the world. The basic phases are planning and preparation, enumeration, data processing and dissemination, and analysis and evaluation of the data. In early 2017, Myanmar is in the fourth of these phases, with the Department of Population actively engaged in making the data it collected during enumeration accessible to as wide an audience as possible. It is disseminating information through a variety of channels, including: (a) websites such as http://www.dop.gov.mm/mpc/ and http://myanmar.unfpa.org/node/4308/; (b) workshops in different parts of the country; (c) a data-on-demand service operated from its offices in Nay Pyi Taw; and (d) a series of technical reports, of which this atlas is a part.

The first few technical reports, published in 2015, were a quick means of making basic census indicators available in tabular form. It was not intended that they would provide much in the way of analysis and interpretation. This is being presented in the set of publications called the “Thematic Reports”, the first of which were launched in the second half of 2016. Thematic reports on fertility and nuptiality, mortality, and maternal morbidity were the first to be launched, followed by migration and urbanization, population dynamics and population projections. Releases will continue into 2017, with reports on disability, the labour force, children and youth, the elderly, education, housing conditions and household amenities, poverty and gender dimensions. Though very different in terms of size, format, content and structure, this atlas is also part of the series of Thematic Reports. But why an atlas? What does this publication offer that other Department of Population Census reports do not?

There are three main differences. Firstly, whereas the Thematic Reports focus on variations in the social and demographic characteristics of different groups in society, the atlas is primarily concerned with the geography of the Census data. In the Thematic Reports, the emphasis is on describing and explaining differences in, for example, fertility, mortality, literacy and migration rates among groups categorized by age, sex, employment status, educational attainment, marital status and mobility. The atlas presents similar kinds of analyses, but adds a geographic perspective by showing how socio-demographic characteristics vary for different groups of society in different parts of the country. The Thematic Reports are largely limited to State/Region level, the atlas delves much deeper, presenting maps, data, figures and critical analyses of differences among Districts and Townships.

Secondly, each Thematic Report presents in-depth analyses of a limited set of indicators related to a single theme. In contrast, the atlas provides a general overview of a selected group of indicators covering all the main social and demographic themes. In this sense, it is a compendium of Census highlights, summarizing the main findings and conclusions of the Thematic Reports and presenting them in a single, abridged form.

The third characteristic that sets the atlas apart from the Thematic Reports is its heavy reliance on graphics, and especially on maps. It is widely recognized that maps are powerful tools for communicating information, especially when that information is wide-ranging and complex, as it is with census data. Maps are also widely understood and very popular, and so using them is an effective way of reaching a large audience and presenting the Census data in a user-friendly and easy to understand format. The 96 maps presented in this atlas show regional patterns and local variations in the distributions of a large number of indicators covering all the main social and demographic themes. The goal is to portray the thematic breadth and geographic depth of the entire 2014 Census in a single, accessible publication.

Chapter 1, Myanmar - Land of Diversity, gives an overview of Myanmar’s physical landscape and reflects on how populations have adapted and organized themselves to live in this physical environment. It also describes the administrative structure of the country, which is the framework within which the 2014 Census was first undertaken and is now being reported. The maps in Chapter 1, showing the locations of States/Regions, Districts and Townships, are the same as those on the fold-out poster, and are intended to provide a reference for identifying specific administrative areas on the thematic maps in other chapters of the atlas.

The General Demographic Characteristics explored in Chapter 2 include how the population is distributed in 2014 and how this distribution has changed since 1973. The chapter also looks at geographic variations in population density, age and sex composition, degree of urbanization, and religious affiliation.

Chapter 3 presents key findings on fertility and mortality, with a particular emphasis on geographic differences in rates among children and youth. Fertility rates among adolescent females and estimated mortality rates for the under-fives are two of the topics explored in this chapter.

Education is the theme of Chapter 4, which compares geographic variations among males and females and among urban and rural populations for indicators related to school attendance, educational attainment and adult literacy.

The analysis of labour force and employment indicators in Chapter 5 also looks at male/female and urban/rural differences. It also explores aspects of child work and child labour. Labour force participation, unemployment and employment in different industry sectors are the main topics discussed in this chapter.

Chapter 6 looks at internal migration, presenting a summary analysis of the most significant flows of both lifetime and recent migrants. It also shows how net rates for recent migrants vary considerably among the Districts, and how differences in net rates for the two sexes are causing some Districts to become ‘more male’ and some to become ‘more female’.

With disability as its theme, Chapter 7 shows that, for all four indicators analysed (disability among individuals; disability as it affects households; and the prevalence of multiple and single disability) differences among the Districts and between urban and rural populations are more substantial than differences between males and females.

Finally, Chapter 8 looks at geographic variations in household characteristics and housing conditions. It shows that parts of the country have marked differences in the average size of households and in the extent of their access to basic amenities such as safe drinking water, hygienic sanitation facilities and electricity. In general, households are found to be larger, and housing conditions worse, in rural areas than in urban areas.

The Department of Population hopes that this atlas will help raise awareness about the current social and demographic landscapes of Myanmar, and the opportunities and challenges inherent in these landscapes. If it informs and encourages further research by social scientists, academics and students; if it provides some guidance to policymakers, community leaders and planning authorities in their efforts to shape and steer socio-economic development; and if the general public finds it interesting, informative and, in some instances, surprising and even controversial, then the 2014 Myanmar Census Atlas will have achieved the results expected by the authors.
Enumerated and Estimated Populations

For the last three censuses undertaken in Myanmar, in 1973, 1983 and 2014, it was not possible to visit all parts of the country and conduct enumeration in 100 percent of its territory. Reasons for this included inter-communal tensions, disagreements between government and community leaders over how the census was to be conducted, and security-related concerns. In the 2014 Census, some communities in Kachin and Kayin were not counted as some areas could not be accessed by Census enumerators. In Rakhine State, members of some communities were not counted because they were not allowed to self-identify using a name that was not recognized by the Government. For the 2014 Census, in an effort to include at least headcounts of the people who were not enumerated, the Census Office made estimates from information collected during pre-enumeration activities such as enumeration area mapping and pilot testing. The table below shows the numbers estimated for the Union as a whole and for the individual States/Regions where the entire population was not counted, for each of the last three censuses.

Enumerated and Estimated Populations from 1973, 1983 and 2014 censuses

Names in parenthesis are the terms that were used for administrative areas at the times of the 1983 and 1973 censuses.

<table>
<thead>
<tr>
<th>Administrative Area</th>
<th>Population</th>
<th>Estimated</th>
<th>Estimated + Enumerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>50,279,900</td>
<td>1,206,353</td>
<td>51,486,253</td>
</tr>
<tr>
<td>Kachin State</td>
<td>1,642,841</td>
<td>46,600</td>
<td>1,689,441</td>
</tr>
<tr>
<td>Kayin State</td>
<td>1,504,326</td>
<td>69,753</td>
<td>1,574,079</td>
</tr>
<tr>
<td>Rakhine State</td>
<td>2,098,807</td>
<td>1,090,000</td>
<td>3,188,807</td>
</tr>
<tr>
<td>Other States/Regions</td>
<td>45,033,926</td>
<td>0</td>
<td>45,033,926</td>
</tr>
</tbody>
</table>

| UNION                       | 34,124,908 | 1,183,005 | 35,307,913             |
| Kachin State                | 819,774    | 85,020    | 904,794                |
| Kayah State                 | 159,661    | 8,768     | 168,429                |
| Kayin (Karen) State         | 632,962    | 422,397   | 1,055,359              |
| Sagaing Region (Division)   | 3,825,158  | 913,243   | 4,738,391              |
| Shan State                  | 5,090,339  | 626,502   | 5,716,841              |
| Other States/Regions        | 24,683,071 | 0         | 24,683,071             |

| UNION                       | 28,094,513 | 836,713   | 28,931,226             |
| Kachin State                | 687,218    | 50,721    | 737,939                |
| Kayah State                 | 107,342    | 19,232    | 126,574                |
| Kayin (Karen) State         | 660,244    | 198,185   | 858,429                |
| Chin State                  | 316,112    | 5,183     | 321,295                |
| Taninthary Region (Tenasserim Division) | 718,441 | 3,304   | 721,745                |
| Bago Region                 | 5,177,464  | 5,183     | 5,182,647              |
| Mon State                   | 1,307,680  | 6,544     | 1,314,224              |
| Rakhine State               | 1,700,506  | 12,332    | 1,712,838              |
| Shan State                  | 2,640,170  | 539,376   | 3,179,546              |
| Other States/Regions        | 16,769,336 | 0         | 16,769,336             |

Unless explicitly stated in the text, all data and indicators presented in this atlas are calculated based on the population that was enumerated in the 2014 Myanmar Population and Housing Census.

Myanmar People Living Overseas at the time of the 2014 Census

Population counts given in this atlas only include people living in Myanmar at the time of the 2014 Census. They do not include Myanmar people living overseas, with the exception of those who were working in Myanmar diplomatic missions abroad. This group of 972 people is included in the population count for Nay Pyi Taw Union Territory (Department of Population, 2015).

Townships and Sub-Townships

When the 2014 Myanmar Census was conducted in March/April 2014, the country’s Districts were sub-divided into Townships, some of which were further divided into Sub-Townships. At that time there were 330 Townships and 83 Sub-Townships, giving a combined total of 413 administrative units.

In November 2014, the Government passed legislation to reorganize the administrative structure of the country. The Sub-Township level was removed, and units that previously had Sub-Township status were absorbed into the adjusted Townships. The number of Townships under the current constitutional arrangement is 330.

Since the 2014 Census provides a snapshot of the demographic characteristics of Myanmar in March/April 2014, this atlas generally presents the results according to the administrative structure at that time. However, in light of the subsequent reorganization and the absorption of Sub-Townships into Townships, it does not distinguish between the two levels – maps and analyses at sub-District level include data for all 413 of the Townships and Sub-Townships.

The terms ‘Townships’ or ‘Township level’ as used in this atlas refer to the combined total of 413 Townships and Sub-Townships that existed in March/April 2014.
Order for Listing States/Regions, Districts and Townships in Tables of Census Data

The order in which administrative units appear in the 2014 Census publications was determined based on two considerations. At the State and Region level, the order is as outlined in the Constitution of the Republic of the Union of Myanmar, Chapter II: State Structure, Article 49. The names of the seven States, the seven Regions and the Union Territory are listed under this article

At the subnational administrative levels, the names and order was sourced from the yearly publication, List of Districts, Townships, Sub-townships and Towns, Wards, Village Tracts and Villages, published by the Ministry of Home Affairs on February 25, 2011 (Ministry of Home Affairs, 2011). This was the basis for the naming and ordering of administrative units as presented in this atlas. Subsequently, the list was updated with editions published in 2012 and 2013, when new administrative units were created. In most cases, the sequencing of administrative units within each higher unit is in alphabetical order when written in the Myanmar language. Since it is assumed that most readers of the 2014 Census reports will be from Myanmar, and will be familiar with the administrative structure of the country in their own language, this order of presentation has been retained in this atlas and in all official Department of Population 2014 Census publications.

Data Classification Techniques

For the purposes of preparing the thematic maps presented in this atlas, values had to be classified. Classifying data is a common practice in thematic mapping because, by grouping administrative units with similar data values into a limited number of classes, it makes the map easier to interpret. Taking Myanmar as an example, it would be quite difficult for a reader to tell the difference between data values for the States/Regions if all 15 of them were mapped using a different colour; distinguishing between 74 different colours for the Districts and 413 different colours for the Townships would be impossible. Healthy human eyes have little difficulty distinguishing between six or eight different colours, but with any more than this, colour tones begin to look too similar and readers find it hard to tell the difference between one administrative unit and another. The more colours used on a map, the more difficult it becomes to understand and interpret.

To overcome this problem, cartographers classify datasets to show regional patterns and clusters of administrative units with similar characteristics. There are several different ways of classifying data, three of which were used to prepare the maps presented in this atlas. The three classification techniques used are called ‘equal intervals’, ‘quantiles’ and ‘natural breaks’.

Equal intervals - This is the technique most commonly used for preparing the maps in this atlas. With equal intervals, the difference between the minimum and maximum value in each class is the same. The main advantages of equal interval classifications are that computing the class intervals is very simple, map legends are easy to interpret, and there are no gaps between classes or missing values within classes. Equal intervals portray datasets that are evenly distributed very well, but the technique does not work well for distributions that are skewed and in which values are grouped together in clusters separated by sizeable gaps (Stocum, T, 2009).

Quantiles - This classification technique puts an equal number of data values in each class. Using the 15 States and Regions of Myanmar as an example, a quantities classification would assign, as closely as possible, an equal number of States/Regions to each class; the number depending on how many classes are used. If there were three classes, for example, there would be five States/Regions in each class. If there were five classes, there would be three States/Regions in each class. Where the number of data values does not divide equally into the number of classes, classes will be of a slightly different size. Classifying the States/Regions into four quantities would produce three classes with four States/Regions and one class with just three States/Regions.

Natural breaks - One of the most commonly used classification techniques in thematic cartography – using natural breaks - groups values into classes based on clusters and gaps inherent in individual datasets. It seeks to minimize variance within classes and maximise variance between classes. Mapping data using this method works very well when, for example, neighbouring Townships in one part of the country have similar scores for a particular indicator, but are much higher or lower than scores for Townships in other parts of the country. Where marked regional patterns exist, the natural breaks method is often the best technique for showing them clearly on maps.

Technical Specifications of Geographic Data

The maps presented in this atlas are generally compiled from two kinds of data - geographic data and Census variables and indicators (attribute data). The geographic data defines the areas that make up Myanmar’s national territory, and also the boundaries of its administrative sub-divisions – the States/Regions, Districts and Townships. Geographic data used also includes the lines that define rivers and roads, and the points that define the locations of cities, towns and smaller settlements.

Census data is collected at the individual level, and for households and housing units, but it is both impractical and not generally useful to disseminate information at this level. It would also breach regulations concerning the protection of personal confidentiality. For this reason, census data are generally aggregated up to, and presented at different levels of, the administrative hierarchy which, in the case of Myanmar, are Village Tracts and Wards at the lowest level, and Townships, Districts, States/Regions and the Union at higher levels. Different users of Census data are interested in different levels of geographic detail; thus, while national policymakers, primary school teachers and the media might be most interested in general differences at the State/Region or perhaps District level, scientists, researchers, programme managers and local service providers will generally need more detailed information, and will therefore be looking for differences at lower geographic area levels.

Since the expected readership of this atlas is likely to include a very broad spectrum of users with interests in a wide range of topics to varying degrees of detail, the atlas attempts to strike a balance between presenting a broad regional overview and specific local detail. It does this by presenting geographic distributions at State/Region, District and Township levels but not for any smaller geography. This balance is evident on most of the two-page spreads covering specific Census themes or indicators. The main geographic patterns and distributions are explained in the text and summarized in graphs and figures; detailed spatial variations are revealed in District and Township level maps; and the numbers behind the maps and figures are presented in tables. Practical considerations of space and legibility limit the amount of data that can be given on each page, but most tables present data for States/Regions and Districts.
Map Scales and Resolution

The thematic maps in this atlas are at different scales, depending on the level of administrative unit for which data are being presented. The range of scales used for the different administrative levels are as follows:

- State/Region maps: between 1:11,000,000 and 1:15,000,000.
- District maps: between 1:7,000,000 and 1:14,000,000.
- Township maps: between 1:7,000,000 and 1:8,000,000.
- Insets showing detail for Yangon, Mandalay and Nay Pyi Taw: between 1:500,000 and 1:600,000.

Map resolution - the degree to which elements can be discriminated by the human eye - was established at the scale of 1:10,000,000. Taking into consideration the international accepted standard that two lines cannot be differentiated if they are less than 0.5 millimetres apart, the adopted map resolution at the scale of 1:10,000,000 is 5,000 metres, or 5 kilometres. This is the cartographic standard error in terms of positional accuracy at scales close to 1:10,000,000.

The minimum size of the features represented on the maps in this atlas is 25 km². Therefore, islands with a surface area smaller than 25 km² were not mapped as independent features and were not considered in the classification of Census data. They do, however, appear in the elevation model layer presented as background to the thematic maps.

The vector dataset representing administrative units on the maps in this atlas originally came from the Ministry of Home Affairs' General Administration Department. Since it was digitized from very detailed, large-scale source maps, the original dataset had to be generalized to make it suitable for the atlas’s small-scale thematic maps. The generalization process included reducing the number of vertices to simplify coastlines and administrative boundaries, removing all features smaller than the minimum mapping unit size of 25 km², and checking that the topological integrity of the original dataset was retained in the modified version. Coding the geographic data so that it could be linked with data from the Census database was done by the Geographical Information System team in the Ministry of Labour, Immigration and Population’s Department of Population.

Data Sources and References

The primary source for the data analysed and presented in this atlas was the official Department of Population (DoP) database for the 2014 Myanmar Population and Housing Census. In addition, reference was also made to the Census Thematic Reports that the DoP is in the process of producing. At the time this atlas was compiled and written (May 2016-February 2017), some of these reports had already been published and some were still in the process of preparation. Where the atlas presents material based on the contents of a report that has already been published, the name of the report and the publication date are given. Where unpublished reports are used as a source, citations are dated ‘2017’ in anticipation of them being published and launched this year.

In conceptualizing and designing the 2014 Myanmar Census Atlas, the authors looked to atlases already published based on censuses in other countries for ideas and inspiration. The following were the most useful in this respect:

- Kosovo Census Atlas (published 2013, based on the 2011 census).

See the list of references at the end of this atlas for full citations of these and all other sources.

Rounding

Most of the percentages given in this atlas are rounded to one decimal place. This might mean that, in a very few cases, proportions do not total to exactly 100 per cent but to either 99.9 per cent or 100.1 per cent. These rounding ‘errors’ do not reflect data inaccuracies but result from a simplification of numbers to make them easier to read and easier to compare.

Urban and Rural

Urban population includes all people living in Wards; rural population includes all people living in Village Tracts. According to the official designations released by the General Administration Department of the Ministry of Home Affairs, there were 3,071 Wards and 13,620 Village Tracts in Myanmar at the time of the 2014 Census (General Administration Department, 2013). Townships are comprised, in most cases, of a combination of both.

Institutional Households

The 2014 Census considered the following to be ‘institutions’: old-people’s homes, orphanages, hospitals, boarding schools, hotels, hostels, guest houses, homes for people living with disabilities, prisons, monasteries, convents, military and police barracks, and camps for workers. Homeless persons were also enumerated and included in the institutional population. Individuals living in institutions such as these on Census Night (29 March 2014) were considered to be living in ‘institutional households’. The questions asked of individuals living in institutional households were a subset of those asked of people living in conventional households. They included questions on sex, marital status, religion, ethnicity, disability, type of identity card, educational attainment and activity status as members of the labour force.
**Glossary of Technical Terms and Definitions**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescent Fertility Rate</td>
<td>The age-specific fertility rate for women aged 15-19. Adolescent fertility rates presented in this atlas were calculated as the number of births to women aged 15-19 in the 12 months prior to the 2014 Census, divided by the number of women in the same age group, multiplied by 1,000.</td>
</tr>
<tr>
<td>Adult Literacy</td>
<td>The ability to read and write in one or more languages with reasonable understanding. Adult literacy rates presented in this atlas are based on the total enumerated population aged 15 years and above.</td>
</tr>
<tr>
<td>Average Size of Household</td>
<td>The number of people enumerated in a conventional household as being present on Census Night (between 29th and 30th March 2014). This may not necessarily be the same as the number of household members usually resident in the household.</td>
</tr>
<tr>
<td>Census Night</td>
<td>The night of 29/30 March 2014.</td>
</tr>
<tr>
<td>Conventional Household</td>
<td>The 2014 Census defined ‘conventional households’ as being comprised of one or more persons who are either related or unrelated and share living quarters in either a stand-alone unit or a compound. Members of a conventional household eat meals together, usually prepared from the same cooking pot. In most cases, one person is acknowledged by household members to be the head of the household.</td>
</tr>
<tr>
<td>Crude Birth Rate (CBR)</td>
<td>The number of births that occur in a particular year per 1,000 persons. CBRs presented in this atlas were calculated as the number of births that occurred during the 12 months prior to the Census, divided by the enumerated population.</td>
</tr>
<tr>
<td>Dependency Ratios</td>
<td>Express the relationship between the number of people of non-working age and the number of people of working age. Non-working ages include children aged 14 years and younger and elderly people aged 65 years and older. The working-age population includes all people aged 15-64 years. The dependency ratios presented in this atlas were calculated as follows:</td>
</tr>
<tr>
<td>Disability</td>
<td>Physical or mental conditions which put a person at greater risk than the general population of experiencing restrictions in performing routine activities (including activities of daily living) or participating in roles (such as work) if no supportive measures are offered. The difficulties covered in the 2014 Census included:</td>
</tr>
<tr>
<td>District</td>
<td>The 2nd administrative level in Myanmar. Groups of Districts combine to form States, Regions, Self-Administered Divisions and Self-Administered Zones. Nay Pyi Taw Union Territory is comprised of two Districts.</td>
</tr>
<tr>
<td>Durable Housing</td>
<td>A housing unit is generally considered to be ‘durable’ if it is built in a non-hazardous location, is considered to be a permanent structure and is capable of protecting its inhabitants from the extremes of climatic conditions. The indicator for housing quality presented in this atlas gives the proportion of households that live in ‘non-durable’ housing. Houses were classified as ‘non-durable’ if the walls, roof or floors were mainly constructed from non-woody vegetation including dhani, theke, in phet and other leaves.</td>
</tr>
<tr>
<td>Economically Active</td>
<td>Includes all people who were enumerated as either ‘employed’ or ‘unemployed’. The expression ‘labour force’ is sometimes used interchangeably with the term ‘economically active’.</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>The highest grade/standard/diploma/degree completed in the education system of Myanmar. It covers both public and private institutions accredited by government.</td>
</tr>
<tr>
<td>Employed</td>
<td>Refers to those people who worked for more than 6 months in the 12 months prior to the Census, for pay or profit, such as a wage, salary, allowance, business profit, etc. Also included in this category were people working in family businesses on a farm, in a store, in a private hospital etc., even though they were not paid any wages.</td>
</tr>
<tr>
<td>Enumeration Area</td>
<td>The smallest geographic unit used traditionally in a census operation. In the 2014 Myanmar Census, enumeration areas included about 100 conventional households. Each enumeration area was enumerated by a single enumerator.</td>
</tr>
<tr>
<td>Geographical Information System(s) (GIS)</td>
<td>A computer system for capturing, storing, checking, and displaying data related to positions on the earth’s surface. GIS can show many different kinds of data on one map. This enables people to see, analyse and understand geographic patterns and relationships more easily.</td>
</tr>
<tr>
<td>High School Level Attainment</td>
<td>Those who reported high school in this atlas as the highest grade completed includes all individuals who had received some higher education (college or undergraduate diploma), but who had not graduated, as well as those who had only completed the last grade in high school (upper secondary level) (Grade 11).</td>
</tr>
<tr>
<td>Improved Sanitation</td>
<td>Refers to sanitation facilities that allow for the hygienic disposal of human excreta without it coming into contact with humans. For the 2014 Myanmar Census, improved sanitation facilities included flush toilets and water-sealed pit latrines.</td>
</tr>
</tbody>
</table>
Infant Mortality Rate
The ratio of the number of deaths of infants aged under one year that occurred during the 12 months prior to the Census, to the number of live births in the same year. This rate is expressed per thousand live births.

In-Migrant
A person who has moved into one area from another area. As defined in Myanmar’s 2014 Census, people who had moved into one Township from another Township were considered to be in-migrants. Migration data presented in this atlas only includes internal migrants - people who moved within Myanmar.

Institutional Households
The 2014 Census considered the following to be ‘institutions’: old people’s homes, orphanages, hospitals, boarding schools, hotels, hostels, guest houses, homes for people living with disabilities, prisons, monasteries, convents, military and police barracks, and camps for workers. Individuals living in institutions such as these on Census Night, including homeless persons, were considered to be living in ‘institutional households’.

Internal Migration
Movement of people involving a change of usual residence between Townships within Myanmar.

International Migration
Movement of people involving a change of country of usual residence.

Labour Force
A general term to mean those persons who were, collectively, ‘employed’ or ‘unemployed’ at the time of the Census. The expression ‘economically active’ is sometimes used interchangeably with the term ‘labour force’.

Labour Force Participation Rate
The ratio between the number of people in the labour force in a particular age group and the overall size of the total population in the same age group. This is an important indicator as it represents the proportion of the population that is economically active.

Life Expectancy at Birth
The average number of years that a newborn can be expected to live if he or she were subject to the age-specific mortality rates of the 12 months prior to the Census.

Lifetime Internal Migration
The total number of people who, at some time in their lives, lived in a Township different to the one they were born in. This includes people who moved to live in a different Township for a period of time, but later returned and were living in their Township of birth when they were enumerated.

Literacy
The ability to read and write in one or more languages with a reasonable level of understanding.

Median Age
The age that divides a given population numerically in half. Fifty per cent of the population is younger than the median age and 50 per cent of the population is older than the median age.

Migrant
A person who has changed his/her usual place of residence from one ‘migration-defining’ area (in the case of the 2014 Census, the Township) to another, at least once during the migration-defining period.

Net Internal Recent Migration Rate
For any given administrative unit: the number of in-migrants in the five years prior to the Census minus the number of outmigrants during the same five-year period, divided by the total enumerated population in 2014, multiplied by 1,000.

Outmigrant
A person who has moved from one area into another area. As defined for Myanmar’s 2014 Census, people whose usual residence moved from one Township to another Township were considered to be outmigrants. Migration data presented in this atlas only includes internal migrants - people who moved within Myanmar.

Population Average Annual Growth Rate
Average amount of population change per year. The formula is:
\[ r = 100 \times \frac{(P2 - P1)}{(t2 - t1)} \]
Where P1 and P2 are the number of persons at times t1 and t2, 1983 and 2014 respectively, and the time interval (t2-t1) is expressed in years; 31 in the case of Myanmar. It is conventionally expressed in percentage units.

Population Density
A measure of the number of people living in a given amount of space, expressed as the number of people per unit area of land. The units used for land areas in this atlas are square kilometres, or km². The formula used to calculate the population density is: number of people / number of square kilometres of the territorial unit they live on.

Population Growth
An increase in the number of people that lives in a given territory between two points in time, depending on fertility, mortality and migration rates. As presented in this atlas, population growth between 1983 and 2014 was calculated as a percentage as follows: [(population in 2014 – population in 1983) / population in 1983] x 100.

Population Pyramid
Representation by means of a histogram of the age distribution of a population at a specific point in time, showing the proportion of the population by age and sex.

Primary School Level Attainment
Persons reported as attaining primary school level education in this atlas are those who reported completing primary school (Grade 5) and the first three grades of lower secondary school (Grades 6, 7 and 8), but who had not gone on to complete upper secondary level (Grade 11).

Recent Migration
For the 2014 Myanmar Census, it refers to the movement of people between Townships during the five-year period prior to the Census.

Rural Area
An area classified by the General Administration Department (GAD) of the Ministry of Home Affairs as a village tract. Generally, such areas have relatively low population density, and land use which is predominantly agricultural.
Safe Drinking Water
Drinking water from a source that is likely to be protected from outside contamination. For the 2014 Myanmar Census, such types of water sources included piped water delivered via a tap, tube wells and bore holes, protected wells and springs, and bottled water and water obtained from a vending machine.

School Attendance Rate
Percentage of children aged 5-15 that were attending school at the time of the Census, at any level and in any educational institution or programme accredited by Government, public or private, for organized learning.

Sex Ratio
Expresses the relationship between the number of males in a population group and the number of females in that same population group. Sex ratios are calculated as follows: (number of males / number of females) x 100.

State/Region
The 1st administrative level of Myanmar. The 2014 Census includes Nay Pyi Taw Union Territory and the country’s seven States and seven Regions in this administrative level.

Total Fertility Rate (TFR)
Expresses the average number of children that a woman would give birth to if all women lived to the end of their childbearing years and bore children according to the current schedule of age-specific fertility rates. It is the sum of five-year age-specific birth rates for females aged 15 to 49.

Township
The 3rd administrative level of Myanmar. A group of Townships comprises a District.

Under-Five Mortality Rate
The ratio of the number of deaths of children less than five years old that occurred during the 12 months prior to the Census, to the number of live births in the same period. This rate is expressed per thousand live births.

Unemployed
As defined for the 2014 Myanmar Census, includes all people who had no work during the 12 months prior to the Census, but who were able to work and had been actually seeking a job during that 12-month period. The Census based its definition on the following International Labour Organization definition:

All persons above a specified age who, during the reference period, were:

- a) “Without work”, in other words, were not in paid employment or self-employment
- b) “Currently available for work”, that is, were available for paid employment or self-employment during the reference period
- c) “Seeking work”, that is, had taken specific steps in a specified reference period to seek paid employment or self-employment.

Unemployment Rate
The percentage of the total labour force that was unemployed but that was actively seeking employment and was willing to work.

University Level Attainment
The highest level of attainment in this atlas includes all individuals who had graduated with bachelor’s degrees, post graduate diplomas, master’s degrees or PhDs.

Urban Area
An area classified by the General Administration Department (GAD) of the Ministry of Home Affairs as a “ward”. Generally, such areas have relatively high density of building structures, high population density and better infrastructure development than areas classified as rural.

Ward and Village Tract
The 4th administrative level of Myanmar. A group of Wards and/or Village Tracts comprises a Township.

Working-Age Population
The number of people between the ages of 15 and 64.
1

Myanmar - Land of Diversity
1.1 People and the Physical Environment

The land area occupied by Myanmar is approximately 676,600 square kilometres, extending about 2,050 kilometres (1,270 miles) from north to south and 390 kilometres (240 miles) from east to west. It is slightly larger than the country of Afghanistan, and slightly smaller than the U.S. state of Texas. Myanmar has approximately 1,930 km of coastline on the Bay of Bengal and Andaman Sea. Elsewhere it shares approximately 6,500 kilometres (4,000 miles) of land borders with five neighbouring countries: Bangladesh to the west; India to the north-west; China to the north and north-east; Lao PDR to the east; and Thailand to the east and south-east. Based on geographic variations in relief, soils, drainage patterns and climate, Myanmar can be divided into five distinct physiographic regions: the northern mountains, the western ranges, the eastern plateau, the central basin and lowlands, and the coastal plains and deltas.

Population distribution is strongly influenced by the physical characteristics of a territory. The people of Myanmar show how populations are extremely adaptable and can thrive in a wide range of natural environments. Even so, local and regional differences in topography, climate, soils, water resources and natural vegetation have strong influences on where and how the people of Myanmar live. Generally, upland areas are much less densely populated than the lowlands of the central basin and coastal plains. However, people do live in some hilly and mountainous areas, where job opportunities provided by rich mineral and forest resources encourage large numbers of young, mostly male, people to live in remote areas under harsh conditions.

Relief - Many of Myanmar’s international boundaries follow ranges of mountains and hills. For example: the Rakhine Mountains, which include the Patkai Range, Naga Hills and Chin Hills, between Myanmar and India; the Dawna Range and Tanintharyi Mountains between Myanmar and Thailand; and the Hengduan Range and Shan Plateau between Myanmar and China. The highest point in the country, Hkakabo Razi, at 5,881 metres (19,296 feet) above sea level, is on the border with China in the Hengduan Range. The mountains in the north are relatively young, formed over the last 50 million years along the line where the Eurasian Tectonic Plate is being pushed up by the northward-moving Indian-Australian Plate. This makes them generally higher, steeper and more rugged than the older, more heavily eroded mountains and hills to the south. The Rakhine Mountains run down the entire western side of Myanmar at an average elevation of 1,800 metres (6,000 feet) above sea level. The Shan Plateau in the east is, on average, only about 1,000 metres (3,300 feet) above sea level, and it is deeply dissected by a network of rivers. Some mountains have religious or other cultural significance. Kyaiydyu, Sagaing Hill and Mount Poppa are among Myanmar’s most important cultural landmarks.

Drainage - Lakes and rivers are vital sources of fresh water for human consumption, industry and irrigated agriculture. Large volumes of water that falls in the uplands in the west, north and east, drains to the coasts through the central basin and lowlands. The central basin is dominated by the Ayeyawady River which, with a navigable length of almost 1,600 km (1,000 miles), is the longest river in Myanmar and, from a socio-economic point of view, by far the most important (Geographia, 2016). The Ayeyawady drains about 60 per cent of the land area of the country. Other important rivers include: the Chindwin, a tributary of the Ayeyawady in the north-west; the Pathein and Yangon Rivers in the south; the Sittaung, which drains into the Gulf of Martaban, in the east; and the Than Lwin, which is the largest of the many rivers that drain the Shan Plateau. All of these rivers, and especially the Ayeyawady, attract people in large numbers to live and farm near them; provide corridors for travel around the country; and facilitate the movement of large volumes of agricultural produce, minerals, forest products and manufactured goods to the country’s population centres and ports.

Lakes also attract people because they provide a source of water and food. Indawgyi Lake in the northern hills of Kachin State is Myanmar’s largest lake. Measuring 24 km (15 miles) by 13 km (8 miles), it is also one of South-East Asia’s largest natural inland water bodies. Inle Lake, on the Shan Plateau, is also important for its natural resources, as a site of social and religious significance, and as a major tourist attraction.

Soils - After water, food is the most important requirement to sustain life. To meet this need, historically people have lived in the largest numbers and at the highest densities on the most productive land. In Myanmar, this is found on the deep, alluvial silts and clays in the central basin and lowlands. The lowland soils are not naturally high in nutrients or organic matter, but they are very productive when fertilized. Over the millennia, Myanmar has increasingly adopted sophisticated agricultural practices to raise the productivity of the central basin and coastal plains and feed its ever-growing population. In contrast, soils in the uplands are relatively shallow and poor in nutrients. They are easily eroded, especially in steep areas with heavy rainfall, and where forest cover has been cleared. Myanmar’s uplands are generally less densely settled than its lowlands, partly because the soils in the mountains are not as productive. Though the soils in the uplands generally cannot support the intensive growing of staples such as rice, wheat or potatoes, they are adequate for less demanding perennial crops such as tea, coffee and rubber, for seasonal plantings of a wide variety of grains, pulses and vegetables, and for grazing livestock.

Climate - Monsoon winds are the main drivers of Myanmar’s climate. Combined with the predominantly north-south alignment of the country’s mountain ranges and valleys, the winds create a pattern of alternating wet and dry zones during both the north-east (November to February) and south-west (June to October) monsoon seasons. All parts of the country have adequate rainfall for agriculture year-round, though irrigation is needed in many lowland areas, particularly during the dry inter-monsoonal season from February to May. Cold temperatures are the limiting factors in the high north, where cold air masses from Central Asia bring snow for two months each year. The wettest parts of the country are the coasts and mountain ranges in the west and south-east, which receive more than 5,000 millimetres (200 inches) of rainfall annually. About 2,500 millimetres (100 inches) of rain falls on the Ayeyawady delta each year. Proximity to the coast and the low, flat terrain of this part of Myanmar makes it particularly vulnerable to risks associated with the tropical cyclones that occasionally form in the Andaman Sea. The central basin is known as the dry zone. Sheltered from the wet westerly winds by the Rakhine Mountains, this part of the country only receives between 500 and 1,000 millimetres (20 to 40 inches) of rainfall per year.

Agriculture - The combined influences of the natural elements described above are reflected in Myanmar’s three distinct agricultural zones: the Ayeyawady and other deltas, where paddy rice is the dominant crop; the dry lowlands, where production of a wide variety of crops, including rice, are made possible by irrigation; and hill and plateau regions, where tree crops and shifting agriculture predominate. Important crops raised in the dry zone include sugarcane, legumes, groundnuts, maize, onions, sesame and rubber. Upland crops include some extensive tea and coffee estates and large areas of mixed agriculture where the principle crops are upland rice, yams, maize and millet. In addition large numbers of pigs, poultry, goats and chickens are kept. Bullocks and buffalo are commonly used as working animals.

Settlements and Transportation - For centuries, Myanmar has been a country of small towns and villages, linked together by extensive networks of narrow roads, tracks and rivers. However, the last 150 years have seen some major changes as transportation and communication links have modernized and the growth of urban centres such as Yangon, Mandalay, Mawlamyine, Taunggyi and Monywa has accelerated. Powering boats with steam engines was the first major innovation to make a big impact in this regard. Then followed the railways, which helped make the movement of people and products between the country’s major towns and cities faster, efficient and less expensive. Myanmar is now expanding and upgrading its road network and air linkages to further improve accessibility and boost the productive capacity of more people in more remote parts of the country. Further improvements in the mobile/cell phone network and internet connectivity are also contributing to Myanmar’s accelerating transition from a traditional, agriculture-based past to a natural resource processing, manufacturing and service sector-based future.

Primary reference for this section: Encyclopaedia Britannica, 2016.
1.2 Administrative Structure

When the Census was conducted in March and April 2014, Myanmar was divided for administrative purposes into 15 States/Regions, 74 Districts, 330 Townships and 83 Sub-Townships. The maps on the following pages show the locations of all these administrative areas and identifies them by name: Map 1.2a for States/Regions; Map 1.2b for Districts; and Map 1.3 for Townships and Sub-Townships.

The Census used this administrative structure as the framework within which it delineated areas for the purposes of planning and managing the enumeration of the population. The entire territory of Myanmar was divided into enumeration areas, most of them containing between 100 and 150 households. In remote, sparsely populated parts of the country, enumeration areas had fewer than 100 households. This approach is the international standard practice for conducting censuses, and it is applied so that, in principle, no households are left out of the enumeration, and no household is counted more than once.

Following a restructuring of the administrative system by the Ministry of Home Affairs’ General Administration Department in November 2014, the Sub-Township level was removed, and units that previously had Sub-Township status were absorbed into the adjusted Townships. The number of Townships under the current constitutional arrangement is 330. However, since the 2014 Census provides a snapshot of the demographic characteristics of Myanmar in March/April 2014, this atlas presents the results according to the administrative structure in place at that time. The locations of the 83 Sub-Townships that were absorbed into Townships in November 2014 are shown on Map 1.3. They are identified with the assignation ‘S-T’ in the map’s key.

Though Map 1.3 distinguishes between Townships and Sub-Townships, the analysis and maps presented for this administrative level in all subsequent chapters refers to both, collectively, as ‘Townships’. This is in the interests of brevity and clarity, and also in recognition of the fact that the Sub-Township level was removed from the administrative hierarchy shortly after the Census was completed.

The maps presented here provide a reference to help readers identify the administrative areas for which Census data are presented on the other maps in this atlas, most of them without place names. By omitting place names, the cartographers who made the maps were able to present the geographic patterns and distributions inherent in the Census data clearly and in great detail. The poster included with this atlas shows the same three reference maps. Opening up the poster as a ready reference while leafing through the atlas will save readers the inconvenience of continually flipping back to this introductory chapter to identify individual States/Regions, Districts and Townships. The poster also makes a good wall chart.
Map 1.3 Administrative Areas, Townships
General Population Characteristics

This chapter covers a broad range of topics that describe the general socio-demographic characteristics of the people of Myanmar at the time of the 2014 Census. Themes explored include where people live and in what numbers; the age and sex composition of people in different parts of the country; relationships between potentially productive and dependent groups; differences between urban and rural populations; and spatial variations in the distribution of followers of different religions. The main questions asked to obtain this information are shown in the extract from the Census questionnaire below.

A pattern which becomes clear in this chapter, and which occurs repeatedly throughout the atlas, shows substantial differences between the people who inhabit the middle corridor between Mandalay and Yangon, and those who live in the Districts and Townships surrounding this corridor. In terms of basic population characteristics, the Census showed that, in general, people in the middle corridor live at higher densities; have larger proportions of potentially productive working-age people; have more females than males; and are more likely to live in urban rather than rural areas, than people who live in outlying areas.

Indicators explored in subsequent chapters reveal a similar horseshoe pattern. Whether it be attendance and attainment at school, literacy, prevalence of disabilities, job opportunities, access to household services, or quality of housing, people living in the middle corridor generally fare better than those living in the outer ring. This is not a new observation, since the Ayeyawady River catchment has long been recognized as the wealthiest and most productive and accessible part of the country. However, the 2014 Population and Housing Census has generated a wealth of empirical data to support (and occasionally refute) observations and conclusions that until now have largely been anecdotal.
2.1 Population Distribution

As at midnight, between 29 and 30 March 2014, the 2014 Myanmar Census estimated the total population of the country at 51,486,253. This figure includes 50,279,900 people enumerated through the field data collection operation, and an additional estimated 1,206,353 people, based on the Census mapping activity, who were not counted. This estimate includes 1,090,000 people in Rakhine State, 69,753 people in Kayin State, and 46,600 people in Kachin State (see Introduction, Enumerated and Estimated Populations, page XIII).

The population of Myanmar is most heavily concentrated in the central part of the country, along a corridor connecting the cities of Yangon, Nay Pyi Taw and Mandalay. Geographical information system (GIS) analysis shows that approximately 50 per cent of the total population lives within 100 kilometres of these three urban centres. The other half of the population is distributed relatively sparsely in largely rural areas to the north, south, east and west, though there are smaller urban concentrations in all of these areas.

This second tier of densely settled urban areas can be seen on Map 2.1 and includes, for example, Sittway and Maungtaw in Rakhine State, Taunggyi in Shan State, Kayah, Kayin, Mon and Chin, and Myek in Tanintharyi Region. Myanmar’s middle corridor is relatively heavily populated, but far more people live in the Districts and Townships of the outer ring, albeit at much lower densities. The Census reported more than 70 per cent of the population living in rural areas in 2014.

Among the States and Regions, Yangon Region has the largest population with 7.3 million, followed by Ayeyawady and Mandalay Regions, each with approximately 6.2 million, and Shan State, with 5.8 million (see Table 2.1). Figure 2.1 shows that these four States/Regions are home to just under half of the total population of the country. The other half of the population, some 26 million people, is distributed unevenly throughout the other 11 States and Regions. Moderately large numbers of people live in Bago Region, Magway Region, Rakhine State and Sagaing Region; large territories that are home to approximately a third of the total population. The remaining 17 per cent of the population live in the other seven States and Regions. Their numbers are relatively small either because they live in administrative areas occupying small land areas, such as Nay Pyi Taw Union Territory, Mon State and Kayah State, or because they live at very low densities in large administrative areas, as in Tanintharyi Region and in Chin, Kayin and Kachin States.

Table 2.1 Total Population (Enumerated plus Estimated) and Population Density, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region</th>
<th>District Area (Km²)</th>
<th>Total Population (Person)</th>
<th>Density per Km²</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>676,577</td>
<td>51,486,253</td>
<td>76</td>
</tr>
<tr>
<td>Mandalay</td>
<td>98,042</td>
<td>1,669,441</td>
<td>19</td>
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<tr>
<td>Myitkyina</td>
<td>78,945</td>
<td>820,778</td>
<td>10</td>
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<tr>
<td>Mohinnay</td>
<td>56,352</td>
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<td>Bhamo</td>
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<td>11,732</td>
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<td>Loikaw</td>
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<td>Kayin</td>
<td>21,009</td>
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<tr>
<td>Hpa-An</td>
<td>10,785</td>
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<td>57</td>
</tr>
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<td>Shwealo</td>
<td>14,877</td>
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<td>8,567</td>
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<td>Taninthary</td>
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</tr>
<tr>
<td>Dawei</td>
<td>14,004</td>
<td>403,576</td>
<td>35</td>
</tr>
</tbody>
</table>

Source of land area data: Department of Settlement and Land Records, 2015.
General Population Characteristics

The base population for this indicator is the number of individuals, both enumerated and estimated, that were living in conventional and institutional households at the time of the 2014 Census.

The number of dots in each administrative unit represents the total population of that administrative unit divided by 1,000. Since the dots are distributed randomly within administrative units, they only give an impression of the density of the population; they do not show precisely where people live within each State/Region, District or Township.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.

1 dot represents 1,000 people

Number of people

- 1 dot represents 1,000 people
- State/Region boundary
- District boundary
- Township boundary

Dots are placed randomly within polygons representing Townships.
2.2 Land Area and Population Density

At 676,577 square kilometres, Myanmar is the 39th largest country in the world, and the 11th largest in Asia (UN DESA, 2014). On the world chart, Myanmar is slightly smaller than Chile and Zambia and slightly larger than Afghanistan and Ukraine (Table 2.2). China is by far the largest of Myanmar’s immediate neighbours, followed closely by India, but Myanmar is slightly larger than Thailand and substantially larger than both Lao PDR and Bangladesh.

Table 2.2 shows that, compared with its neighbours in Asia, people in Myanmar generally live at a relatively low density, with only Lao PDR less densely populated. To the west, Myanmar shares a border with two of the most heavily and densely populated countries in the world - Bangladesh and India. At 1,087 people per square kilometre, population density in Bangladesh is by far the highest in the region. Lao PDR has the lowest, at only 29 people per square kilometre. Among neighbouring countries, Thailand is most similar in terms of population density with 131 people per square kilometre compared with Myanmar’s 76. Interestingly, of all the countries in the world, Ukraine is closest to Myanmar in terms of both land area and population density.

The overall sparse population density at the Union level hides substantial variations in different parts of the country. Maps 2.1 and 2.2 show a clear regional distinction between the relatively densely settled middle corridor, stretching from Mandalay in the north to Yangon in the south, and the sparsely settled Districts and Townships that form a ring around this middle corridor. Differences between the middle corridor and the outer ring are a recurring theme of Myanmar’s social and economic geography, and are evident on many of the maps presented in this atlas.

Maps 2.1 and 2.2 also show the highly skewed nature of the population distribution, whereby a large proportion of the population is concentrated in relatively few Districts and Townships. The 35 Districts that are more densely populated than the national average contain 70 per cent of the country’s population, but Figure 2.2 shows that they only occupy 30 per cent of its land area. In 2014, with 716 people per km², Yangon Region was by far the most densely settled State/Region, with people living at 6,500 per km² in East Yangon District and almost 5,000 per km² in West Yangon District. Within these Districts, residents of Townships such as Sangyoung, Kyauktada and Pabedan were living at densities of more than 40,000 per km², whilst Pazuntaung in East Yangon District was the most densely populated Township in the country, with a very tightly packed 48,000 people living on its single square kilometre.

The remaining 30 per cent of the population was thinly spread across 38 Districts, occupying 70 per cent of the land area. Chin, Kachin, Kayah and Shan States, and Tanintharyi Region all had fewer than 50 people per km². Putao in Kachin State was the District with the lowest population density, at 3 people per km². Within Putao District, Sumparabum Township and Pannandin Sub-Township were both populated with fewer than 0.5 people per km², whilst Ingyanyan in Myitkyina District was the least densely populated Township, with each of its 1,732 residents occupying an average of almost 3 square kilometres of territory.
Map 2.2 Population Density, Townships

The base population for this indicator is the number of individuals, both enumerated and estimated, that were living in conventional and institutional households at the time of the 2014 Census.

The indicator gives the number of people living in each Township divided by the area of the Township in square kilometres.

People per square kilometre

Population density at Union level: 76.1

- 0.4 - 76.0
- 76.1 - 100.0
- 100.1 - 200.0
- 200.1 - 500.0
- 500.1 - 1,000.0
- 1,000.1 - 5,000.0
- 5,000.1 - 10,000.0
- 10,001.0 - 47,894.0


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
2.3 Population Growth

Between the 1983 and 2014 censuses, Myanmar’s population increased by almost 16.2 million people, or approximately 46 per cent (Table 2.3). This means that, on average, the population of the country increased by more than half a million people in each of the 31 years between the two censuses. The average annual growth rate during this period was 0.9 per cent, making Myanmar one of the slowest growing countries in South-East Asia (Department of Population, 2017a).

Figure 2.3 shows that the States/Regions with the largest population increases in terms of numbers were Yangon Region (increased by 3.4 million), Shan State (2.1 million), and Mandalay and Sagaing Regions (both 1.5 million). In percentage terms, the populations of Yangon Region and Kachin State almost doubled in size, with increases of more than 85 per cent, followed by Kayah State with an increase of 70 per cent. Magway and Ayeyawady Regions and Mon State grew the least, with population increases of little more than 20 per cent during the 31-year intercensal period (see Table 2.3). Nay Pyi Taw Union Territory was officially established in 2006 (Department of Population, 2015); until then the territory it occupied was part of Mandalay Region.

The maps opposite show some clear regional differences in the extent and nature of population change since 1983. States/Regions in the central corridor have seen the largest increases in terms of absolute numbers, the exception being Shan State, where a large proportion of the 2 million increase can probably be attributed to in-migration from other parts of Myanmar (Maps 2.3a and 2.3b). Slow population growth in Ayeyawady, Bago and Magway Regions and Mon State contrast sharply with the relatively rapid growth of Yangon Region (Map 2.3c). Perceived and real opportunities for economic advancement have attracted a steady stream of migrants into Yangon City, with net outmigration from neighbouring States/Regions tempering any natural growth that has occurred there. Map 2.3c also illustrates the most striking aspect of population growth in Myanmar in the last 30-40 years, which is that most parts of the country have experienced only very modest growth. As noted above, the annual growth rate for the country as a whole between 2003 and 2014 was only 0.9 per cent. Among Myanmar’s South-East Asian neighbours, only Thailand (0.3 per cent) and China (0.6 per cent), had lower average annual growth rates (Department of Population, 2017a).

Table 2.3 Population Growth 1973-2014, States/Regions

<table>
<thead>
<tr>
<th></th>
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<tr>
<td>UNION</td>
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<td>22.6</td>
<td>86.7</td>
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<td>70.2</td>
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<td>53.5</td>
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<td>4,987,373</td>
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<td>4,917,055</td>
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<td>Mandalay</td>
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<td>Mon</td>
<td>3,134,224</td>
<td>1,680,157</td>
<td>2,054,383</td>
<td>27.8</td>
<td>22.3</td>
</tr>
<tr>
<td>Rakhine</td>
<td>1,712,838</td>
<td>2,045,559</td>
<td>3,188,607</td>
<td>19.4</td>
<td>55.9</td>
</tr>
<tr>
<td>Yangon</td>
<td>3,190,359</td>
<td>3,973,626</td>
<td>7,360,703</td>
<td>24.6</td>
<td>85.2</td>
</tr>
<tr>
<td>Shan</td>
<td>3,179,546</td>
<td>3,716,841</td>
<td>5,824,432</td>
<td>18.9</td>
<td>56.7</td>
</tr>
<tr>
<td>Ayeyawady</td>
<td>4,198,673</td>
<td>4,964,051</td>
<td>6,164,829</td>
<td>20.1</td>
<td>23.8</td>
</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>n/a</td>
<td>n/a</td>
<td>1,160,242</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>


Data Source: Department of Population, 2015 (Table 3, p.15).
Map 2.3 Population Growth, States/Regions

a) 1983 population*

b) 2014 population

c) 1983 - 2014 population growth

The base population for this indicator is the number of individuals, both enumerated and estimated, that were living in conventional and institutional households in 1983 and 2014.

* In 1983, Nay Pyi Taw Union Territory was included in Mandalay Region.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
The most striking features of the age distribution shown in the population pyramid at Figure 2.4 are that Myanmar is a relatively young country (in terms of its age profile), with more than half of the population younger than 30. There are fewer young children (0-9 years old) than adolescents (10-19 years old) and the proportion of the elderly people (those older than 64) at just less than 6 per cent is around the regional average. The main reasons for these characteristics are likely to be declining mortality and fertility rates since World War II (Department of Population, 2017a), both of which have accelerated markedly in the last 20 years.

The ‘youth bulge’, showing clear evidence that more children were born between 1995 and 2004 than were born in the subsequent decade, is the clearest indication that fertility rates are dropping. It does not appear in either of the population pyramids from the 1973 and 1983 censuses.

Table 2.4 Children, Working-Age and Elderly Share of Total Population, States/Regions and Districts

Regional and local variations in age structure are primarily caused by selective migration and geographic differences in fertility and mortality rates. Secondary causes include inequitable access to health, education and other social services. Predominantly rural Districts, where employment opportunities and access to social services are limited, tend to have higher proportions of children.

Districts in the middle corridor, where the largest urban centres are located and where access to jobs and social services is greater, have larger proportions of working-age and elderly people. Table 2.4 and Maps 2.4a, 2.4b and 2.4c show these distinct geographic patterns very clearly.
Map 2.4 Population Distribution by Age Group, Districts

a) Children

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 14</td>
<td>17.0 - 20.0</td>
</tr>
<tr>
<td>20.1 - 25.0</td>
<td></td>
</tr>
<tr>
<td>25.1 - 30.0</td>
<td></td>
</tr>
<tr>
<td>30.1 - 35.0</td>
<td></td>
</tr>
<tr>
<td>35.1 - 40.0</td>
<td></td>
</tr>
<tr>
<td>40.1 - 41.0</td>
<td></td>
</tr>
</tbody>
</table>

b) Working-Age population

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 64</td>
<td>54.3 - 55.0</td>
</tr>
<tr>
<td>55.1 - 60.0</td>
<td></td>
</tr>
<tr>
<td>60.1 - 65.0</td>
<td></td>
</tr>
<tr>
<td>65.1 - 70.0</td>
<td></td>
</tr>
<tr>
<td>70.1 - 75.0</td>
<td></td>
</tr>
<tr>
<td>75.1 - 75.9</td>
<td></td>
</tr>
</tbody>
</table>

c) Elderly people

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>65+</td>
<td>2.6 - 3.0</td>
</tr>
<tr>
<td>3.1 - 4.0</td>
<td></td>
</tr>
<tr>
<td>4.1 - 5.0</td>
<td></td>
</tr>
<tr>
<td>5.1 - 6.0</td>
<td></td>
</tr>
<tr>
<td>6.1 - 7.0</td>
<td></td>
</tr>
<tr>
<td>7.1 - 8.6</td>
<td></td>
</tr>
</tbody>
</table>

Percentage of population aged 0-14, 15-64, 65+
Average at Union level 0-14: 28.6
Average at Union level 15-64: 65.6
Average at Union level 65+: 5.8

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The percentages divide the population into three age groups: children, working-age population and elderly people.

Source of geographic data: Department of Population GIS Unit.
Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
2.5 Age Composition: Median Age

The median age of a population is the age that divides the group into two numerically equal parts. Exactly half the population is older than the median age and half is younger than the median age. It is considered to be an index that summarizes the age distribution of a population. The 2014 Census revealed that the median age for Myanmar was 27.1 years. This shows a substantial increase from 1983 when the median age was 20.2 years (Department of Population, 2017a).

At the State/Region level, Sagaing, Bago, Magway, Mandalay, Yangon and Ayeyawady Regions all had median ages higher than 27.1. Median ages for all the other States/Regions were below the national median median ages higher than 27.1. This indicates that the population living in other States/Regions were below the national median age for Myanmar's middle corridor is generally older than the population living in its outer ring. This regional contrast is even more distinct when examined at the District and Township levels, as Maps 2.5a and 2.5b show.

The median ages of District populations indicate that, in 2014, Mindat and Falam Districts in Chin State had the youngest populations in the country. For both these Districts the median age was less than 20. The four Districts with the next lowest median ages, Hopan, Makman, Kunlon and Minesat, are all in Shan State. As Chapter 3 shows, the main factors underlying the very young median ages in these and other outer ring Districts are high fertility and mortality rates.

At the other extreme, the Districts with the oldest populations in terms of median age are right in the heart of the middle corridor. Districts on the upper right in Figure 2.5 include Pyay, Gangaw, Sagaing, Hinthada, Nyaung U, Thayawady, Thandwe, Thayet and West Yangon, where, at more than 30 years, the median age was more than 10 years older than in Mindat and Falam Districts. Not only are fertility and mortality rates generally lower in these central Districts, but net outmigration rates are also relatively high. Migrants tend to be younger people, and they leave behind a population that is gradually ageing.

In general, population groups living in administrative areas on or near international borders were much younger than the Union median (27.1 years). Interestingly, whilst this is the case in areas bordering Bangladesh, India, China, and Thailand, it does not apply to those Districts and Townships in Shan State that share a border with Laos; here the median age was much closer to the national average.
Map 2.5 Median Age

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census.

The median age for an administrative unit is the age that divides the population of that unit exactly in two, with half the population older and half the population younger than the median age.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
### 2.6 Age Composition: Dependency Ratios

Dependency ratios express the relationship between the productive and non-productive proportions of population groups. The distinction is made based on age: productive members of the population are those of working age (15-64) and non-productive members are children (0-14) and the elderly (65 and over). Populations with high dependency ratios are of most concern to policymakers, because they indicate that large numbers of children and/or elderly are dependent on relatively small numbers of economically productive people.

The maps opposite show that, in general, child dependency rates are highest in the outer ring (Map 2.6b), whilst old-age dependency ratios are highest in the middle corridor (Map 2.6c). Table 2.6 shows that at the District level, Mindat has the highest child dependency ratio at 75.5. In Falam, Hopan, Kunlon, Putao and Haka, where child dependency ratios are all higher than 65, people of working age are supporting very large numbers of children. Districts with the highest proportions of elderly dependents include Kyaukpyu, highest at 13.9, and Thandwe, Myingyan, Hinthada and Sagaing, all with old-age dependency ratios of 12.0 or higher.

Figure 2.6 and Table 2.6 show that Chin and Kayin States and Tanintharyi Region have the highest total dependency ratios at the State/Region level. Yangon and Mandalay Regions and Nay Pyi Taw Union Territory have the lowest total dependency ratios. It is common throughout the world for total dependency ratios to be highest in predominantly rural areas and lowest in areas with large urban populations. High ratios for the remote, essentially rural Districts of Mindat, Falam, Haka, Putao, Kunlon, Hopan and Hpa-An, all of them 73.0 or higher, are consistent with this general pattern.

#### Table 2.6 Dependency Ratios, Total, Child and Old-Age, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region/District</th>
<th>Total</th>
<th>Child</th>
<th>Old-Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>52.4</td>
<td>43.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Kachin</td>
<td>51.5</td>
<td>45.5</td>
<td>6.1</td>
</tr>
<tr>
<td>Myitkyina</td>
<td>56.7</td>
<td>49.9</td>
<td>6.7</td>
</tr>
<tr>
<td>Mon</td>
<td>42.9</td>
<td>38.1</td>
<td>4.8</td>
</tr>
<tr>
<td>Bhamo</td>
<td>56.7</td>
<td>49.5</td>
<td>7.2</td>
</tr>
<tr>
<td>Putao</td>
<td>74.4</td>
<td>66.0</td>
<td>8.4</td>
</tr>
<tr>
<td>Kayah</td>
<td>56.7</td>
<td>49.9</td>
<td>6.7</td>
</tr>
<tr>
<td>Bago</td>
<td>53.3</td>
<td>43.6</td>
<td>9.7</td>
</tr>
<tr>
<td>Sagaing</td>
<td>59.2</td>
<td>50.7</td>
<td>8.5</td>
</tr>
<tr>
<td>Magway</td>
<td>58.0</td>
<td>49.1</td>
<td>9.0</td>
</tr>
<tr>
<td>Yangon</td>
<td>41.8</td>
<td>30.8</td>
<td>10.9</td>
</tr>
<tr>
<td>Thayawady</td>
<td>49.7</td>
<td>38.5</td>
<td>11.2</td>
</tr>
<tr>
<td>Total</td>
<td>51.9</td>
<td>41.0</td>
<td>10.9</td>
</tr>
<tr>
<td>Old-Age</td>
<td>51.9</td>
<td>41.0</td>
<td>10.9</td>
</tr>
<tr>
<td>Mindat</td>
<td>50.7</td>
<td>40.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Thayet</td>
<td>45.7</td>
<td>35.4</td>
<td>10.3</td>
</tr>
<tr>
<td>Pakokku</td>
<td>56.1</td>
<td>44.6</td>
<td>11.5</td>
</tr>
<tr>
<td>Gangaw</td>
<td>48.1</td>
<td>36.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Mandalay</td>
<td>47.3</td>
<td>38.2</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>50.7</td>
<td>40.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Old-Age</td>
<td>50.7</td>
<td>40.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Saungu</td>
<td>57.0</td>
<td>46.7</td>
<td>10.4</td>
</tr>
<tr>
<td>Pyin Oo Lwin</td>
<td>49.5</td>
<td>42.5</td>
<td>7.1</td>
</tr>
<tr>
<td>Kyaukse</td>
<td>47.5</td>
<td>38.9</td>
<td>8.6</td>
</tr>
<tr>
<td>Nyaung U</td>
<td>48.3</td>
<td>37.2</td>
<td>11.0</td>
</tr>
<tr>
<td>Yware Win</td>
<td>50.9</td>
<td>40.6</td>
<td>10.2</td>
</tr>
<tr>
<td>Meiktila</td>
<td>51.8</td>
<td>40.4</td>
<td>11.3</td>
</tr>
<tr>
<td>Mon</td>
<td>50.6</td>
<td>40.2</td>
<td>10.4</td>
</tr>
<tr>
<td>Mawlamyine</td>
<td>58.6</td>
<td>47.6</td>
<td>11.0</td>
</tr>
<tr>
<td>Thaton</td>
<td>63.7</td>
<td>54.2</td>
<td>9.5</td>
</tr>
<tr>
<td>Rakhine</td>
<td>60.8</td>
<td>50.0</td>
<td>10.7</td>
</tr>
<tr>
<td>Sittway</td>
<td>61.4</td>
<td>52.3</td>
<td>9.1</td>
</tr>
<tr>
<td>Mysak U</td>
<td>64.6</td>
<td>55.2</td>
<td>9.5</td>
</tr>
<tr>
<td>Maungtaw</td>
<td>59.8</td>
<td>53.7</td>
<td>6.1</td>
</tr>
<tr>
<td>Kyaukpyu</td>
<td>61.8</td>
<td>47.9</td>
<td>13.9</td>
</tr>
<tr>
<td>Thanlawe</td>
<td>52.1</td>
<td>39.5</td>
<td>12.7</td>
</tr>
</tbody>
</table>

#### Figure 2.6 Dependency Ratios, Total, Child and Old-Age, States/Regions

![Dependency Ratio Chart](chart.png)
Map 2.6 Dependency Ratios, Districts

a) Total

- Total dependency ratio
  - 31.8 - 40.0
  - 40.1 - 50.0
  - 50.1 - 60.0
  - 60.1 - 70.0
  - 70.1 - 80.0
  - 80.1 - 84.2

b) Child

- Child dependency ratio
  - 22.4 - 30.0
  - 30.1 - 40.0
  - 40.1 - 50.0
  - 50.1 - 60.0
  - 60.1 - 70.0
  - 70.1 - 75.5

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
The sex ratio indicates the balance between the number of males and the number of females in any single population group. It is expressed as the number of males per 100 females in the group. For Myanmar’s total population at the time of the 2014 Census, the sex ratio was 93 males per 100 females.

In comparison to the 1983 census, the 2014 Census showed a marked decrease in the number of males in relation to the number of females. The sex ratio fell from 98.6 in 1983 (Immigration and Manpower Department, 1986, pp 1-14), to 93 in 2014. This decrease is likely to be explained by a combination of physical and behavioural differences between the sexes. Physical differences are evident in mortality rates, sex ratios at birth and life expectancy. Behavioural differences are found in migration rates, lifestyle choices and exposure to risk. The influence of sex-specific rates of international outmigration is particularly strong in Myanmar, where the relatively large numbers of males emigrating from the country is leaving behind an increasingly female-dominated population.

Sex ratios vary considerably between Myanmar’s States/Regions (Figure 2.7 and Table 2.7), and its Districts and Townships (Table 2.7 and Map 2.7). Numbers of males and females are equal in Kayah and Shan States. Differences between numbers of males and females are largest in Magway Region (86.3) and Kachin State (108.3). However, while in Magway and adjacent States/Regions low ratios are consistent among all Districts and Townships, in Kachin State only Mohnin District shows a large imbalance between numbers of males and females (126.2). Map 2.7b shows geographic variations in sex ratios most clearly and in most detail. The most striking feature of the distribution is the large numbers of males in relation to females in Townships bordering China, Thailand and parts of India. This is largely caused by the greater mobility of males, who migrate towards international borders in larger numbers than females in search of work.

Figure 2.7 Sex Ratios, States/Regions

Table 2.7 Male and Female Populations and Sex Ratios, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Enumerated Population</th>
<th>Sex Ratio</th>
<th>Both Sexes Male</th>
<th>Both Sexes Female</th>
<th>Both Sexes Male</th>
<th>Both Sexes Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>50,279,960</td>
<td>93.0</td>
<td>24,279,714</td>
<td>26,001,186</td>
<td>93.0</td>
<td>26,001,186</td>
</tr>
<tr>
<td>Kachin</td>
<td>1,642,841</td>
<td>108.4</td>
<td>888,618</td>
<td>757,223</td>
<td>99.2</td>
<td>757,223</td>
</tr>
<tr>
<td>Magway</td>
<td>5,235,347</td>
<td>89.9</td>
<td>2,516,949</td>
<td>2,718,398</td>
<td>85.6</td>
<td>2,718,398</td>
</tr>
<tr>
<td>Shan</td>
<td>4,781,343</td>
<td>85.6</td>
<td>2,440,912</td>
<td>2,340,431</td>
<td>99.2</td>
<td>2,340,431</td>
</tr>
<tr>
<td>Mon</td>
<td>787,358</td>
<td>84.2</td>
<td>420,327</td>
<td>367,031</td>
<td>99.1</td>
<td>367,031</td>
</tr>
<tr>
<td>Sagaing</td>
<td>1,012,497</td>
<td>105.2</td>
<td>506,102</td>
<td>506,395</td>
<td>99.9</td>
<td>506,395</td>
</tr>
<tr>
<td>Mogok</td>
<td>1,453,343</td>
<td>92.1</td>
<td>721,016</td>
<td>732,327</td>
<td>99.2</td>
<td>732,327</td>
</tr>
<tr>
<td>Mongama</td>
<td>757,358</td>
<td>84.2</td>
<td>420,327</td>
<td>367,031</td>
<td>99.1</td>
<td>367,031</td>
</tr>
<tr>
<td>Sittwe</td>
<td>881,283</td>
<td>94.7</td>
<td>447,710</td>
<td>433,573</td>
<td>99.2</td>
<td>433,573</td>
</tr>
<tr>
<td>Pakokkou</td>
<td>506,102</td>
<td>99.9</td>
<td>506,395</td>
<td>506,395</td>
<td>99.9</td>
<td>506,395</td>
</tr>
<tr>
<td>Bago</td>
<td>612,248</td>
<td>95.8</td>
<td>309,949</td>
<td>309,300</td>
<td>99.9</td>
<td>309,300</td>
</tr>
<tr>
<td>Mawlamyine</td>
<td>612,248</td>
<td>95.8</td>
<td>309,949</td>
<td>309,300</td>
<td>99.9</td>
<td>309,300</td>
</tr>
<tr>
<td>Mon</td>
<td>2,045,393</td>
<td>92.5</td>
<td>987,392</td>
<td>1,057,001</td>
<td>99.9</td>
<td>1,057,001</td>
</tr>
<tr>
<td>Mawlamyine</td>
<td>1,232,221</td>
<td>94.7</td>
<td>587,676</td>
<td>644,545</td>
<td>99.2</td>
<td>644,545</td>
</tr>
<tr>
<td>Sittwe</td>
<td>535,583</td>
<td>86.7</td>
<td>246,870</td>
<td>288,913</td>
<td>99.2</td>
<td>288,913</td>
</tr>
<tr>
<td>Myauk</td>
<td>689,131</td>
<td>86.3</td>
<td>309,949</td>
<td>379,182</td>
<td>99.2</td>
<td>379,182</td>
</tr>
<tr>
<td>Maungdaw</td>
<td>934,292</td>
<td>89.1</td>
<td>203,807</td>
<td>236,215</td>
<td>99.2</td>
<td>236,215</td>
</tr>
<tr>
<td>Thandwe</td>
<td>357,840</td>
<td>95.7</td>
<td>174,959</td>
<td>182,881</td>
<td>99.2</td>
<td>182,881</td>
</tr>
</tbody>
</table>

2014 MYANMAR CENSUS ATLAS
Map 2.7 Sex Ratios

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census.

Sex ratios are calculated as the number of males living in an administrative unit, divided by the number of females living in that same unit, multiplied by 100.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
The urban population is the number of people living in urban areas; conversely, the rural population is the number of people living in rural areas. This distinction sounds simple and clear, but internationally, there is no consensus on the definitions of urban and rural areas. Most countries make the distinction based on: some measure of population or housing density; consideration of the presence or absence of key infrastructure, including roads, an electricity network and water and sewage systems; and varying levels of access to services such as education, health, fire and rescue and public transportation. Exactly how these factors are measured, weighted and combined varies tremendously from country to country, in line with variations in social, economic and cultural practices.

The 2014 Myanmar Population and Housing Census adopted the definition established by the General Administration Department (GAD) of Myanmar’s Ministry of Home Affairs, which divides the country’s lowest level administrative areas simply into Wards (urban) and Village Tracts (rural). The distinction is based loosely on the factors mentioned above. At the time of the 2014 Census, Myanmar had 3,071 Wards and 13,620 Village Tracts (General Administration Department, 2013).

The 2014 Census data suggests that Myanmar is still a predominantly rural country, with only about 30 per cent of the population living in urban areas (Table 2.8). The dominance of rural green over urban brown is clear to see in Figure 2.8 and Map 2.8. A comparison of 30 per cent of the total population of Myanmar live in urban areas, but in almost three quarters of the country’s Townships (299 out of 413), the proportion of urban dwellers is less than the Union proportion. This is largely because the distribution is skewed by Myanmar’s three major cities, which are home to about 50 per cent of the country’s urban population - Yangon (5.21 million), Mandalay (1.22 million), and Nay Pyi Taw (1.16 million). As Map 2.8 shows, Myanmar’s urban population is concentrated in a relatively small number of Townships in these three large cities, and in the capitals of States and Regions.

The city of Yangon can be defined as an ‘urban agglomeration’, since it includes more than one locality and its suburban fringes (UNDESA Statistics Division, 2015, p. 202). However, while East and West Yangon Districts had 99 and 100 per cent of their populations in urban areas respectively, North and South Yangon Districts only had 55 and 30 per cent urban, respectively.

The urbanization rate of Myanmar is defined by the 2014 Myanmar Population and Housing Census as the proportion of the population living in urban areas. This distinction in urbanization by States and Regions has remained very slow (Department of Population, 2016a). It is difficult to draw any definitive conclusions about rates of urbanization from the Census data because of the basis used for distinguishing between urban and rural areas. Further research is needed to determine whether GAD’s Wards and Village Tracts accurately distinguish between areas based on the physical differences that characterize urban and rural areas, or are more arbitrary divisions of the territory delineated on some other basis purely for administrative purposes.

Almost 30 per cent of the total population of Myanmar live in urban areas, but in almost three quarters of the country’s Townships (299 out of 413), the proportion of urban dwellers is less than the Union proportion. This largely is because the distribution is skewed by Myanmar’s three major cities, which are home to about 50 per cent of the country’s urban population - Yangon (5.21 million), Mandalay (1.22 million), and Nay Pyi Taw (1.16 million). As Map 2.8 shows, Myanmar’s urban population is concentrated in a relatively small number of Townships in these three large cities, and in the capitals of States and Regions.

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Map 2.8 Urban and Rural Populations, Townships

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census.

The indicator gives the proportion of individuals in each District and Township that were living in urban areas. For the purposes of determining which people lived in urban areas and which people lived in rural areas, the 2014 Census adopted the Ministry of Home Affairs’ General Administration Department designation of Wards as urban and Village Tracts as rural.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
The Census enumerated a total of 50,279,900 people at the place they were present on 29 March 2014 (de facto enumeration). As noted in the Introduction to this atlas, some people in Kachin, Kayin and Rakhine were not enumerated in the 2014 Census (see Introduction, Enumerated and Estimated Populations, page XIII). Instead, their numbers were estimated from information collected during the enumeration mapping exercise prior to the actual enumeration. The estimated populations were 46,600 for Kachin State, 69,753 for Kayin State and 1,090,000 for Rakhine State. The total enumerated and non-enumerated population was therefore 51,486,253.

For the purpose of determining the numbers of people following each of the religions practiced in Myanmar, it was assumed that the 1,090,000 non-enumerated people in Rakhine (Table 2.9) were of the Islamic Faith. This estimated population is therefore included in the number and percentage of Muslims given for Rakhine has substantial numbers of Muslims. There, the 570,000 Christians made up less than 10 per cent of the population. Followers of Islam were enumerated in all States and Regions, but only Rakhine has substantial numbers of Muslims. There, the 28,731 people enumerated as Muslims together with the estimated 1,090,000 assumed to be Muslims represented just over one-third of the total estimated population.

Table 2.10 Number and Proportion of Population by Religion, States/Regions

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Enumerated</th>
<th>Non-Enumerated (Estimated)</th>
<th>Enumerated + Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>50,279,900</td>
<td>1,206,353</td>
<td>51,486,253</td>
</tr>
<tr>
<td>Kachin</td>
<td>1,842,841</td>
<td>46,600</td>
<td>1,899,441</td>
</tr>
<tr>
<td>Kayin</td>
<td>286,637</td>
<td>n/a</td>
<td>286,637</td>
</tr>
<tr>
<td>Kayin</td>
<td>1,504,326</td>
<td>69,753</td>
<td>1,574,079</td>
</tr>
<tr>
<td>Chin</td>
<td>478,801</td>
<td>n/a</td>
<td>478,801</td>
</tr>
<tr>
<td>Sagaing</td>
<td>5,325,347</td>
<td>n/a</td>
<td>5,325,347</td>
</tr>
<tr>
<td>Taninthay</td>
<td>1,408,401</td>
<td>n/a</td>
<td>1,408,401</td>
</tr>
<tr>
<td>Bago</td>
<td>4,867,373</td>
<td>n/a</td>
<td>4,867,373</td>
</tr>
<tr>
<td>Magway</td>
<td>3,917,055</td>
<td>n/a</td>
<td>3,917,055</td>
</tr>
<tr>
<td>Mandalay</td>
<td>6,165,723</td>
<td>n/a</td>
<td>6,165,723</td>
</tr>
<tr>
<td>Mon</td>
<td>2,054,393</td>
<td>n/a</td>
<td>2,054,393</td>
</tr>
<tr>
<td>Rakhine</td>
<td>2,098,807</td>
<td>1,090,000</td>
<td>3,188,807</td>
</tr>
<tr>
<td>Shan</td>
<td>6,824,432</td>
<td>n/a</td>
<td>6,824,432</td>
</tr>
<tr>
<td>Ayeyawady</td>
<td>6,184,829</td>
<td>n/a</td>
<td>6,184,829</td>
</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>1,160,242</td>
<td>n/a</td>
<td>1,160,242</td>
</tr>
</tbody>
</table>

Table 2.9 Enumerated and Non-Enumerated Population, States/Regions

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Enumerated</th>
<th>Non-Enumerated</th>
<th>(Estimated)</th>
<th>Enumerated + Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>45,185,449</td>
<td>87.8</td>
<td>51,486,253</td>
<td></td>
</tr>
<tr>
<td>Kachin</td>
<td>1,050,610</td>
<td>62.2</td>
<td>2,054,393</td>
<td></td>
</tr>
<tr>
<td>Kayin</td>
<td>1,42,896</td>
<td>49.9</td>
<td>2,371,768</td>
<td></td>
</tr>
<tr>
<td>Kayin</td>
<td>1,271,768</td>
<td>80.8</td>
<td>1,42,896</td>
<td></td>
</tr>
<tr>
<td>Chin</td>
<td>62,079</td>
<td>13.0</td>
<td>406,730</td>
<td></td>
</tr>
<tr>
<td>Sagaing</td>
<td>4,909,960</td>
<td>92.2</td>
<td>365,377</td>
<td></td>
</tr>
<tr>
<td>Taninthay</td>
<td>3,731,074</td>
<td>97.5</td>
<td>105,758</td>
<td></td>
</tr>
<tr>
<td>Bago</td>
<td>3,917,055</td>
<td>39.5</td>
<td>142,528</td>
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</tr>
<tr>
<td>Magway</td>
<td>3,870,316</td>
<td>98.8</td>
<td>27,015</td>
<td></td>
</tr>
<tr>
<td>Mandalay</td>
<td>5,898,160</td>
<td>95.7</td>
<td>65,061</td>
<td></td>
</tr>
<tr>
<td>Mon</td>
<td>1,901,667</td>
<td>92.6</td>
<td>10,791</td>
<td></td>
</tr>
<tr>
<td>Rakhine</td>
<td>2,098,807</td>
<td>1,090,000</td>
<td>3,188,807</td>
<td></td>
</tr>
<tr>
<td>Shan</td>
<td>6,824,432</td>
<td>n/a</td>
<td>6,824,432</td>
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</tr>
<tr>
<td>Ayeyawady</td>
<td>6,184,829</td>
<td>n/a</td>
<td>6,184,829</td>
<td></td>
</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>1,160,242</td>
<td>n/a</td>
<td>1,160,242</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.11 Number and Proportion of Population by Religion, States/Regions

<table>
<thead>
<tr>
<th>Religion</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buddhism</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Christianity</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animism</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hinduism</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Religions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The percentages for ‘Other Religions’ (0.2 per cent), ‘No Religion’ (0.1 per cent) and ‘Not Enumerated, Religion not Assumed’ (0.2 per cent) are so small, that their bars in Figure 2.9 are barely visible.

Figure 2.9 Proportion of Population by Religion, Union

26 General Population Characteristics

2014 MYANMAR CENSUS ATLAS

2.9 Religion

if not wholly, of the Islamic faith” (Department of Population, 2016b). However, since there was less of a firm basis for similarly assuming the religion of the non-enumerated populations in Kachin and Kayin States, no assumptions were made and the religions of the estimated populations are shown as ‘Not Enumerated, Religion not Assumed’ in Figure 2.9 and Table 2.10.

Map 2.9 shows the degree to which Myanmar is a predominantly Buddhist country. According to the 2014 Census, almost 90 per cent of the total enumerated and non-enumerated population in the Union was Buddhist. Though Magway Region (98.8 per cent) and Nay Pyi Taw Union Territory (96.8 per cent) had the largest proportions of Buddhists among their populations, Yangon, Mandalay and Ayeyawady Regions had the most Buddhists in terms of absolute numbers, each with more than 5.5 million (Table 2.10).

The extent to which Buddhism is Myanmar’s most prevalent religion comes through very clearly on Map 2.9, which shows that in 2014 it had the biggest following in all but one State/Region. Chin State is the exception, where more than 85.4 per cent of the population was enumerated as Christian. Large numbers of Christians were also enumerated in Kayah (45.8 per cent of the population) and in Kachin (32.9 per cent). An approximate number is given for Kachin because the religion of the 46,000 people who were not enumerated was neither known nor assumed. Large numbers of Christians were also enumerated in Shan, but there the 570,000 Christians made up less than 10 per cent of the population. Followers of Islam were enumerated in all States and Regions, but only Rakhine has substantial numbers of Muslims. There, the 28,731 people enumerated as Muslims together with the estimated 1,090,000 assumed to be Muslims represented just over one-third of the total estimated population.

Fewer than 900,000 people were recorded as not being followers of one of these three religions. These people were either Animists, Hindus, adherents to other unspecified faiths, of no religious persuasion or, in the cases of Kachin and Kayin, were not enumerated and so were not able to state their religion. These groups represent less than 2 per cent of the total estimated population of the Union.

The total of 1,118,731 includes 28,731 individuals enumerated as Muslims and 1,090,000 individuals not enumerated but assumed to be Muslims. Data is tabulated from left to right, starting with the largest and ending with the smallest percentage values at the Union level. Some percentage totals may not add up to exactly 100 per cent because percentages for individual religions have been rounded to one decimal place.
The base population for this indicator is individuals, both enumerated and estimated, that were living in conventional and institutional households at the time of the 2014 Census. Percentages of less than 1.0 are given in Table 2.9 but they are too small to be shown as slices of the pies on the map.

The estimated population of Rakhine is assumed to be Muslim, but no assumptions are made as to the religious affiliation of the estimated population of Kachin and Kayin. See text opposite for a more detailed explanation of the Census’ reporting of religion data.

Religions
- Buddhism
- Christianity
- Islam
- Animism
- Hinduism
- Other religion
- No religion
- Not stated

Pie size proportionate to total population
- 30,000,000 people
- 1,000,000 people
- 300,000 people


Source of geographic data: Department of Population GIS Unit.
Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
Fertility and Mortality

Knowing the rates at which people are expected to be born and die is important for a number of reasons. Most fundamentally, fertility and mortality rates to a large extent determine how fast a population will change in the future. Usually that change means growth, but in some countries, particularly those with very low fertility rates, population change attributable to natural factors can be negative. Rates of population change are also influenced by migration, so that even if fertility rates are low and mortality rates are high, a population can still grow if there are high rates of net in-migration. Being able to predict how fast populations are growing or shrinking is vital for policymakers, who need to make a wide range of decisions based on what they expect the population to be in the future. Authorities responsible for planning the provision of public health, education, housing, energy, transportation, recreation and social security services all need to base their long-term plans on predictions of how many people they will need to provide for 10, 20 and 30 years into the future. Reliable estimates of current fertility and mortality rates are crucial for population change projections to be accurate and useful.

This chapter presents a general overview of fertility and mortality estimates based on data collected from the 2014 Census. The questions used to collect the data are shown below. The chapter examines four key indicators, two for fertility and two for mortality. For the former, the analysis discusses total fertility and adolescent fertility; for the latter, it considers life expectancy and early-age mortality. In some sections, international comparisons of national-level data are made to show how rates in Myanmar differ from those in other countries. For Myanmar, Union-level estimates are useful for giving policymakers general guidance on how many more (or fewer) people to plan for in the future, but they can only give a general sense of how many more schools, teachers, hospitals, clinics, doctors, nurses, houses, power stations and new roads will be needed. It is equally important for policymakers and planning authorities to know where new infrastructure and services will be needed most, and for this they need to know how fertility rates, mortality rates and net migration rates vary in different parts of the country. For this reason, this chapter examines variations in fertility and mortality indicators in different parts of Myanmar, revealing distinct regional and local patterns and giving some indication as to where the population can be expected to grow fastest, and where slower growth or even population decline are more likely.

The analysis presented in this chapter highlights a number of key findings from the 2014 Census. The total fertility rate for the Union was slightly lower than the world average, and slightly higher than the average for the South-East Asia region. Compared with other countries in the region, Myanmar is roughly in the middle, with higher total fertility rates than Viet Nam, Malaysia, Thailand and Singapore, and lower total fertility rates than Cambodia, the Philippines, Lao PDR and Timor-Leste. Within Myanmar, there is a striking contrast between total fertility rates in the middle corridor and rates in the outer ring. For all three of the indicators presented - births, total fertility and adolescent fertility - rates were generally substantially lower for Districts and Townships in the middle corridor than they were for those areas in the outer ring.

The mortality indicators estimated from Census data are cause for serious concern. The analysis presented in Section 3.3 shows life expectancy in Myanmar, at 64.7 years, to be some six years shorter than both the world average and the average for the South-East Asia region. Life expectancy for males in Myanmar is particularly short, at just over 60 years compared with world and region averages of about 68 years. Similarly, with infant and under-five mortality, rates in Myanmar are far higher in the region, and compare unfavourably with the world average. The striking aspect of mortality as presented in this chapter is not so much internal geographic variability, but more that short life expectancy, especially for males, and high early-age mortality rates for both sexes, are common to all parts of the country.

Having said that, a study of how early-age mortality rates have changed in Myanmar since the 1960s offers some encouragement, showing that they have dropped from many people they will need to provide for 10, 20 and 30 years into the future. Reliable estimates of current fertility and mortality rates are crucial for population change projections to be accurate and useful.

Knowing the rates at which people are expected to be born and die is important for a number of reasons. Most fundamentally, fertility and mortality rates to a large extent determine how fast a population will change in the future. Usually that change means growth, but in some countries, particularly those with very low fertility rates, population change attributable to natural factors can be negative. Rates of population change are also influenced by migration, so that even if fertility rates are low and mortality rates are high, a population can still grow if there are high rates of net in-migration. Being able to predict how fast populations are growing or shrinking is vital for policymakers, who need to make a wide range of decisions based on what they expect the population to be in the future. Authorities responsible for planning the provision of public health, education, housing, energy, transportation, recreation and social security services all need to base their long-term plans on predictions of how many people they will need to provide for 10, 20 and 30 years into the future. Reliable estimates of current fertility and mortality rates are crucial for population change projections to be accurate and useful.

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The analysis presented in this chapter highlights a number of key findings from the 2014 Census. The total fertility rate for the Union was slightly lower than the world average, and slightly higher than the average for the South-East Asia region. Compared with other countries in the region, Myanmar is roughly in the middle, with higher total fertility rates than Viet Nam, Malaysia, Thailand and Singapore, and lower total fertility rates than Cambodia, the Philippines, Lao PDR and Timor-Leste. Within Myanmar, there is a striking contrast between total fertility rates in the middle corridor and rates in the outer ring. For all three of the indicators presented - births, total fertility and adolescent fertility - rates were generally substantially lower for Districts and Townships in the middle corridor than they were for those areas in the outer ring.

The mortality indicators estimated from Census data are cause for serious concern. The analysis presented in Section 3.3 shows life expectancy in Myanmar, at 64.7 years, to be some six years shorter than both the world average and the average for the South-East Asia region. Life expectancy for males in Myanmar is particularly short, at just over 60 years compared with world and region averages of about 68 years. Similarly, with infant and under-five mortality, rates in Myanmar are far higher in the region, and compare unfavourably with the world average. The striking aspect of mortality as presented in this chapter is not so much internal geographic variability, but more that short life expectancy, especially for males, and high early-age mortality rates for both sexes, are common to all parts of the country.

Having said that, a study of how early-age mortality rates have changed in Myanmar since the 1960s offers some encouragement, showing that they have dropped from a high of almost 150 infant deaths per 1,000 live births in 1968, to the 2014 Census-based estimate of just over 60 (Department of Population, 2016c). Though current estimates of infant mortality rates are still high by international comparison, they have dropped substantially over the last 50 or 60 years.
3.1 Total Fertility

This section presents data for crude birth rates and total fertility rates, both indicators of the reproductive rate of a population. Since the spatial distribution and regional patterns are similar for both (Maps 3.1a and 3.1b), the discussion here is limited only to total fertility rates. Total fertility is a summary estimate of the level of fertility in a population. Fertility can be estimated in a number of different ways, but the rates presented here give the average number of children that women of reproductive age span of 15-49 years.

Based on data collected for the 2014 Census, the total fertility rate for the Union was estimated to be 2.5. This puts Myanmar towards the high end of countries with a fertility rate for the Union was estimated to be 2.5. This puts Myanmar towards the high end of countries in which total fertility rates mostly fall within the range from 1.2 in Singapore to 3.1 in Lao PDR (Figure 3.1). Among the country’s States and Regions, all but Chin State fell within the range 1.8 (Yangon Region) to 3.5 (Kayah State). But just as South-East Asia has Timor-Leste as an outlier, with the very high rate of 5.9, Myanmar has Chin State as its outlier, with a slightly lower rate of 5.0 (Figure 3.2).

In most countries, fertility rates are higher for rural populations than they are for urban populations. This is also the case in Myanmar, where in 2014 the rates at the Union level were 1.9 in urban areas and 2.6 in rural areas. Map 3.1b shows this pattern quite clearly. Townships in the middle corridor, where a higher proportion of the population lives in urban areas, are generally below the Union level of 2.5. Rates in the predominantly rural outer ring Townships were generally above the Union average.

What are the main reasons for this difference? Compared to women living in rural areas, those in urban areas are generally better-educated, have more opportunities for active engagement in income-earning employment, and have better access to family planning and health services (National Statistics Directorate, 2013). For all these reasons, women in urban areas are more likely to limit their childbearing by giving birth less frequently (wider spacing) and delaying childbirth until later in their lives.

For a detailed explanation of the methods used for estimating the total fertility rates presented here, see Department of Population, 2016d.

**Sources of Data:**
Data for Myanmar: Department of Population, 2016d.
Data for all other countries: UN DESA, Population Division, 2015, Table A.22.
The base population for these indicators is all females aged 15-49 that were living in conventional and institutional households at the time of the 2014 Census.

The Crude Birth Rate is the number of births in a given year. It is calculated as the total number of live births in the 12 months prior to the Census divided by the enumerated population, multiplied by 1,000.

The Total Fertility Rate is the sum of five-year age-specific birth rates for females aged 15 to 49. It gives the average number of children that a woman would give birth to if all women lived to the end of their childbearing years (49) and bore children according to the current schedule of age-specific fertility rates.

The range of Total Fertility Rates is 1.3 to 5.6 in Table 3.1 and 0.9 to 7.1 in Map 3.1b. This difference is because Table 3.1 gives rates for the States/Regions and Districts, whereas Map 3.1b shows rates for Townships.
3.2 Adolescent Fertility

Whereas the rates for total fertility discussed in the previous section estimated the number of children women give birth to during their entire reproductive lives, adolescent fertility gives age-specific rates for women aged 15-19 years. This section presents rates per thousand, based on the number of live births reported for women in this age group during the 12-month period prior to the Census. The data presented here aligns with Sustainable Development Goal 3 (see Box).

In 2014, the adolescent fertility rate for the Union was 33.2 births per thousand women aged 15-19 years. In urban areas, the rate was 22.3 per thousand, and in rural areas it was 38.0 per thousand (Department of Population, 2016d). At the State/Region level, Yangon Region had the lowest adolescent fertility rate at 20.8, and Shan State had the highest at 58.8 (Figure 3.3). Variability within States/Regions was substantial, ranging from lows of less than 20 births per thousand in West Yangon, East Yangon, Myingyan and Sagaing Districts, to highs of more than 90 births per thousand in Minephyat, Makman and Minesat Districts (Table 3.2).

Maps 3.2a and 3.2b show these regional and local variations very clearly. Shan State stands out as having by far the highest adolescent fertility rates in the country, though within Shan State there is a very broad range, from 46.8 in Taunggyi District to 117.5 in Minesat District. Rates were moderately high in parts of other States/Regions, including Kawthoung District in Tanintharyi Region (63.4), Labutta District in Ayeyawady Region (56.3) and Haka District in Chin State (55.4). These Districts are all in the outer ring. Conversely, the lowest adolescent fertility rates were found in Districts in the middle corridor, particularly in those Districts noted above - West Yangon (11.0), East Yangon (17.4), Myingyan (17.8) and Sagaing (18.0) Districts.

As with total fertility rates, adolescent fertility rates were generally higher in rural areas than in urban areas, often for similar reasons. Women who bear children during their teenage years tend to be less well-educated, live in poorer households, be economically inactive and have limited access to health and family planning services than women who postpone childbirth until later in their lives. The main reason that high adolescent fertility rates are of concern to women, health professionals and policymakers is that births to young women often have adverse implications for the health of both the women and their children.

For a detailed explanation of the methods used for calculating the adolescent fertility rates presented here, see Department of Population, 2016d.

For Target 3.7 of Sustainable Development Goal 3, Myanmar’s goal is to ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

**Table 3.2 Adolescent Fertility Rates, Women Aged 15-19, States/Regions and Districts**

<table>
<thead>
<tr>
<th>State/Region</th>
<th>District</th>
<th>Adolescent Fertility Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>Myek</td>
<td>37.8</td>
</tr>
<tr>
<td></td>
<td>Kawthoung</td>
<td>63.4</td>
</tr>
<tr>
<td></td>
<td>Bago</td>
<td>28.5</td>
</tr>
<tr>
<td></td>
<td>Bago</td>
<td>29.0</td>
</tr>
<tr>
<td></td>
<td>Toungoo</td>
<td>28.0</td>
</tr>
<tr>
<td></td>
<td>Paya</td>
<td>23.4</td>
</tr>
<tr>
<td></td>
<td>Thayawady</td>
<td>29.8</td>
</tr>
<tr>
<td></td>
<td>Magway</td>
<td>26.6</td>
</tr>
<tr>
<td></td>
<td>Mandalay</td>
<td>23.7</td>
</tr>
<tr>
<td></td>
<td>Myin</td>
<td>30.5</td>
</tr>
<tr>
<td></td>
<td>Kyaukme</td>
<td>49.0</td>
</tr>
<tr>
<td></td>
<td>Loikae</td>
<td>35.2</td>
</tr>
<tr>
<td></td>
<td>Dawei</td>
<td>27.5</td>
</tr>
</tbody>
</table>

**Sustainable Development Goal 3**

Ensure healthy lives and promote well-being for all at all ages

Target 3.7: By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

Indicator 3.7.2: Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group.
Map 3.2 Adolescent Fertility Rates

The base population for this indicator is all females aged 15-19 that were living in conventional and institutional households at the time of the 2014 Census.

The Adolescent Fertility Rate represents the age-specific fertility rate for women aged 15-19. It is calculated as the number of children born in the 12 months prior to the Census to women in this age group, multiplied by 1,000.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
3.3 Life Expectancy

Life expectancy at birth is the most widely used indicator of mortality. It estimates the average number of years a newborn baby is expected to live. Based on Census data, life expectancy in Myanmar in 2014 was 64.7 for all newborns; 60.2 for males and 69.3 for females, respectively. Table 3.3 and Figure 3.4 show how life expectancy in Myanmar compares with life expectancy in other countries in South-East Asia and with world estimates. Life expectancy in Myanmar is shortest for males and females combined and for males only; for females it was shorter than in most countries, but slightly longer than in India (68.9) and Lao PDR (66.8).

At the broadest regional level, life expectancy for Myanmar’s newborn males and females together ranged from 60.5 years in Chin State to 67.7 years in Nay Pyi Taw Union Territory. For females, life expectancy was also shortest in Chin State (63.5 years) and longest in Nay Pyi Taw (71.6 years). For males, however, though Nay Pyi Taw again had the longest life expectancy at 67.7 years, expectations were shortest in Magway Region at only 57.1 years (Table 3.4). The maps opposite clearly show the big differences between male and female life expectancy.

Differences in life expectancy between males and females are the norm in most countries, but as Table 3.3 shows, the gap between male and female life expectancy in Myanmar was very wide compared with the global average and for other countries in the region. Whereas females born in Myanmar could be expected to live 9.1 years longer than their male counterparts, the gap for the world population was only 4.4 years. In South-East Asia only Viet Nam, at 9.6 years, had a wider gap between male and female life expectancy than Myanmar, and in countries such as Bangladesh, Lao PDR and India, the gaps were less than 3 years. A Census data-based analysis of life expectancy and other mortality indicators suggests that the particularly wide gap in Myanmar is likely to be explained more by behavioural differences between males and females than by biological differences (Department of Population, 2016c). Risk-prone behaviour that can lead to premature death includes alcohol abuse, smoking, motorcycle riding and working in dangerous and stressful jobs. These types of behaviour are more common among boys and men than among girls and women, a distinction which might be particularly exaggerated in Myanmar. They also tend to be more prevalent among males in urban areas than males in rural areas. Though no data for comparing urban and rural life expectancies is presented in this atlas, the report referenced above states that, in Myanmar, the probability of males dying between the ages of 15 and 59 is double that of females, which is a big difference compared with other countries in the region.

Table 3.3 Life Expectancy at Birth, International Comparisons

<table>
<thead>
<tr>
<th>Region/Country</th>
<th>Life Expectancy at Birth</th>
<th>Both Sexes</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORLD</td>
<td>70.5</td>
<td>68.3</td>
<td>72.7</td>
<td></td>
</tr>
<tr>
<td>SE ASIA</td>
<td>70.3</td>
<td>67.5</td>
<td>73.2</td>
<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>71.0</td>
<td>69.8</td>
<td>72.3</td>
<td></td>
</tr>
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<td>Brunei Darussalam</td>
<td>78.4</td>
<td>76.6</td>
<td>80.4</td>
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<td>Cambodia</td>
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<td>65.5</td>
<td>69.5</td>
<td></td>
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<tr>
<td>China</td>
<td>75.4</td>
<td>74.0</td>
<td>77.0</td>
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<td>66.8</td>
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<td>72.2</td>
<td>76.9</td>
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<td>MYANMAR</td>
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<td>69.3</td>
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<td>77.6</td>
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<td>Timor-Leste</td>
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<td>66.1</td>
<td>69.5</td>
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<tr>
<td>Viet Nam</td>
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<td>70.7</td>
<td>80.3</td>
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</table>

Table 3.4 Life Expectancy at Birth, States/Regions

<table>
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<tr>
<th>State/Region</th>
<th>Life Expectancy at Birth</th>
<th>Both Sexes</th>
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<th>Females</th>
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<td>69.3</td>
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<td>Kayah</td>
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<td>59.1</td>
<td>70.2</td>
<td></td>
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<tr>
<td>Kayin</td>
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<td>57.7</td>
<td>66.7</td>
<td></td>
</tr>
<tr>
<td>Chin</td>
<td>60.5</td>
<td>57.4</td>
<td>63.5</td>
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<td>Sagaing</td>
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<td>61.0</td>
<td>70.4</td>
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</tr>
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<td>Taninthai</td>
<td>65.5</td>
<td>62.2</td>
<td>68.9</td>
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</tr>
<tr>
<td>Bago</td>
<td>65.2</td>
<td>60.7</td>
<td>69.6</td>
<td></td>
</tr>
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<td>Magway</td>
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<td>67.5</td>
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<td>Mraukay</td>
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<td>59.7</td>
<td>70.2</td>
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<tr>
<td>Mon</td>
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<td>58.2</td>
<td>69.1</td>
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</tr>
<tr>
<td>Rathine</td>
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<td>69.3</td>
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<td>60.5</td>
<td>70.8</td>
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<td>Shen</td>
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<td>69.4</td>
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<td>67.0</td>
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</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>67.7</td>
<td>63.7</td>
<td>71.6</td>
<td></td>
</tr>
</tbody>
</table>
The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The indicator gives the average number of years that a newborn baby is expected to live (see Glossary of Technical Terms and Definitions for more information).


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
3.4 Early-Age Mortality

Early-age mortality refers to the rates at which children die within five years of being born. This section presents rates that were calculated by indirect methods from the 2014 Census data. In this sense, they only serve as a proxy for the under-five mortality indicator defined for Sustainable Development Goal 3 (see Box). Other methods for calculating early-age mortality rates use direct methods applied to ‘full birth history’ data collected through specially designed surveys (see Department of Population, 2016c for an explanation of the different approaches and a discussion of the differences between them).

From the indirect estimates derived from the 2014 Census data, the Union infant mortality rate was 61.8 and the Union under-five mortality rate was 71.8 deaths per 1,000 live births (see indicator definition below Map 3.4). International comparisons should be treated with caution because of significant differences in the way records are kept, surveys are conducted and mortality rates are estimated by different organizations in different countries. However, since Table 3.5 presents international data from a single source, the differences are to some extent controlled and the numbers are considered valid for the purposes of making general comparisons. Nevertheless, the rates in Table 3.5 are rounded up to whole numbers to avoid giving a sense of false precision. Comparing early-age mortality rates within Myanmar is sounder because they were derived by applying a standard methodology to a single dataset. Maps 3.4a and 3.4b show a distinct division of the country into two halves, with relatively high rates in the south and west and relatively low rates in the north and east. This pattern is interesting in that it does not conform to the middle corridor/outer ring distinction seen for other indicators.

The reasons why rates vary in different parts of the country are more likely to be explained locally than regionally. Relatively low rates will almost certainly be associated with better access to quality health services, transportation and communication networks. Children born to better-educated parents with higher incomes generally have a much better chance of surviving beyond the age of five. And areas in which people live in better quality houses with amenities such as safe drinking water, a reliable electricity supply and hygienic sanitation facilities will usually have relatively low early-age mortality rates. Conditions for raising children are generally more favourable in urban areas than they are in rural areas, which would help explain why early-age mortality rates in predominantly rural Townships are likely to be much higher than the rates in neighbouring, but predominantly urban, Townships. For a detailed explanation of the methods used for calculating the early-age mortality rates presented here, see Department of Population, 2016c.

### Figure 3.5 Early-Age Mortality Rates, States/Regions

### Table 3.5 Early-Age Mortality Rates, International Comparisons*

<table>
<thead>
<tr>
<th>Region/Country</th>
<th>Early-Age Mortality Rates</th>
<th>Infant</th>
<th>Under-Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORLD</td>
<td>36</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>SE ASIA</td>
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<td>30</td>
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</tr>
<tr>
<td>Bangladesh</td>
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<tr>
<td>Brunei Darussalam</td>
<td>4</td>
<td>5</td>
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</tr>
<tr>
<td>Cambodia</td>
<td>30</td>
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<td></td>
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<tr>
<td>China</td>
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<td>14</td>
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<tr>
<td>India</td>
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<td>Lao PDR</td>
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<td>Malaysia</td>
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</tr>
<tr>
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<td></td>
</tr>
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<td>Philippines</td>
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<td>30</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
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<td>2</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
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<td>13</td>
<td></td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>44</td>
<td>56</td>
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</tr>
<tr>
<td>Viet Nam</td>
<td>19</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

*Sources of Data:
Data for Myanmar: Department of Population, 2016c.
Data for all other countries: UN DESA, 2015a, Tables A.29 and A.30.

### Table 3.6 Early-Age Mortality Rates, States/Regions

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Early-Age Mortality Rates</th>
<th>Infant</th>
<th>Under-Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
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<td>71.8</td>
<td></td>
</tr>
<tr>
<td>Kachin</td>
<td>52.8</td>
<td>60.6</td>
<td></td>
</tr>
<tr>
<td>Kayah</td>
<td>60.1</td>
<td>69.7</td>
<td></td>
</tr>
<tr>
<td>Kayin</td>
<td>53.6</td>
<td>61.6</td>
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</tr>
<tr>
<td>Chin</td>
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<td>89.6</td>
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<td>Sagaing</td>
<td>60.0</td>
<td>69.6</td>
<td></td>
</tr>
<tr>
<td>Taninthary</td>
<td>70.8</td>
<td>83.4</td>
<td></td>
</tr>
<tr>
<td>Bago</td>
<td>61.9</td>
<td>72.0</td>
<td></td>
</tr>
<tr>
<td>Magway</td>
<td>83.9</td>
<td>100.6</td>
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<tr>
<td>Mandalay</td>
<td>50.3</td>
<td>58.4</td>
<td></td>
</tr>
<tr>
<td>Mon</td>
<td>41.9</td>
<td>47.3</td>
<td></td>
</tr>
<tr>
<td>Raekine</td>
<td>61.1</td>
<td>71.0</td>
<td></td>
</tr>
<tr>
<td>Yangon</td>
<td>44.9</td>
<td>51.0</td>
<td></td>
</tr>
<tr>
<td>Shan</td>
<td>55.5</td>
<td>64.0</td>
<td></td>
</tr>
<tr>
<td>Ayeyawady</td>
<td>86.2</td>
<td>103.6</td>
<td></td>
</tr>
<tr>
<td>Nay Pyi Daw</td>
<td>55.4</td>
<td>63.8</td>
<td></td>
</tr>
</tbody>
</table>
The base population for this indicator is the number of live births to women living in conventional and institutional households during the 12-month period prior to the 2014 Census.

The indicator for infant mortality gives the number of infants that died before reaching one year of age per 1,000 live births during this 12-month period.

The indicator for under-five mortality gives the number of children that died before reaching five years of age per 1,000 live births during this 12-month period.
This chapter highlights spatial variations in some key education indicators, based on data collected for the 2014 Myanmar Population and Housing Census. The themes of the chapter are school attendance, educational attainment and adult literacy. In summary, the Census revealed that, in 2014, attendance rates were generally quite high for young children, with little difference between boys and girls, and between urban and rural children. As children get older, attendance rates declined, especially for boys, and especially in rural areas. In spite of reasonably high current attendance rates, less than half the adult population had completed any level of education beyond primary school, with something less than 20 per cent having completed upper secondary level, referred to in this report as ‘high school’ level. Boys were more likely than girls to have dropped out of the education system during, or after completing, primary school or high school, as evidenced by the fact that a higher proportion of female adults had completed university than male adults. Both educational attainment and adult literacy measures show that urban populations are better educated than rural populations. Data from the Census indicated that education is most problematic in Shan State, which had the lowest current attendance rates, the highest proportion of children who had never attended school, the lowest attainment rates at all educational levels, and the lowest adult literacy rates in the country. Attendance, attainment and literacy measures across the country were generally better for children and adolescents than they were for older age groups. This suggests that the quality of education is improving and its reach is extending even into remote, rural parts of the country.

The education-related questions asked in the 2014 Census are shown below. Only people in conventional households were asked the questions about literacy (Question 19) and school attendance (Question 20). But information on attainment (Question 21) was collected from people in both conventional households and institutional households. This means the base population numbers used for calculating literacy and attendance rates were lower than the base population numbers used for calculating attainment rates. The base population for all attendance rates in this chapter was for all individuals between the ages of 5 and 15 years that were living in conventional households. This age group was used because, based on government policy, all children in this age group are expected to be attending either primary school, middle school (lower secondary level) or high school. The base population for all percentages presented for educational attainment is the total number of individuals aged 25 and over that were living in both conventional and institutional households. Percentages for attainment give the proportions of the population that claimed each of the three levels identified to be the highest level completed. They are not completion rates, which would incorporate the total number of people that had completed each level, and in which university graduates would also be counted as having completed both primary school and high school, and high school graduates also counted as having completed primary school.

’Educational attainment’ is defined as the highest ISCED level successfully completed by an individual (UN DESA Population Division, 2015). This atlas discusses educational attainment in terms of the highest level completed at three levels - primary school, high school (upper secondary level) and university. Numbers for each level classified in this atlas represent aggregations of the data for the maximum grades achieved within each level. Thus, the total for primary school includes all those who reported completing primary school (Grade 5) and the first three grades of middle school (Grades 6, 7 and 8) but who had not gone on to complete upper secondary level (Grade 11). Those for whom high school was reported as the highest grade completed includes all individuals who had received some higher education (college or undergraduate diploma) as well as those that had completed the last grade in high school (Grade 11). The highest level of attainment includes all individuals who had graduated with bachelor’s degrees, postgraduate diplomas, master’s degrees or PhDs.

Department of Population 2015, 2017b and 2017c were the primary sources for this chapter. Readers are advised to refer to these reports for broader and more detailed analyses of children and youth and education, respectively.
4.1 School Attendance

The 2014 Census showed that among 5-15 year olds more than two-thirds (69.4 per cent) were currently attending school at some level (Table 4.1). However, this overall figure masks some extreme differences when looking at single years of age. Peak attendance (85 per cent) occurred at age 9 after which attendance began to drop off, quite steeply after age 12 (68 per cent) falling to 28 per cent at age 15 (Figure 4.2). For children up to the age of 12, school attendance rates were similar for both males and females, and in both urban and rural areas. For children older than 12, females were generally better attenders than males, and a higher proportion of these older children were attending school in urban areas than in rural areas (Department of Population, 2015).

Table 4.1 shows that at the State/Region level, Chin State had the highest attendance rate at 81.1 per cent, and Shan State had the lowest, at 56.6 per cent. Indeed, Maps 4.1a and 4.1b clearly show Shan State had the highest attendance rate at 81.1 per cent, and Shan State had the lowest, at 56.6 per cent. States/Regions and Districts

Table 4.1 Proportion of Children Currently Attending School, States/Regions, Urban and Rural

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Percentage</th>
<th>State/Region</th>
<th>Percentage</th>
<th>State/Region</th>
<th>Percentage</th>
</tr>
</thead>
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<td>Kayah</td>
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<td>Magway</td>
<td>73.6</td>
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<tr>
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<td>Thandwe 73.1</td>
<td>74.2</td>
<td>Ngaungpen</td>
<td>69.1</td>
</tr>
</tbody>
</table>

Figure 4.1 Proportion of Children Currently Attending School, States/Regions, Urban and Rural

Children in Putoa District (Kachin State) were the most diligent school-goers, with almost 86 per cent of them attending school in 2014. The top four Townships in the country in terms of school attendance were Naungmoon, Khaunglanphoo, Sumprabum and Machanbaw, all of them in Putoa District and all of them with attendance rates close to 90.0 per cent. Attendance rates were around 80 per cent in all three Districts in Chin State, the highest being 83.4 per cent in Haka District. Rates were higher than 60 per cent in all Districts except those in Shan State.

The difference between attendance rates in urban and rural parts of Shan State was more than 20 percentage points. This is the widest gap in the country at the State/Region level, and it is largely a function of the very low rate of only slightly more than 50 per cent attendance in rural areas (Figure 4.1).

Figure 4.2 Proportion of Children Currently Attending School by Age Males, Females and Both Sexes, Union

The eight Townships with the poorest records for school attendance at lower than 30 per cent, were all in Shan State. Of these, rates in Minekak Township and Minekoke Sub-Township were lower than 20 per cent. The 2014 Census showed that among 5-15 year olds more than two-thirds (69.4 per cent) were currently attending school at some level (Table 4.1). However, this overall figure masks some extreme differences when looking at single years of age. Peak attendance (85 per cent) occurred at age 9 after which attendance began to drop off, quite steeply after age 12 (68 per cent) falling to 28 per cent at age 15 (Figure 4.2). For children up to the age of 12, school attendance rates were similar for both males and females, and in both urban and rural areas. For children older than 12, females were generally better attenders than males, and a higher proportion of these older children were attending school in urban areas than in rural areas (Department of Population, 2015).

Table 4.1 shows that at the State/Region level, Chin State had the highest attendance rate at 81.1 per cent, and Shan State had the lowest, at 56.6 per cent. Indeed, Maps 4.1a and 4.1b clearly show Shan State had the highest attendance rate at 81.1 per cent, and Shan State had the lowest, at 56.6 per cent. States/Regions and Districts

Table 4.1 Proportion of Children Currently Attending School, States/Regions, Urban and Rural

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Percentage</th>
<th>State/Region</th>
<th>Percentage</th>
<th>State/Region</th>
<th>Percentage</th>
</tr>
</thead>
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<td>Ngaungpen</td>
<td>69.1</td>
</tr>
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</table>
Map 4.1 School Attendance Rates, 5-15 Year Olds

a) Districts

b) Townships

The base population for this indicator is all individuals aged 5-15 that were living in conventional households at the time of the 2014 Census.

The indicator gives the proportion of 5-15 year olds that were actively attending school in 2014.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
Whereas the previous section explored the geography of children actively attending school in 2014, this section presents key patterns and trends concerning sections of society that had never attended school. Figure 4.3 illustrates three clear patterns among the adult population. Firstly, younger adults were much more likely to have received some formal schooling than their parents or grandparents. While around 35 per cent of males and 50 per cent of females aged 80 and over had never attended school, among 25-39 year olds the proportions dropped to just under 10 per cent for males and just over 10 per cent for females. Secondly, a higher proportion of females than males had never attended school. For example, among 25-39 year olds the proportions dropped to just under 10 per cent for males and just under 10 per cent for females. Thirdly, the gap between males and females was narrowing, so that even though females were still more likely to have never attended school, the difference among younger adults was only about 2 percentage points.

More than 450,000 children aged 7-15 years had never attended school. This represents 5.3 per cent of the total population for this age category. Tables 4.2 and 4.3 show that, though rates for males and females who had never attended school are quite similar, they are significantly higher for children in rural areas than they are for children in urban areas. For the Union as a whole, 2.4 per cent of urban children and 6.3 per cent of rural children had never attended school, but against these relatively low figures there are some worryingly high rates in some parts of the country. Shan State again stands out, with State-wide rates of 5.0 per cent for urban areas and 26.6 per cent for rural areas. Proportions for never having attended school also varied considerably within Shan State. In Makman, Hopan, Minseik and Kengtung Districts, more than 50 per cent of rural children had never attended school (Map 4.2b). The 10 Districts in the country with the highest never attended rates were all in Shan State, with rates as high as 60 per cent. Only five other Districts in the country had more than 10 per cent of 7-15 year olds having never attended school - Maungtaw in Rakhine State, Hkamlit in Sagaing Region, Kawkareik in Kayin State, and Tachileik and Muse, again in Shan State (Map 4.2c).

### Table 4.2 Proportion of Rural Children who had Never Attended School, Males and Females, States/Regions

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Population 7 - 15 Years Old</th>
<th>7 - 15 Never Attended School</th>
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<td></td>
<td>Both Sexes</td>
<td>Males</td>
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<td>19,410</td>
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<td>Sagaing</td>
<td>141,870</td>
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<td>Taninthay</td>
<td>59,549</td>
<td>1,260</td>
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<td>Bago</td>
<td>165,389</td>
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<td>Magway</td>
<td>85,439</td>
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<td>Mandalay</td>
<td>299,213</td>
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<td>Mon</td>
<td>94,783</td>
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<td>Yangon</td>
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### Table 4.3 Proportion of Urban Children who had Never Attended School, Males and Females, States/Regions

<table>
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<th>State/Region</th>
<th>Population 7 - 15 Years Old</th>
<th>7 - 15 Never Attended School</th>
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</table>
Map 4.2 Children who had Never Attended School, Districts

a) Urban

b) Rural

c) Urban and Rural

Percentage of children who have never attended school
Average at Union level: 2.4 urban, 6.3 rural, 5.3 urban and rural

The base population for this indicator is individuals who were living in conventional households at the time of the 2014 Census. The indicator gives the percentage of children, 7-15 years, who have never attended school at any level.
24 year olds having completed only primary school were generally quite large, and larger for males than for females throughout the country. In Sagaing Region, the State/Region with the largest proportion, almost half the adult population had only completed primary school. As noted earlier, this does not necessarily mean that these people had not attended middle school or high school, but it does mean that, for some reason, they had not completed education at a higher level than primary school. The proportions of males with primary school as the highest level completed were more than four percentage points higher than for females in most Districts. In parts of Chin State, and Rakhine State, the difference was more than 12 percentage points (Map 4.3a).

Highest Level Completed - University: Beyond high school, a greater proportion of females than males had completed university in 57 of Myanmar’s 74 Districts. Though the differences were generally small, four Districts stand out - in West Yangon, East Yangon, Mawlamyine and Dekkhina (South), females had out-completed males in higher education by more than three percentage points. The parts of the country where females had completed university are again concentrated in Chin and Rakhine States, with another cluster of Districts in Shan State (Map 4.3c).

Analysing adult educational completion rates is looking at what has happened in the past. Few people over the age of 25 are likely to return to school to complete their education at any level. Policymakers, educators and parents should be encouraged by indicators reported by the Census for younger age groups. The trends for current attendance rates among children discussed in the previous section - increasing numbers attending school and decreasing numbers having never attended school - suggest that more people are likely to complete higher levels of education in the future. Reinforcing and expanding steps that are already being taken to meet the Sustainable Development Target 4.1 (see Box above) by keeping children in school, improving teaching standards and eliminating incentives for children to start work at very early ages, will not only give children of both sexes a better start in life, but it will generate opportunities for the social and economic advancement of Myanmar society as a whole (Department of Population, 2017b).
Map 4.3 Sex Differences in Education Levels Completed, Districts

a) Primary School

b) High School

c) University

Percentage point differences between males and females

Average at Union level for primary school: 5.0 more for males than females
Average at Union level for high school: 2.9 more for males than females
Average at Union level for university: 1.7 more for females than males

- Male completion rates more than 12 percentage points higher
- Male completion rates 8.1 to 12.0 percentage points higher
- Male completion rates 4.1 to 8.0 percentage points higher
- Male completion rates 0.1 to 4.0 percentage points higher
- Female completion rates 0.1 to 4 percentage points higher
- Female completion rates more than 4 percentage points higher

State/Region boundary
District boundary

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The indicator shows differences in the proportions of males and females, aged 25 and older, that have completed primary school, secondary school, and university levels of education. University means graduates with bachelor’s degrees, postgraduate diplomas, master’s degrees and PhDs.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
### 4.4 Educational Attainment: Urban and Rural

Whereas the previous section looked at differences in educational attainment between males and females in 2014, this section focuses on differences between urban and rural populations. Urban/rural differences were generally substantially greater than male/female differences. Again, there was a shift from one attainment level to another, in this case with larger proportions of rural adults reporting primary school as the highest level they had completed, but larger proportions of urban adults reporting high school and university as the highest levels they had completed. The maps opposite clearly show this shift, with Districts/proportions of urban adults reporting high school and university as the highest levels they had completed, but larger educational attainment between males and females in all 74 Districts (Map 4.4b). Falam and Mindat Districts had the biggest differences at more than 11 percentage points each. Districts/proportions of urban adults reporting high school as the highest level completed in all 74 Districts (Map 4.4b). Falam and Mindat Districts had the biggest differences at more than 11 percentage points each.

#### Table 4.7 Primary School as Highest Level Completed, States/Regions, Urban and Rural

<table>
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<tr>
<th>State/Region</th>
<th>Rural</th>
<th>Urban</th>
<th>% Urban</th>
<th>% Rural</th>
<th>Total Number</th>
<th>% RuralTotal Number</th>
<th>% Total Number</th>
<th>% Urban</th>
<th>% Rural</th>
<th>Total Number</th>
<th>% RuralTotal Number</th>
<th>% Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>18,556,818</td>
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<td>37.9</td>
<td>8,366,455</td>
<td>2,611,993</td>
<td>31.2</td>
<td>-4.7</td>
<td>18,556,818</td>
<td>7,033,574</td>
<td>37.9</td>
<td>8,366,455</td>
<td>2,611,993</td>
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<tr>
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<td>211,993</td>
<td>55,083</td>
<td>26.0</td>
<td>21.2</td>
<td>409,357</td>
<td>19,721</td>
<td>4.8</td>
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<td>55,083</td>
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#### Table 4.8 High School as Highest Level Completed, States/Regions, Urban and Rural

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<th>% Urban</th>
<th>% Rural</th>
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<th>% RuralTotal Number</th>
<th>% Total Number</th>
<th>% Urban</th>
<th>% Rural</th>
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<th>% RuralTotal Number</th>
<th>% Total Number</th>
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<td>-4.7</td>
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<td>7,033,574</td>
<td>37.9</td>
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</tr>
<tr>
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<td>4.8</td>
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<td>19,721</td>
<td>4.8</td>
<td>211,993</td>
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#### Table 4.9 University as Highest Level Completed, States/Regions, Urban and Rural

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Rural</th>
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<th>% Rural</th>
<th>Total Number</th>
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<th>% Total Number</th>
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<th>% Rural</th>
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<th>% RuralTotal Number</th>
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<td>19,721</td>
<td>4.8</td>
<td>211,993</td>
<td>55,083</td>
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</table>
The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The indicator shows differences between urban and rural populations in the proportions of people aged 25 and older, reporting primary, high school, or university as the highest level of education completed. University means graduates with bachelor’s degrees, postgraduate diplomas, master’s degrees and PhDs.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
4.5 Adult Literacy

Map 4.5 Adult Literacy Rates, Districts

a) Urban Males

b) Urban Females

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Both Sexes</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
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<td>Nay Pyi Taw</td>
<td>97.2</td>
<td>98.9</td>
<td>95.9</td>
</tr>
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</table>

The base population for the indicators presented in this section is all persons aged 15 years and over that were living in conventional households at the time of the 2014 Census. The literate population includes all individuals who reported to Census enumerators that they were able to read and write in at least one language. According to this definition, the proportion of the adult population enumerated as literate in 2014 was 89.5 per cent. Though the Census did not make a detailed qualitative assessment of literacy, and did not ask any questions at all about numeracy, the high rate of almost 90 per cent adult literacy it did record suggests Myanmar is well positioned to meet Target 4.6 of the United Nations Sustainable Development Goal 4 (see Box above).

Though the differences are small, in general urban males were the most literate and rural females were the least literate. Among the States and Regions, the urban populations of Yangon Region and Nay Pyi Taw Union Territory had the highest adult literacy rates in the country at 97.2 per cent (Table 4.10). At the other end of the scale, rates were lowest among rural residents of Kayin State and Shan State, at 68.6 per cent and 57.9 per cent, respectively (Table 4.11). The four maps in this section show District-level comparisons of 2014 literacy rates between urban and rural populations and between males and females.

Sustainable Development Goal 4

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Target 4.6: By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.

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Adult literacy rates were generally much higher in the middle corridor than they were in the outer ring. As the four maps above illustrate, this pattern was true for males and females in both urban and rural areas. For all four populations, rates for the States and Regions were higher than the Union average in Ayeyawady, Bago, Magway, Mandalay, Sagaing, Tanintharyi, Yangon and Nay Pyi Taw. In all seven States/Regions located in the outer ring, adult literacy rates were below the Union Average, again for both males and females.

Maps 4.5c and 4.5d clearly show the Districts with the lowest rates of literacy among rural adults in 2014. The six Districts with the lowest rates are all in Shan State; fewer than 30 per cent of rural females were literate in Hopan, Kengtung, Laukine, Makman, Minephyat and Minesat Districts. Five of these six Districts also had the lowest adult literacy rates among rural males, a little higher than for females at between 24 and 45 per cent. But illiteracy is not exclusively a rural problem.

Less than 80 per cent of the urban adult male population was literate in four Districts; less than 70 per cent of the urban adult female population was literate in seven Districts. All of these Districts are in Shan State. The lowest adult literacy rates among urban populations were reported for Hopan District, where only 51 per cent of urban females and 62 per cent of urban males were able to read and write. Against the impressively high adult literacy rate for the Union as a whole, the relatively low rates found in the outer ring of States, and predominantly in rural areas, shows clear evidence that, historically, opportunities for getting good, basic education have not been equal in all parts of the country.

### Table 4.11 Rural Adult Literacy Rates, Males and Females (aged 15 and over), States/Regions

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<th>Females</th>
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<td>79.9</td>
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<td>97.5</td>
<td>89.3</td>
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</table>
Labour Force and Employment

The 2014 Census asked questions about whether people were working or not in the 12-month period prior to the Census (29 March 2014), that is, it collected information on what is termed ‘usual activity’ rather than ‘current activity’, for which, in other censuses, the reference period is usually the week before the census. Determining ‘usual activity’ is generally considered more appropriate in circumstances where the level of economic activity of people varies widely over the year – as it does particularly in agricultural communities – but has the disadvantage in that it possibly underestimates levels of unemployment. Two other questions asked what people’s jobs were, and what the major products or services were provided by the organization for which they worked (in order for their industry sector to be derived). The extracts from the questionnaire below show the three questions that the Census asked that were directly related to labour force and employment. Information was collected on people aged 10 and over living in conventional households for all three questions; those living in institutional households were only asked Question 22 concerning their activity status.

By combining the answers given to these questions with other information collected by the Census, it is possible to analyse and map geographic variations in labour force characteristics and employment patterns. This section presents a selection of such analyses and discusses geographic variations in the extent to which people were actively participating in the labour force, unemployment, employment in different industry sectors, levels of education among the workforce, and child labour. The analysis provides empirical and graphic evidence of some striking geographic variations in the characteristics of Myanmar’s labour force. Some of them are already well known, but others are new.

Firstly, the extent to which agriculture, forestry and fishing dominated the economy and the labour market in almost all parts of the country comes through very clearly. At the same time, signs of change seem to be emerging, particularly in urban centres such as Yangon and Mandalay, where this so-called ‘primary sector’ was less dominant and the employment base more diverse.

Secondly, even though in 2014, urban areas seemed to offer employment opportunities in a wider variety of sectors, they also tended to have significantly higher unemployment rates than rural areas. In Myanmar, as in many developing countries, it appears that the ‘big city’ fails to live up to expectations of easy to find, well-paid jobs, and that people who move there in search of work are often disappointed.

Thirdly, though the labour force generally has a significantly larger proportion of male than female participants, the difference is not so marked in the agriculture, forestry and fishing sector. Women do a lot of work on the farm in many rural societies, largely because much of it is seasonal, part-time and close to home, fitting in well with the traditional female responsibilities of child-rearing and other domestic duties. Though for the Union as a whole the sector employed a slightly larger proportion of males than females, in States such as Kayah, Chin and Shan, proportions were roughly equal, or in some cases even slightly larger for females. And ‘females’ here does not only refer to women, since the fourth characteristic of the labour force that emerged from the 2014 Census was the extent to which children, including girls, are working rather than attending school. The low attendance and completion rates for high school and university described in Chapter 4 are clearly reflected in the large numbers of children that were actively participating in the labour force in 2014.

The fact that a very large proportion of working children were employed in the primary sector points to a fifth key finding from this analysis of the labour force - that working people in urban areas were generally better educated than working people in rural areas. Whereas about one-third of the employed population in cities like Yangon, Nay Pyi Taw and Mandalay had at least completed high school, in most Districts and Townships with predominantly rural populations, less than one fifth of the workforce had completed this level of education.

Finally, the maps presented in this chapter generally do not conform to the ‘middle corridor’/‘outer ring’ contrast illustrated so distinctly and so consistently on the maps in other chapters. Though some general regional patterns can be identified, labour force and employment characteristics tend to be more variable, more local and even more ‘random’ than many of the other social and demographic indicators presented in this atlas. Difficulties in obtaining clear, accurate, consistent answers to questions involving obscure, technical terminology might explain this in part, but it could also be an indication of a quickening in the pace of change in Myanmar. The lack of sharply defined, high-contrast regional patterns can be an expression of dynamism; of communities, resources and institutions on the move; and of imminent change to traditional ways of life in a climate of political, social and economic flux. Undoubtedly Myanmar is changing rapidly in many ways, and whilst the snapshot of the 2014 Census might hint at such a transformation, it will more usefully provide benchmarks against which the nature and pace of change will be measured in the future.

2014 MYANMAR CENSUS ATLAS

Labour Force and Employment 51
Labour force participation rates (LFPRs) indicate the degree to which populations are economically active. They are expressed as the percentage of the total population of working age (15-64) that is economically active, with ‘economically active’ defined as people that are either working or unemployed but looking for work. The Census reported that the LFPR for the Union as a whole was 67.0 per cent in 2014. This section discusses regional and local variation in LFPRs. Section 5.2 considers differences in participation rates between male and female populations.

The States/Regions with the highest participation rates in 2014 were Shan, Kayah, Sagaing and Magway, where LFPRs were all higher than 70 per cent (Table 5.1). The concentration of high LFPRs in the north-east of the country shows up very clearly on Map 5.1. It is also evident in Figure 5.1, with most of the Districts in the top half of the figure (above the Union rate of 67 per cent) located in the north and east, and most of the Districts in the bottom part of the figure (below the Union rate) located in the south and west. Kachin State was an exception to this general pattern, where low LFPRs were recorded for places such as Myitkyina State, (in Kachin State), Haka (Chin), Thayawady (Bago), Thaton (Mon), Sittway (Rakhine), and Phapyon (Ayeayawady). Closer analysis of Township-level data shows that not everywhere in the south and west of the country conformed to the general pattern for the region as a whole. Exceptions included Cikha Sub-Township, (in Falam District) and Paletwa (Mindat District), both in Chin State; Mindon Township (Thayet District in Magway Region); and Thanbyuzayat Township, (Mawlamyine District in Mon State). LFPRs were higher than 75 per cent in all of these Townships.

In 2014, LFPRs were relatively low throughout the south and west of Myanmar. Mon, Rakhine and Kayin States had the least economically active populations, all at around 60 per cent. At the District level, rates of less than 60 per cent were recorded for Hpa-An and Phapyon (in Kayin State), Haka (Chin), Thayawady (Bago), Thaton (Mon), Sittway (Rakhine), and Phapyon (Ayeayawady).

### Figure 5.1 Labour Force Participation Rates, Districts

#### Table 5.1 Labour Force Participation Rates, States/Regions and Districts

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5.1 Labour Force Participation: Geographic Variations
The base population for this indicator is all individuals aged 15-64 that were living in conventional or institutional households at the time of the 2014 Census. The indicator gives the sum of the employed plus unemployed population, aged 15-64, as a percentage of the total population in the same age group.


Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
5.2 Labour Force Participation: Males and Females

In Myanmar, as in most countries, the proportion of males participating in the labour force is higher than the proportion of females. In 2014, approximately 85 per cent of males aged 15-64 were actively employed or looking for work. For females in the same age group, the proportion was just fractionally over a half (Table 5.2).

Table 5.2  Labour Force Participation: Males and Females

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Total Population Aged 15 - 64</th>
<th>Active Population Aged 15 - 64 (Employed + Unemployed)</th>
<th>Labour Force Participation Rate, Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>UNION</td>
<td>15,722,510</td>
<td>17,266,258</td>
<td>13,402,101</td>
</tr>
<tr>
<td>Kayin</td>
<td>578,060</td>
<td>603,533</td>
<td>599,399</td>
</tr>
<tr>
<td>Mandalay</td>
<td>138,139</td>
<td>143,913</td>
<td>74,223</td>
</tr>
<tr>
<td>Magway</td>
<td>1,658,333</td>
<td>1,657,107</td>
<td>2,406,675</td>
</tr>
<tr>
<td>Shan</td>
<td>90,159</td>
<td>111,012</td>
<td>94,158</td>
</tr>
<tr>
<td>Rakhine</td>
<td>260,213</td>
<td>263,307</td>
<td>203,205</td>
</tr>
<tr>
<td>Kayah</td>
<td>275,353</td>
<td>196,107</td>
<td>248,877</td>
</tr>
<tr>
<td>Mon</td>
<td>109,152</td>
<td>111,912</td>
<td>14,958</td>
</tr>
<tr>
<td>Kayin</td>
<td>360,525</td>
<td>418,166</td>
<td>1,247,824</td>
</tr>
</tbody>
</table>

Shan State stands out as the State/Region that had the highest LFPRs for both men and women. As will be discussed later in this chapter, this is typical of an area where most people work in agriculture and where, conversely, unemployment rates are very low. Other States/Regions with high LFPRs for both sexes include Kayah and Saginag, which, together with Shan, were all close to 90 per cent for men and around 60 per cent or more for women. Interestingly, the lowest LFPRs were found in Regions for men than for women. For men, Chin, Mon and Kayin had the lowest rates, whereas for women, the lowest level of participation was in Kayin, Bago and Tanintharyi, and - with by far the lowest level, at only 38 per cent - Rakhine.

Seven Districts had male LFPRs higher than 90 per cent, five of them - Myinehp, Minath, Kyaukme, Kyaukse and Loin - located in Shan State, the others being Bawldw (in Kayah) and Mawlal (in Sagaing).

Similarly, three of the four Districts with the highest rates for females were also in Shan State. These were Taunggyi, Hopan and Makma, with the fourth being, again, Mawlal, with all LFPRs higher than 70 per cent. Whereas these Districts have similar socio-demographic profiles - mostly outer ring Districts with large rural populations working predominantly in the primary sector - no such similarities are found among the Districts with the lowest participation rates.

For males, these included Haka, Falma and Mindat (in Chin State), Sittway (Rakhine), and the district of central West and East Yangon Districts, all with male LFPRs of less than 80 per cent. For females, the lowest rates were found, again, in Sittway and in Thayawady (Bago), Kawkhawng (Tanintharyi), and Phaporn (Kayin), where only about one-third of women were active in the labour force.
Labour force participation rate
Average at Union level: 85.2 males, 50.5 females, 67.0 males & females

<table>
<thead>
<tr>
<th>Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.9 - 40.0</td>
<td></td>
</tr>
<tr>
<td>40.1 - 50.0</td>
<td></td>
</tr>
<tr>
<td>50.1 - 60.0</td>
<td></td>
</tr>
<tr>
<td>60.1 - 70.0</td>
<td></td>
</tr>
<tr>
<td>70.1 - 80.0</td>
<td></td>
</tr>
<tr>
<td>80.1 - 92.7</td>
<td></td>
</tr>
</tbody>
</table>

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The indicator gives the percentage of the employed and unemployed population aged 15 to 64 divided by the total population in the same age group.

Source of geographic data: Department of Population GIS Unit.
Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
Unemployment rates are widely used as indicators of the efficiency, productivity and overall ‘health’ of labour markets. They are, however, notoriously difficult to collect data for and to calculate. The main problem lies in making a clear distinction between what is meant by the terms ‘employed’ and ‘unemployed’. The difficulty is particularly acute in developing countries, and especially among rural populations, where most working people undertake several different kinds of work at different times of the year, some of it paid and some of it unpaid, some of it full-time and some of it for just a few hours per week. Very few people are fully employed or fully unemployed all the time, meaning that for many people, the less precise classification of ‘underemployed’ is more appropriate. These qualifications limit the usefulness of Census-derived unemployment rates to providing only a very general picture of employment levels in the workforce. 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Map 5.3 Unemployment Rates, Districts

a) Urban

b) Rural

c) Urban and Rural

Unemployment rate
Average at Union level: 4.8 urban, 3.6 rural, 4.0 urban and rural

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The indicator gives the percentage of the unemployed population aged 15 to 64.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
The pie charts on Map 5.4 show two things. Firstly, the size of the pie charts show the relative share each State/Region has of Myanmar’s total employed population living in conventional households. Secondly, the size of the pie charts on the map clearly reflects Myanmar’s uneven population distribution, and is another example of the recurring contrast between the middle corridor (large numbers of workers) and the outer ring (relatively few workers). The dominance of agriculture, forestry and fishing (the primary sector) is also consistent with the fact that Myanmar is still predominantly a rural country. As described in Chapter 2, less than one-third of the population lived in urban areas in 2014.

Figure 5.3 shows that agriculture, forestry and fishing was by far the most important industry sector in Myanmar. More than 50 per cent of the country’s employed population aged 10 and over worked in this sector. This proportion provides further evidence that Myanmar is still largely a rural society. Wholesale and retail trade was a distant second containing just under 10 per cent of the employed population, followed by manufacturing with just under 7 per cent. No other sector had more than 5 per cent of the employed population, although for a substantial number of people (more than 6 per cent), responses given to Census enumerators were not clear enough to determine which sector they worked in, so they were reported as ‘not stated’.

Geographic comparisons show that the agriculture, forestry and fishing sector was particularly important in Chin and Shan States, employing more than 70 per cent of the working population in both States (Table 5.4). Yangon stood out as having by far the lowest proportion of primary sector workers at less than 15 per cent, reflecting the predominantly urban nature of the Region. In contrast, Mandalay Region and Nay Pyi Taw Union Territory, home to the nation’s second and third largest cities, both still had relatively large numbers of workers in the primary sector, at about 40 per cent. (More detail about the distribution of the population in this sector is given in Section 5.5.) Mining and quarrying is an extremely important revenue-generating sector, but it did not employ large numbers of people. It accounted for less than 1 per cent of the working population nationwide at the time of the Census, and was among the top six sectors in only two States, Kachin and Kayah. Even in these two States, the absolute numbers employed in mining and quarrying were small, as evidenced by the small size of their pie charts on Map 5.4.

Not surprisingly, Yangon Region is the only State/Region in the country where the primary sector was not the largest employer. It was joint second with manufacturing at 14.8 per cent, both marginally overshadowed, by one percentage point, by wholesale and retail trade. Another interesting difference between Yangon Region and the rest of the country is the diversity of employment there. This can be clearly seen in the multi-coloured pie chart for Yangon on Map 5.4, which contrasts markedly with the green-dominated pie charts for all other States/Regions. The relatively uniform size of the pie slices for Yangon shows that other sectors, such as manufacturing, wholesale, retail and motor vehicle repair, transportation and storage, and accommodation and food services shared, with the primary sector, roughly equal proportions of the total employed, all at between 9 and 16 per cent. These numbers confirm Yangon Region as the home of Myanmar’s industrial, commercial and transportation hub.

5.4 Employment by Industry Sector

### Table 5.4 Proportion of Employed Population* in Top Ten Industry Sectors, States/Regions

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Agriculture, Forestry &amp; Fishing</th>
<th>Manufacturing</th>
<th>Wholesale &amp; Retail Trade; Repair of Motor Vehicle</th>
<th>Accommodation &amp; Food Services</th>
<th>Construction</th>
<th>Transportation &amp; storage</th>
<th>Public Administration &amp; Defence</th>
<th>Other Service Activities</th>
<th>Education</th>
<th>Mining &amp; Quarrying</th>
<th>Other 11 Sectors &amp; Sector ‘Not Stated’</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.6%</td>
<td>0.7%</td>
<td>0.4%</td>
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<td>Kachin</td>
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<td>Kayah</td>
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<td>Kayin</td>
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<td>Chin</td>
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<td>Sagaing</td>
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<tr>
<td>Taninthayi</td>
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<tr>
<td>Bago</td>
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<td>Mapway</td>
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<tr>
<td>Mandalay</td>
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<tr>
<td>Mon</td>
<td>0.2%</td>
<td>0.2%</td>
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<tr>
<td>Rakhine</td>
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<td>Yangon</td>
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<tr>
<td>Shan</td>
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<td>0.7%</td>
</tr>
<tr>
<td>Ayeyawady</td>
<td>0.2%</td>
<td>0.2%</td>
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</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.6%</td>
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<td>0.7%</td>
</tr>
</tbody>
</table>

* This table (and indeed Section 5.4 in general) examines employment data for the age group aged 10 and over, whereas other sections in this chapter look at 15-64 year olds or, in the case of Section 5.7, the age group aged 10-17 for whom child labour is an issue of particular concern in Myanmar. Thus, the proportions shown as working in agriculture, forestry and fishing will not be the same as those shown in Table 5.5 in the next section.
Map 5.4 Employment by Industry Sector, States/Regions

The base population for this indicator is all employed individuals aged 10 years and older that were living in conventional households at the time of the 2014 Census. The sizes of pie slices are proportionate to the total number of people aged 10 years and older working in each sector, as a percentage of the total employed population in the same age group. The industry sectors shown in each pie chart are the six that employed the largest proportion of the working population in each State/Region, plus a seventh for ‘other sectors’ and ‘not stated’. This means that they are not the same six sectors for all States/Regions.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
5.5 Employment in Agriculture, Forestry and Fishing

Of the 21.2 million people aged 15-64 reported as ‘employed’ by the 2014 Census, almost half worked in either agriculture, forestry or fishing. Chin State had the largest proportion of its workforce employed in this sector (referred to as the primary sector) at 73 per cent, this was less than 120,000 people. In absolute terms, the largest numbers of 15-64 year olds working in the sector were in Shan State (1.9 million), Sagaing Region (1.3 million) and Ayeayawady Region (1.2 million). The 4.4 million primary sector workers in these three States/Regions represent almost half the total of the 9 million 15-64 year olds that were working in Myanmar’s agriculture, forestry and fishing sector in 2014.

As earlier sections of this atlas have shown, people live in larger numbers and at higher densities in Myanmar’s middle corridor than in its outer ring. This is partly explained by the greater agricultural productivity of the fertile lowlands. However, in terms of employment, in 2014 the agriculture, forestry and fishing sector was more important in the outer ring - it employed larger proportions of the working population in Districts in, for example, Shan, Kayah and Rakhine States than it did in Mandalay, Magway, Bago and Yangon Regions. The maps opposite show this distinction very clearly. They also show other interesting aspects of the distribution of employment in the primary sector. Firstly (as has already been noted) with the exception of Yangon Region, agriculture, forestry and fishing was generally the dominant sector throughout the country in terms of the proportion of workers it employed. Secondly, even with this general overall dominance, agriculture and forestry (and less so fishing) were particularly important in the north-west and north-east. Thirdly, generally, a larger proportion of men than women worked in the sector, but the gender differences were small and the relationship was consistent for all parts of the country.

Though agriculture, forestry and fishing was by far the largest employer nationwide, there are significant differences in the extent to which it dominates the labour market locally. Figure 5.4 shows this variation at the State/Region level, and the Maps opposite show it broken down by sex at the District level. Among the States and Regions, the percentage ranges from about 10 per cent in Yangon Region to 73 per cent in Chin State. The range at the District level is, of course, much greater from slightly more than 1 per cent in West Yangon to more than 85 per cent in Makman (in Shan State). The five Districts with the largest proportions of employed people working in the primary sector at the time of the 2014 Census were all in Shan State. In addition to Makman they included Minephya, Minesat, Hpanp and Lolin, in all of which more than three quarters of the employed population worked in the primary sector. The least agricultural Districts, in terms of the percentage employed in the sector, have predominantly urban populations. In addition to West Yangon they included East Yangon, North Yangon and Mandalay Districts, all with less than 11 per cent employed in agriculture, forestry or fishing.

In 2014, not only did the numbers employed in agriculture, forestry and fishing vary geographically, but so too did the nature of the work within the sector. In the lowlands of the central basin, coastal plains and deltas, most of the people employed in the sector were probably working on large-scale, often highly mechanized commercial farms, or in the fishing industry. In upland areas, farming generally was smaller scale and less productive, and options for employment more limited, hence the large percentages of the employed population working in the sector in the hills of Chin, Rakhine, Sagaing and Shan States. Most of the employment in forestry would also have been in upland areas, the forests of the lowlands having been cleared for agriculture long ago (though the Census did not collect information that could specifically confirm this).

This section has used 2014 Census data to illustrate broad geographic patterns of employment in the agriculture, forestry and fishing sector, patterns which are deeply embedded in the physical, cultural and economic landscapes of Myanmar. Those patterns have evolved slowly over decades, centuries and millennia. In spite of the rapid pace of change that the country is currently experiencing in some spheres of activity, the rural economy and landscapes of Myanmar will most probably look much the same for many years to come.
Map 5.5 Employment in Agricultural, Forestry and Fishing, Districts

a) Males

b) Females

c) Both Sexes

Percentage of employed population working in agriculture, forestry and fishing sector

Average at Union level: 45.3 males, 37.9 females, 42.3 both sexes

The base population for this indicator is individuals that were living in conventional households at the time of the 2014 Census. The indicator gives the proportion of the employed population aged 15 to 64 working in the agriculture, forestry and fishing sector.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
This section describes geographic variations in the distribution of working people, aged 15-64, according to relative levels of educational attainment. The focus is on the numbers in the fourth column of Table 5.6, which shows where relatively better educated workers lived in terms of the proportion of the working population that had at least graduated from high school (upper secondary level).

At the State/Region level, such proportions ranged from only 9 per cent in Shan State up to about 31 per cent in Yangon Region. In addition to Yangon Region, Nay Pyi Taw Union Territory and Mandalay Region also had relatively highly-educated workforces, at around 24 per cent and 17 per cent, respectively. In contrast, education levels were relatively low among the employed populations of Shan, Kayin, Ayeyawady and Magway, where less than 12 per cent had at least graduated from high school. A most striking feature of Figure 5.5 are the relatively high proportions of workers in Chin, Kayah and Kachin States that had at least graduated from high school. A most striking feature of Figure 5.5 are the relatively high proportions of workers in Chin, Kayah and Kachin States that had completed high school but had not gone on to complete a university education.

The Districts with the more highly-educated workforces include West Yangon, the only District where more than half the employed population had at least completed high school, and East Yangon, Dukkanha (South) and Mandalay, where between one quarter and one half of workers were relatively well-educated. The lowest rates were in Districts in predominantly rural areas. Table 5.6 shows that in 18 Districts, the proportion of the population with at least a high school diploma was less than 10 per cent. Ten of these Districts are in Shan State, two are in Ayeyawady Region, and the other six are Yame’thin (in Mandalay Region), Kawkareik (Kayin), Myauk U (Rakhine), Thayawady (Bago), Mawlaik (Sagaing) and Thayet (Magway). Maps 5.6a and 5.6b show that, with a few exceptions, the most highly educated workers lived in the more predominantly urban Districts. Reference to Section 5.4 shows that it was in Myanmar’s main urban centres in which the largest proportions of the workforce were employed in wholesale and retail, manufacturing, accommodation and food services, and public administration – those sectors that require people with literacy, numeracy and technical skills. Conversely, in rural areas, where education levels among the working population were relatively low, agriculture, forestry and fishing was by far the dominant industry sector.

### Table 5.6 Proportion of Employed Population by Highest Level of Education Attained, States/Regions and Districts

| State/Region | Percentage Employed with Highest Education Level Completed as | | | |
|--------------|-------------------------------------------------------------|------------------|------------------|
| High School | University | High School | University | High School | University |
| **UNION**    | 7.7 | 7.9 | 15.6 | | | |
| **Kachin**   | 10.9 | 7.1 | 17.7 | | | |
| **Myitkyina** | 10.7 | 9.6 | 20.3 | | | |
| **Mohnyin**  | 10.7 | 6.2 | 16.9 | | | |
| **Shame**    | 7.4 | 5.9 | 13.3 | | | |
| **Puloa**    | 11.8 | 5.2 | 17.0 | | | |
| **Kayah**    | 10.4 | 6.4 | 16.8 | | | |
| **Loikaw**   | 10.7 | 6.9 | 17.6 | | | |
| **Bawlake**  | 8.8 | 4.2 | 13.0 | | | |
| **Kayin**    | 5.6 | 4.7 | 10.3 | | | |
| **Hpa-An**   | 6.3 | 5.8 | 12.1 | | | |
| **Phopon**   | 6.3 | 6.0 | 12.3 | | | |
| **Myeik**    | 5.9 | 4.9 | 10.8 | | | |
| **Kawkhate** | 4.5 | 3.1 | 7.6 | | | |
| **Chin**     | 10.6 | 5.5 | 16.1 | | | |
| **Haka**     | 8.0 | 7.9 | 15.9 | | | |
| **Falam**    | 14.1 | 5.9 | 20.0 | | | |
| **Mindat**   | 8.9 | 4.2 | 13.1 | | | |
| **Sagaing**  | 6.0 | 6.1 | 12.1 | | | |
| **Sagae**    | 6.9 | 8.4 | 15.3 | | | |
| **Shwebo**   | 5.0 | 5.2 | 10.2 | | | |
| **Monywa**   | 6.4 | 9.2 | 15.6 | | | |
| **Kalaw**    | 5.7 | 4.8 | 10.5 | | | |
| **Kalay**    | 7.6 | 7.1 | 14.7 | | | |
| **Tamu**     | 14.0 | 6.9 | 20.9 | | | |
| **Mawlaik**  | 4.5 | 3.9 | 8.4 | | | |
| **Hisami**   | 7.5 | 3.4 | 10.9 | | | |
| **Yinmarpin** | 4.5 | 5.6 | 10.1 | | | |
| **Tandinwadi** | 7.8 | 6.9 | 14.4 | | | |
| **Dawei**    | 7.1 | 8.0 | 15.1 | | | |

| State/Region | Percentage Employed with Highest Education Level Completed as | | | |
|--------------|-------------------------------------------------------------|------------------|------------------|
| **Yangon**   | 14.4 | 16.5 | 30.9 | | | |
| **North Yangon** | 14.1 | 10.4 | 24.5 | | | |
| **East Yangon** | 19.4 | 21.3 | 40.7 | | | |
| **South Yangon** | 4.2 | 6.4 | 10.6 | | | |
| **West Yangon** | 17.7 | 34.6 | 52.3 | | | |
| **Shan**     | 5.1 | 3.9 | 9.0 | | | |
| **Taunggyi** | 6.9 | 5.7 | 12.6 | | | |
| **Lolim**    | 3.0 | 2.7 | 5.7 | | | |
| **Lindu**    | 3.2 | 3.6 | 6.8 | | | |
| **Laisho**   | 5.2 | 4.9 | 10.1 | | | |
| **Mae**      | 8.1 | 4.6 | 12.7 | | | |
| **Kyaukme**  | 5.2 | 3.5 | 8.7 | | | |
| **Kunlin**   | 1.4 | 2.3 | 3.7 | | | |
| **Labhone**  | 1.9 | 1.8 | 3.7 | | | |
| **Hpan**     | 0.9 | 0.6 | 1.6 | | | |
| **Maltman**  | 1.6 | 0.4 | 2.0 | | | |
| **Kengtung** | 3.7 | 2.9 | 6.6 | | | |
| **Mineaw**   | 1.5 | 1.8 | 3.3 | | | |
| **Tachileik** | 8.3 | 4.6 | 12.9 | | | |
| **Minephyat** | 2.8 | 1.8 | 4.6 | | | |
| **Ayeawady** | 5.7 | 5.1 | 10.8 | | | |
| **Pathin**   | 6.0 | 6.5 | 12.5 | | | |
| **Pyepon**   | 3.5 | 4.4 | 7.9 | | | |
| **Mawdaw**   | 6.2 | 4.2 | 10.5 | | | |
| **Mываungmya** | 6.0 | 4.5 | 10.5 | | | |
| **Labutta**  | 4.8 | 3.8 | 8.6 | | | |
| **Hinthada** | 6.8 | 5.5 | 12.3 | | | |
| **Nay Pyi Taw** | 10.5 | 13.7 | 24.2 | | | |
| **Ooala (North)** | 9.2 | 9.6 | 18.6 | | | |
| **Dakkhina (South)** | 11.4 | 16.9 | 28.3 | | | |
Map 5.6 Employment by Educational Attainment, Districts

a) High School

Percentage of employed population who reported either high school or university as the highest education level completed

Average at Union level: 7.7 high school, 7.9 university

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The indicator gives the proportion of the employed population aged 15 to 64 that has completed high school or university education.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
As discussed in Chapter 4, children entering the labour force at young ages is a significant problem in Myanmar. Early school dropout rates are very high, with large numbers of children failing to complete primary school, middle school (lower secondary) and, particularly, high school (upper secondary). Table 5.7 shows that more than one fifth of children aged 10-17 were working in 2014. This includes both child labour and child work, defined by the International Labour Organization as including both paid employment below the minimum age, which in Myanmar is 16 years, and children engaged in unpaid, often hazardous, household services. Of all the industry sectors, agriculture, forestry and fishing employed by far the largest number of children. Within the sector, agriculture was the biggest draw, with most working children leaving school early most likely to help out on the family farm.

The proportion of children working in all sectors was larger than the Union level average of 21 per cent in four States/Regions - Sagaing, Mandalay, Magway and Shan. Whereas for the first three of these the proportions were only marginally higher than the national average, all at less than a quarter, in Shan State, almost a third of all children aged 10-17 were employed in agriculture, forestry or fishing (see Figure 5.6). The 11 Districts with the largest proportions of working children in this sector were all in Shan State, ranging from approximately 19 per cent in Lashio District to 36 per cent in Makman District. As would be expected, Districts where most people lived in urban areas had the lowest rates for child labour in agriculture, forestry and fishing, with West Yangon, East Yangon, Mandalay, Sittway and North Yangon all at less than 2 per cent.

Comparing the geographic variations in child labour presented in this section with patterns for some of the education indicators discussed in Chapter 4 reveals some interesting, though not surprising, relationships. Those parts of the country with the highest current attendance rates and high school completion rates generally reported relatively small proportions of working children, and the States/Regions and Districts with the lowest current attendance rates and high school completion rates tended to have relatively large proportions of working children.

Chin State is something of an anomaly in that, though almost three quarters of the working population there were employed in agriculture, forestry or fishing (see Figure 5.6). It had one of the lowest child labour rates for the sector at just over 6 per cent. This reflects the State’s very strong performance in keeping children in school. As discussed in Chapter 4, children in Chin State had the highest current school attendance rate (81.1 per cent) and among the lowest never attended school rates (1.4 per cent) in the country.

---

### Table 5.7 Children Aged 10-17 Working in All Sectors and in Agriculture, Forestry and Fishing, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Percentage Population Aged 10-17 Working in All Sectors</th>
<th>Percentage Population Aged 10-17 Working in Agriculture, Forestry and Fishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNION</td>
<td>20.8</td>
<td>6.5</td>
</tr>
<tr>
<td>Kachin</td>
<td>12.7</td>
<td>6.2</td>
</tr>
<tr>
<td>Myitkyina</td>
<td>10.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Mohsein</td>
<td>12.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Bhamo</td>
<td>19.4</td>
<td>12.1</td>
</tr>
<tr>
<td>Putoo</td>
<td>5.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Kayah</td>
<td>20.2</td>
<td>13.8</td>
</tr>
<tr>
<td>Loikaw</td>
<td>19.9</td>
<td>14.1</td>
</tr>
<tr>
<td>Baweikha</td>
<td>21.7</td>
<td>12.3</td>
</tr>
<tr>
<td>Kayin</td>
<td>16.6</td>
<td>8.3</td>
</tr>
<tr>
<td>Hpa-An</td>
<td>14.1</td>
<td>7.4</td>
</tr>
<tr>
<td>Phepon</td>
<td>10.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Myawady</td>
<td>17.6</td>
<td>6.1</td>
</tr>
<tr>
<td>Kawakane</td>
<td>20.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Chin</td>
<td>9.9</td>
<td>6.4</td>
</tr>
<tr>
<td>Haka</td>
<td>8.6</td>
<td>5.7</td>
</tr>
<tr>
<td>Falum</td>
<td>11.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Minbur</td>
<td>9.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Sagaing</td>
<td>22.9</td>
<td>10.1</td>
</tr>
<tr>
<td>Sagaing</td>
<td>23.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Sheesbo</td>
<td>25.1</td>
<td>11.8</td>
</tr>
<tr>
<td>Monywa</td>
<td>21.8</td>
<td>4.6</td>
</tr>
<tr>
<td>Kulla</td>
<td>26.4</td>
<td>17.3</td>
</tr>
<tr>
<td>Katay</td>
<td>17.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Tamu</td>
<td>13.6</td>
<td>7.0</td>
</tr>
<tr>
<td>Mawlake</td>
<td>27.1</td>
<td>15.7</td>
</tr>
<tr>
<td>Hoiom</td>
<td>21.9</td>
<td>14.0</td>
</tr>
<tr>
<td>Yinnayung</td>
<td>19.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Taninthayi</td>
<td>15.9</td>
<td>7.6</td>
</tr>
<tr>
<td>Dawei</td>
<td>14.2</td>
<td>5.3</td>
</tr>
</tbody>
</table>
The base population for this indicator is all employed individuals aged 10-17 that were living in conventional households at the time of the 2014 Census. The indicator for Map 5.7a gives the number of children aged 10-17 working in all sectors as a percentage of the total number of children in the same age group. The indicator for Map 5.7b gives the number of children aged 10-17 working in skilled jobs in the agriculture, forestry and fishing sector as a percentage of the total number of children in the same age group.
This chapter examines two different aspects of migration, namely migration flows and net migration rates. The analyses of both lifetime and recent migration flows reported in the 2014 Census share some common patterns. Yangon Region was, and continued to be, the most popular destination for people who left their place of birth to live in another location in Myanmar. Urban centres in Nay Pyi Taw Union Territory and Mandalay Region also attracted relatively large numbers of in-migrants. Kachin, Kayah and Kayin States were also net recipients of migrants in relatively large numbers. Here, however, the draw was not the attraction of large urban centres, but more the perceived opportunities for work in the primary sector, mining, and engagement in activities related to international trade.

The spatial analysis underlying the maps presented in this chapter reveal a number of other patterns which are likely to be of interest to policymakers, social scientists and the development community in general. For example, more than half of the people who migrated between 2009 and 2014 were female. Whilst large numbers of male migrants had moved to remote areas and border Districts - attracted by economic opportunities there - females were more likely to have moved to urban centres to pursue academic interests or seek employment in the manufacturing sector, government agencies, private service industries or public services such as schools, hospitals and clinics. Rates of rural-to-urban migration remain relatively low, with the largest numbers of migrants moving either from urban to urban areas or from rural to rural areas.

This chapter only discusses internal migration. The data and analysis presented here do not include people who have immigrated to Myanmar from other countries, nor does it include people who have left Myanmar to live abroad. However, the reader will want to be aware that the Census did collect some limited data on international migration from Myanmar (as part of the inquiry on former household members living abroad), that suggested that large numbers of working-age people, and especially males, were leaving to seek work overseas. The most popular destinations were Thailand and Malaysia. Collecting reliable information in a census on people who have left the country is always difficult, and the numbers of emigrants recorded by the 2014 Census - for example the 1.4 million people reported to be living in Thailand and more than 300,000 in Malaysia - are likely to be significant undercounts (Department of Population, 2016a). Even so, these numbers represent the loss of substantial productive capacity which could be contributing to economic growth in Myanmar if it could be gainfully employed in this country. Mass-emigration is another demographic process academics and social scientists are diligently monitoring and analysing, and policymakers will most likely be seeking to stem.

The questions asked for obtaining information about migration are shown here in the extract from the main questionnaire. The base population used for the analysis of migration presented in this chapter includes all individuals whose usual place of residence was in conventional households in Myanmar at the time of the Census. It does not include people who were living in institutional households at the time of the Census for whom information on movement was not collected; nor does it include people whose usual place of residence was overseas.

The 2014 Census Thematic Report on Migration and Urbanization (Department of Population, 2016a) was the primary source for the material presented in this chapter.
6.1 Lifetime Internal Migration Flows

The 2014 Myanmar Census defined lifetime migrants as those people who, at some time in their lives, lived in a Township different to the one in which they were born. This includes people who moved to live in a different Township for a period of time, but who later returned and were living in their Township of birth at the time of the Census (so called ‘return migrants’). Out of the total number of people living in conventional households of 47,918,525 for the Union as a whole, 9,231,619 (19.3 per cent) were lifetime migrants (had moved between Townships) and of these, 4,561,588 (9.5 per cent) had moved to Townships in different States/Regions (Department of Population, 2016a).

Maps 6.1a and 6.1b show the most significant flows of lifetime internal migrants between States/Regions. Explanations of the use of the term ‘most significant flow’ in this chapter are given in footnotes below the tables and maps.

For inter-State/Region migration, by far the most significant movement was from Ayeyawady to Yangon, with 773,414 lifetime migrants, or 8.5 per cent of the total number of 9,231,619. Table 6.1 shows that large numbers of people also moved from Bago to Yangon (372,068), Sagaing to Mandalay (209,217) and Magway to Yangon (199,483) during their lifetimes.

Clearly, the predominant pattern for inter-State/Region lifetime migration in Myanmar was towards Yangon (Map 6.1b), with movements to and from Mandalay showing a similar trend, but involving substantially fewer people (Map 6.1a). Of the lifetime migrations not to or from Yangon Region, the largest flows were from Sagaing to Mandalay (209,217 people), from Mandalay to Shan (159,757), and from Magway to Mandalay (128,487).

Most of the lifetime migrants to the country’s two largest cities originated in other urban areas. This can be seen in the relatively high rates of urban-urban migration of almost half of all lifetime moves, and the surprisingly low rates of rural-urban migration of less than 10 per cent. Figure 6.1 shows the relative contribution of the four lifetime migration streams between urban and rural areas.

The States/Regions with the largest total numbers of lifetime outmigrants were Ayeyawady (1,018,461), Bago (880,370), Mandalay (777,846) and Magway (564,060). Recipients of the largest total numbers of in-migrants included Yangon (2,048,643) and Mandalay (604,415), Shan (398,749), and Bago (240,075).

Some of the largest flows of people in Myanmar have been internal migrations within Yangon Region – that is, large numbers of people moving from one of Yangon’s four Districts to another. According to the 2014 Census, 773,414 people moved internally within Yangon during their lifetime. Some Districts in other parts of the country also contributed large numbers of lifetime migrants to Yangon, with more than 100,000 moving from Maubin, Hinthada, Pathein and Phyapon Districts in Ayeyawady Region, and from Bago and Thayayawady Districts in Bago Region.

Subtracting the number of outmigrants from the number of in-migrants provides a measure of net gains or losses in lifetime migration, expressed as rates per 1,000 population. At the State/Region level, Yangon (246.3), Nay Pyi Taw Union (142.1) and Kachin (100.2) showed the highest levels of net in-migration, whilst Chin (-167.7), Ayeyawady (-147.0) and Magway (-121.1) showed the highest levels of net outmigration.

### Table 6.1 Lifetime Migration Flows between States/Regions

<table>
<thead>
<tr>
<th>State/Region of Birth</th>
<th>Kachin</th>
<th>Kayah</th>
<th>Kayin</th>
<th>Chin</th>
<th>Sagaing</th>
<th>Tanintharyi</th>
<th>Bago</th>
<th>Magway</th>
<th>Mandalay</th>
<th>Mon</th>
<th>Rakhine</th>
<th>Yangon</th>
<th>Shan</th>
<th>Ayeyawady</th>
<th>Nay Pyi Taw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kachin</td>
<td>1,140,581</td>
<td>361</td>
<td>1,212</td>
<td>2,930</td>
<td>91,406</td>
<td>837</td>
<td>1,094</td>
<td>134</td>
<td>3,310</td>
<td>3,175</td>
<td>9,500</td>
<td>559</td>
<td>5,14</td>
<td>2,213</td>
<td>13,849</td>
</tr>
<tr>
<td>Kayah</td>
<td>381</td>
<td>332,226</td>
<td>1,275</td>
<td>144</td>
<td>1,043</td>
<td>38,578</td>
<td>1,164</td>
<td>3,370</td>
<td>38,578</td>
<td>3,175</td>
<td>9,500</td>
<td>559</td>
<td>5,14</td>
<td>2,213</td>
<td>13,849</td>
</tr>
<tr>
<td>Kayin</td>
<td>1,212</td>
<td>779</td>
<td>1,240</td>
<td>467</td>
<td>2,922</td>
<td>2,676</td>
<td>212</td>
<td>134</td>
<td>3,310</td>
<td>3,175</td>
<td>9,500</td>
<td>559</td>
<td>5,14</td>
<td>2,213</td>
<td>13,849</td>
</tr>
<tr>
<td>Chin</td>
<td>477</td>
<td>640</td>
<td>1,437</td>
<td>456,788</td>
<td>3,271</td>
<td>58</td>
<td>419</td>
<td>2,076</td>
<td>758</td>
<td>176</td>
<td>3,451</td>
<td>615</td>
<td>549</td>
<td>518</td>
<td>95</td>
</tr>
<tr>
<td>Sagaing</td>
<td>20,409</td>
<td>622</td>
<td>1,230</td>
<td>56,532</td>
<td>4,948,349</td>
<td>1,038</td>
<td>10,020</td>
<td>47,968</td>
<td>57,283</td>
<td>2,716</td>
<td>2,981</td>
<td>12,709</td>
<td>11,023</td>
<td>8,323</td>
<td>2,359</td>
</tr>
<tr>
<td>Tanintharyi</td>
<td>825</td>
<td>143</td>
<td>2,541</td>
<td>235</td>
<td>1,703</td>
<td>1,232,236</td>
<td>18,361</td>
<td>5,243</td>
<td>4,477</td>
<td>24,078</td>
<td>5,638</td>
<td>21,246</td>
<td>1,745</td>
<td>23,598</td>
<td>812</td>
</tr>
<tr>
<td>Bago</td>
<td>3,370</td>
<td>1,354</td>
<td>8,910</td>
<td>590</td>
<td>7,573</td>
<td>2,681</td>
<td>4,514,911</td>
<td>38,874</td>
<td>32,476</td>
<td>16,337</td>
<td>8,669</td>
<td>53,977</td>
<td>9,204</td>
<td>45,543</td>
<td>10,093</td>
</tr>
<tr>
<td>Magway</td>
<td>3,158</td>
<td>474</td>
<td>661</td>
<td>6,485</td>
<td>12,778</td>
<td>907</td>
<td>18,851</td>
<td>3,995,132</td>
<td>23,945</td>
<td>2,222</td>
<td>3,268</td>
<td>13,718</td>
<td>5,139</td>
<td>9,650</td>
<td>2,236</td>
</tr>
<tr>
<td>Mon</td>
<td>1,341</td>
<td>320</td>
<td>19,926</td>
<td>331</td>
<td>2,363</td>
<td>6,723</td>
<td>52,142</td>
<td>5,847</td>
<td>7,578</td>
<td>1,778,201</td>
<td>3,335</td>
<td>27,041</td>
<td>3,155</td>
<td>33,149</td>
<td>1,288</td>
</tr>
<tr>
<td>Rakhine</td>
<td>1,179</td>
<td>206</td>
<td>552</td>
<td>2,038</td>
<td>1,341</td>
<td>830</td>
<td>5,140</td>
<td>3,896</td>
<td>2,699</td>
<td>1,576</td>
<td>1,049,649</td>
<td>7,729</td>
<td>1,632</td>
<td>10,619</td>
<td>453</td>
</tr>
<tr>
<td>Yangon</td>
<td>21,587</td>
<td>3,865</td>
<td>16,456</td>
<td>13,506</td>
<td>70,879</td>
<td>38,516</td>
<td>372,068</td>
<td>199,483</td>
<td>176,615</td>
<td>133,376</td>
<td>128,623</td>
<td>4,688,445</td>
<td>65,883</td>
<td>784,918</td>
<td>27,737</td>
</tr>
<tr>
<td>Shan</td>
<td>13,806</td>
<td>8,852</td>
<td>2,872</td>
<td>2,872</td>
<td>38,897</td>
<td>1,497</td>
<td>33,270</td>
<td>55,375</td>
<td>59,737</td>
<td>6,940</td>
<td>7,776</td>
<td>31,386</td>
<td>5,065,811</td>
<td>23,496</td>
<td>13,069</td>
</tr>
<tr>
<td>Ayeyawady</td>
<td>3,025</td>
<td>402</td>
<td>1,790</td>
<td>645</td>
<td>4,403</td>
<td>2,127</td>
<td>25,190</td>
<td>13,273</td>
<td>8,632</td>
<td>4,725</td>
<td>10,851</td>
<td>43,957</td>
<td>6,003</td>
<td>5,939,688</td>
<td>1,318</td>
</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>2,598</td>
<td>946</td>
<td>1,416</td>
<td>908</td>
<td>9,207</td>
<td>1,393</td>
<td>36,337</td>
<td>34,457</td>
<td>50,080</td>
<td>4,780</td>
<td>4,098</td>
<td>50,631</td>
<td>8,839</td>
<td>19,972</td>
<td>841,877</td>
</tr>
</tbody>
</table>

The lifetime migration flows considered ‘most significant’ are highlighted in blue in Table 6.1 and are shown as arrows on Maps 6.1a and 6.1b. These include all flows involving more than 50,000 people, plus flows involving fewer than 50,000 people, but significant to individual States and Regions because they represent the largest flow of lifetime migrants to each State/Region and the largest flow of lifetime migrants from each State/Region.
Map 6.1 Lifetime Internal Migration Flows

a) Between States/Regions other than Yangon Region

b) To and From Yangon Region

The base population for this indicator is all individuals that were living in conventional households at the time of the 2014 Census.

Arrows show the direction of the most significant lifetime flows. The width of each arrow is proportionate to the number of migrants.

'Most significant migration flows' - As used in this chapter, the term ‘most significant’ is used to describe migration flows that have had the most impact at both the national level and for individual States and Regions. At the national level, the most significant flows are those of large numbers of people in absolute terms. On Map 6.1 for lifetime migrants, all flows of more than 50,000 people are shown. For States/Regions with small populations, even migrations of small numbers of people in absolute terms can have a big impact on the source or receiving populations. For this reason, the largest flow to each State/Region and the largest flow from each State/Region are also shown on the map, even if these flows involved fewer than 50,000 migrants.
6.2 Recent Internal Migration Flows

The 2014 Census defined recent migrants as those people who moved from one Township to live in another Township during the five years prior to the Census. The 3,359,342 recent migrants recorded by the Census represent 7.0 per cent of the total enumerated population in conventional households (Department of Population, 2016a). Comparing this number with the 9,231,619 lifetime migrants shows that more than one-third of all internal migrations occurred between 2009 and 2014. These numbers include all migrants - both those who moved from one Township to another in the same State/Region, and those who moved from one Township to another in a different State/Region.

Table 6.2 and Map 6.2b however, only show inter-State/Region migration flows. Yangon Region was the major recipient of recent internal migrants. In addition to the large numbers from Ayeyawady, Yangon also received large numbers from Bago, Magway, Mandalay and Rakhine. Employment opportunities in the industrial zone in North and East Yangon Districts are the main draw. Mandalay Region attracted moderate numbers of recent in-migrants, especially from neighbouring Sagaing, Magway, and Shan.

Figure 6.2 shows that rural-urban migration accounted for a relatively small proportion of total recent internal migration (10.4 per cent), with most migrants having moved either from one urban centre to another (47.6 per cent) or from rural to rural areas (25.9 per cent).

Table 6.2 Recent Migration Flows between States/Regions

<table>
<thead>
<tr>
<th>State/Region of Previous Residence</th>
<th>State/Region of Usual Current Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kayah</td>
<td>Kayah</td>
</tr>
<tr>
<td>Kayin</td>
<td>Kayin</td>
</tr>
<tr>
<td>Chin</td>
<td>Chin</td>
</tr>
<tr>
<td>Sagaing</td>
<td>Sagaing</td>
</tr>
<tr>
<td>Taninthary</td>
<td>Taninthary</td>
</tr>
<tr>
<td>Bago</td>
<td>Bago</td>
</tr>
<tr>
<td>Mandalay</td>
<td>Mandalay</td>
</tr>
<tr>
<td>Mon</td>
<td>Mon</td>
</tr>
<tr>
<td>Rakhine</td>
<td>Rakhine</td>
</tr>
<tr>
<td>Yangon</td>
<td>Yangon</td>
</tr>
<tr>
<td>Shan</td>
<td>Shan</td>
</tr>
<tr>
<td>Ayeyawady</td>
<td>Ayeyawady</td>
</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>Nay Pyi Taw</td>
</tr>
</tbody>
</table>

The recent internal migration flows considered ‘most significant’ are highlighted in blue in Table 6.2 and are shown as arrows on Maps 6.2a and 6.2b. These include all flows involving more than 20,000 people, plus flows involving fewer than 20,000 people, but significant to individual States and Regions because they represent the largest flow of recent migrants to each State/Region and the largest flow of recent migrants from each State/Region.

The large number of people moving from Ayeyawady Region to Yangon Region stands out even more for recent migrants than it does for lifetime migrants (Figure 6.3). The 350,463 people that moved between these two Regions represent 10.4 per cent of the 3,359,342 total recent migrants, and 44.6 per cent of the 784,919 people who had migrated from Ayeyawady Region to Yangon Region during their lifetimes. That almost half the lifetime flow took place between 2009 and 2014 reflects the impact of Cyclone Nargis in May 2008, with increasing numbers of people moving away from the vulnerable Ayeyawady Delta as they attempted to recover from the disaster and rebuild their lives.

States bordering Thailand and China received large numbers of migrants during the five-year period leading up to the 2014 Census. There were substantial flows to Shan State from Mandalay and Magway Regions, to Kayin State from Bago Region and Mon State, and to Kachin State from Sagaing Region. People are moving to these areas in search of work in the mining and forestry sectors and to benefit from the economic opportunities provided by international trade.
Map 6.2 Recent Internal Migration Flows

a) Between States/Regions other than Yangon Region

b) To and From Yangon Region

The base population for this indicator is all individuals that were living in conventional households at the time of the 2014 Census.

Arrows show the direction of the most significant flows of migrants that occurred during the five-year period prior to the 2014 Census. The width of each arrow is proportionate to the number of migrants.

'Most significant migration flows' - As used in this chapter, the term 'most significant' is used to describe migration flows that have had the most impact at both the national level and for individual States and Regions. At the national level, the most significant flows are those of large numbers of people in absolute terms. On Map 6.2 for recent migrations, all flows of more than 20,000 people are shown. For States/Regions with small populations, even migrations of small numbers of people in absolute terms can have a big impact on the source or receiving populations. For this reason, the largest flow to each State/Region and the largest flow from each State/Region are also shown on the map, even if these flows involved fewer than 20,000 migrants.
6.3 Recent Internal Migration Rates

As in the previous section, Sections 6.3 and 6.4 present spatial analysis of ‘recent’ migration, meaning population movements that occurred during the five-year period prior to the Census. Here, net migration rates rather than migration flows are discussed. Net internal migration rates measure the degree to which different geographic areas are either gaining or losing people through internal migration. And whereas the previous sections focused on population flows between States/Regions, the main geographic focus of the net migration rate analysis is on the Districts.

Districts where the number of people that had moved in was higher than the number of people that had moved out had positive net migration rates and are coloured blue in Figure 6.4 and on Map 6.3. Those with higher outmigration than in-migration had negative net migration rates, shown in brown in the graphics. In the five-year period leading up to the 2014 Census, three clear patterns are evident – the west of the country generally lost population to migration, the east generally gained population, and the movement of large numbers of people from most parts of the country to Yangon Region continued.

The State/Region-level flow analysis gave some hints of these broad patterns, but a closer look at District rates gives further insights into migration patterns and the possible reasons behind them. For example, Table 6.3 reveals that, in addition to Districts in Yangon, those close to the other major urban centres of Mandalay and Nay Pyi Taw were also major net recipients of migrants. Furthermore, large urban centres are not the only magnets to migrants; economic opportunities offered by international borders also drew large numbers of migrants to Districts such as Myawady (in Kayin), Tachileik (in Shan), Kawthoung (in Tanintharyi) and Bawlake (in Kayah).

### Table 6.3 Recent Internal Net Migration Rates, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region/District</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kachin</td>
<td>-22.8</td>
</tr>
<tr>
<td>Myitkyina</td>
<td>42.6</td>
</tr>
<tr>
<td>Mohnyin</td>
<td>36.4</td>
</tr>
<tr>
<td>Bhamo</td>
<td>0.1</td>
</tr>
<tr>
<td>Putoo</td>
<td>-80.4</td>
</tr>
<tr>
<td>Kayah</td>
<td>28.6</td>
</tr>
<tr>
<td>Loktawk</td>
<td>11.7</td>
</tr>
<tr>
<td>Bawlake</td>
<td>79.0</td>
</tr>
<tr>
<td>Kayin</td>
<td>43.1</td>
</tr>
<tr>
<td>Hpa-An</td>
<td>18.9</td>
</tr>
<tr>
<td>Phayao</td>
<td>-5.4</td>
</tr>
<tr>
<td>Kayaw</td>
<td>201.2</td>
</tr>
<tr>
<td>Kawlin</td>
<td>18.3</td>
</tr>
<tr>
<td>Chin</td>
<td>-34.7</td>
</tr>
<tr>
<td>Haka</td>
<td>-22.3</td>
</tr>
<tr>
<td>Falun</td>
<td>-57.8</td>
</tr>
<tr>
<td>Mandal</td>
<td>-22.1</td>
</tr>
<tr>
<td>Sagaing</td>
<td>-16.0</td>
</tr>
<tr>
<td>Sagaing</td>
<td>-35.0</td>
</tr>
<tr>
<td>Sheebo</td>
<td>-30.5</td>
</tr>
<tr>
<td>Mohnyin</td>
<td>-23.5</td>
</tr>
<tr>
<td>Katha</td>
<td>-3.1</td>
</tr>
<tr>
<td>Kale</td>
<td>12.4</td>
</tr>
<tr>
<td>Tamu</td>
<td>23.1</td>
</tr>
<tr>
<td>Mawlaik</td>
<td>-6.4</td>
</tr>
<tr>
<td>Hsawl</td>
<td>8.6</td>
</tr>
<tr>
<td>Yinmarpin</td>
<td>-27.9</td>
</tr>
<tr>
<td>Tanintharyi</td>
<td>15.7</td>
</tr>
<tr>
<td>Dawei</td>
<td>15.6</td>
</tr>
<tr>
<td>Myek</td>
<td>-6.8</td>
</tr>
</tbody>
</table>

### Figure 6.4 Recent Internal Net Migration Rates, Districts
Map 6.3 Recent Internal Net Migration Rates, Districts

The base population for this indicator is all individuals that were living in conventional households at the time of the 2014 Census.

The indicator reflects the difference between rates of in-migration and rates of outmigration. Positive values mean more migrants arrived than left during the five-year period; negative values mean more migrants left than arrived.

The net migration rate is calculated as the number of in-migrants during the five-year period minus the number of outmigrants during the same period, divided by the total enumerated population of the District as counted by the 2014 Census.
Picking up on the net migration rates shown in Table 6.3 in the previous section, Figure 6.5 shows that, among the States and Regions, Yangon (93.0) had the highest recent net in-migration rate, whilst Nay Pyi Taw (59.9) and Kayin State (43.1) also had substantially more recent in-migrants than outmigrants. Ayeyawady (-85.0), Magway (-40.2) and Bago (-34.9) had lost the most people to migration in recent years.

At the District level, Myawady (201.2), North Yangon (146.8), Tachileik (125.9), East Yangon (111.9), Kawthoung (89.9) and Mandalay (83.5) had the highest positive rates. Those Districts that had lost people to migration at the highest rates include Phyapon (-93.0), Labutta (-89.9), Putao (-80.4), Myaungmya (-72.7), Maubin (-64.1) and Myingyan (-63.3). Four of these six Districts are in Ayeyawady Region.

Of the total 3,359,342 recent migrants reported in the 2014 Census, 53 per cent were female and 47 per cent were male. The age profiles of migrants were similar for both sexes, with the largest numbers in the 20-24 age group and numbers getting progressively smaller among older cohorts. In other respects, however, there are some interesting differences. The main reason given for moving is one example.

Among recent inter-State/Region migrants, the largest proportion of males (55.8 per cent) reported they had migrated to another State/Region because of marriage. The main reason for moving to another State/Region by 5.7 per cent of recent male migrants and 11.1 per cent of recent female migrants, respectively.

There were also notable differences in the employment characteristics of recent male and female migrants. The largest numbers of male migrants were working (or seeking work) in semi-skilled manual jobs in construction, mining, transportation and agriculture, forestry or fishing. Females, on the other hand, were more likely to be pursuing opportunities in clerical, administrative or production line positions in the manufacturing, public administration, hospitality or wholesale and retail sectors.

Maps 6.4a and 6.4b show that net recent migration rates for males and females were similar for most Districts. However, a closer examination reveals some striking gender differences. For 10 of Myanmar’s 74 Districts, rates varied by more than 10 points, suggesting that the numbers of males and females in those Districts might be becoming increasingly out of balance.

Some Districts, such as West Yangon, were becoming ‘more female’ in the sense that, though they were gaining both sexes, they were gaining females at a much higher rate than males. In contrast, Nyaung U and Myingyan (in Mandalay Region) were becoming ‘more female’ because of substantially higher net outmigration rates for males than females.

Conversely, some Districts were becoming ‘more male’. Mohnyin (in Kayin), Dawei (in Tanintharyi) and Bawlakhe (in Kayah) were all gaining both sexes through migration, but the net gains for males far outweighed the net gains for females. Putao (in Kachin) was also getting ‘more male’, but here it was because it was losing males at a slower rate than it was losing females.

Policymakers in fields such as education, employment, family planning and housing will have special issues to address in parts of the country where numbers of males and females are becoming increasingly out of balance.

The analysis presented here is based on information taken from the 2014 Census Thematic Report on Migration and Urbanization, which explores differences in migration rates and the characteristics of male and female migrants in more detail (Department of Population, 2016a).

Figure 6.5 Gainers and Losers in Recent Internal Migration, States/Regions

Table 6.4 Recent Internal Net Migration Rates, Males and Females, States/Regions

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Recent Internal Net Migration Rates per 1,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Both Sexes Males Females</td>
</tr>
<tr>
<td>Kayin</td>
<td>34.9 61.8 48.5 32.1 30.5 33.7 22.8 31.4 14.8</td>
</tr>
<tr>
<td>Kayah</td>
<td>49.9 51.3 48.6 29.4 28.1 30.5 20.6 23.2 18.1</td>
</tr>
<tr>
<td>Kayin</td>
<td>58.3 61.4 55.5 15.2 14.9 15.6 43.1 46.6 40.0</td>
</tr>
<tr>
<td>Chin</td>
<td>13.1 13.8 12.5 47.9 46.4 49.2 34.7 32.6 36.7</td>
</tr>
<tr>
<td>Sagoni</td>
<td>14.1 15.2 13.1 30.1 32.7 27.9 16.0 17.6 14.7</td>
</tr>
<tr>
<td>Tanintharyi</td>
<td>34.9 39.1 31.0 19.2 18.5 20.1 15.7 20.8 10.9</td>
</tr>
<tr>
<td>Bayin</td>
<td>18.1 18.7 17.5 52.9 53.6 52.4 -34.9 -34.8 -34.9</td>
</tr>
<tr>
<td>Magway</td>
<td>11.1 11.9 10.4 51.3 54.6 46.4 -40.2 -42.9 -37.9</td>
</tr>
<tr>
<td>Mandalay</td>
<td>35.5 37.5 30.7 33.9 37.1 31.3 2.6 0.4 4.5</td>
</tr>
<tr>
<td>Mon</td>
<td>35.4 38.1 32.2 37.7 37.1 38.2 -2.2 2.0 -6.0</td>
</tr>
<tr>
<td>Rahline</td>
<td>9.1 10.3 8.1 39.8 38.4 40.9 -30.6 -28.1 -32.8</td>
</tr>
<tr>
<td>Yangon</td>
<td>116.4 113.6 119.0 23.5 24.4 22.6 93.0 89.1 96.4</td>
</tr>
<tr>
<td>Shan</td>
<td>27.3 29.3 25.5 16.0 15.4 16.5 11.3 13.9 9.0</td>
</tr>
<tr>
<td>Ayeyawady</td>
<td>7.9 8.0 7.9 73.0 72.1 73.7 -45.0 -46.1 -45.8</td>
</tr>
<tr>
<td>Nay Pyi Taw</td>
<td>103.9 105.4 102.7 44.2 45.8 42.6 59.9 59.6 60.1</td>
</tr>
</tbody>
</table>
The base population for this indicator is all individuals that were living in conventional households at the time of the 2014 Census.

The indicator reflects the difference between rates of in-migration and rates of outmigration. Positive values mean more migrants arrived than left during the five-year period prior to the Census; negative values mean more migrants left than arrived.

The net migration rate is calculated as the number of in-migrants during the five-year period minus the number of outmigrants during the same period, divided by the total enumerated population of the District as counted by the 2014 Census.
It is understandably very difficult to collect clear, objective information about the nature and magnitude of the many different physical and mental conditions that limit people’s abilities to function optimally in society. Nevertheless, from the modest efforts of the 2014 Census to gather some information concerning disability, there is now a general, but extremely valuable, national dataset which will help deepen the level of understanding about people who are living with disabilities, how those people are affected by their disabilities, and how the prevalence of different kinds of disabilities varies both according to where people live and to their socio-economic characteristics.

The Census adopted a question developed by the Washington Group on Disability Statistics to determine disability status. This asked about the degree of difficulty people experienced in four basic human functions. The functions, also referred to as ‘domains’, were seeing, hearing, walking and remembering. The extent to which people were able or unable to perform each function was recorded as either ‘some difficulty’, (classified as ‘mild’), ‘a lot of difficulty’ (classified as ‘moderate’) or ‘cannot do at all’ (classified as ‘severe’) (Department of Population, 2017e). The question is shown below, and was asked of all persons living either in conventional households or in institutions.

From the data collected from this question, the Census generated empirical evidence that disability was more prevalent among rural populations than it was among urban populations. The areas of the country that had the lowest prevalence of disability were centred around the cities of Mandalay, Nay Pyi Taw and Yangon. These same areas also had the most services available to support people with disabilities. As expected, the prevalence of disability was highest in the country’s outer ring, especially in Districts and Townships in the middle-west, south and north.

The geographic distribution of people living with disabilities was similar for males and females, though a slightly higher proportion of females were living with disabilities in Districts and Townships throughout the country. At the State/Region level, the prevalence among both males and females was highest in Chin, Kayin, Taninthryi and Ayeyawady, and lowest in Nay Pyi Taw, Mandalay, Sagaing and Yangon.
The 2014 Census considered people to be living with a disability if they reported having any difficulty at all performing basic functions in at least one of four domains - seeing, hearing, walking or remembering. In other words, people who responded ‘some difficulty’, ‘a lot of difficulty’ or ‘cannot do at all’ in at least one domain were classified as persons living with a disability. People who responded ‘no difficulty’ were considered not to be living with a disability. Based on this definition, the Census enumerated 2,311,250 people, or 4.6 per cent of the enumerated population, as living with some form of disability in 2014. Of this total, 1,751,370, (three quarters) reported only a mild level of disability, 323,818 (14.9 per cent) reported a severe disability. The totals were 1,254,495 people, or 4.6 per cent of the enumerated population, and 1,056,755 males, or 4.4 per cent of the enumerated male population (Department of Population, 2017e).

Geographically, Figure 7.1 shows that the distribution of people living with a disability varies both regionally and locally. At the State/Region level, the highest proportions of both males and females living with a disability were in Ayeyawady, at 7.3 and 7.9 per cent, respectively. In addition, Chin, Tanintharyi, Kayin, Kayah, Rakhine, Mon, and Magway also had a higher than national average prevalence of disability among both males and females. As might be expected, States/Regions with large urban populations reported the lowest prevalence of disability. Between 3.0 and 3.5 per cent of both males and females were living with a disability in Yangon and Mandalay, while Nay Pyi Taw recorded the lowest prevalence at 3.0 per cent for males and 3.3 per cent for females.

Some Districts had strikingly high rates of disability. Map 7.1 shows the Districts with the highest rates clustered in Kayin and Chin States and in Tanintharyi and Ayeyawady Regions. In Kayin, the Districts where disability was most prevalent were Pharpun, Kawkareik and Hpa-An; in Chin, rates were highest in Falam and Mindat Districts; and in Tanintharyi Region, Myeik District is particularly noticeable because the high prevalence of disability there contrasted markedly with the relatively low rates reported for all other Districts in the Region. Disability affected more than 6.5 per cent of males and more than 7.5 per cent of females in all these Districts. It is Ayeyawady Region, however, that really stands out. Prevalence was generally high across the Region, but particularly high in the Districts of Myaungmya (7.2 per cent for males and 8.0 per cent for females), Hinthada (7.9 and 8.7 per cent) and, most strikingly, in Labutta (10.8 and 11.5 per cent).

Table 7.1 Proportion of Males and Females Living with Some Form of Disability, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Percentage Both Sexes</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myanmar</td>
<td>Myeik</td>
<td>8.0</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>Bago</td>
<td>4.2</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Magway</td>
<td>5.2</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>Mandalay</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Mon</td>
<td>5.3</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>Kayin</td>
<td>7.3</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>Hpa-An</td>
<td>7.1</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>Pathein</td>
<td>6.0</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>Kyaukpyu</td>
<td>6.3</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>Labutta</td>
<td>11.2</td>
<td>10.8</td>
</tr>
<tr>
<td></td>
<td>Yangon</td>
<td>3.4</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Figure 7.1 Prevalence of Disability, Males and Females, States/Region

2014 MYANMAR CENSUS ATLAS

Disability

Map 7.1 shows the Districts with the highest rates clustered in Kayin and Chin States and in Tanintharyi and Ayeyawady Regions. In Kayin, the Districts where disability was most prevalent were Pharpun, Kawkareik and Hpa-An; in Chin, rates were highest in Falam and Mindat Districts; and in Tanintharyi Region, Myeik District is particularly noticeable because the high prevalence of disability there contrasted markedly with the relatively low rates reported for all other Districts in the Region. Disability affected more than 6.5 per cent of males and more than 7.5 per cent of females in all these Districts. It is Ayeyawady Region, however, that really stands out. Prevalence was generally high across the Region, but particularly high in the Districts of Myaungmya (7.2 per cent for males and 8.0 per cent for females), Hinthada (7.9 and 8.7 per cent) and, most strikingly, in Labutta (10.8 and 11.5 per cent).
Map 7.1 Disability among Individuals, Districts

a) Males

b) Females

c) Both Sexes

Percentage of population living with disability

Average at Union level: 4.4 males, 4.8 females, 4.6 both sexes

- 2.2 - 3.0
- 3.1 - 5.0
- 5.1 - 7.0
- 7.1 - 9.0
- 9.1 - 11.0
- 11.1 - 11.5

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census. The indicator gives the proportion of individuals that were living with at least one form of disability.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
7.2 Disability within Households

It is not always only the individuals concerned that are affected by their limited abilities to see, hear, walk or remember - often reductions in the quality of life and productive capacity extend to other members of the household to which people with disabilities belong. This is why it is important for policymakers - especially those in areas such as health, employment, social services, education and transportation - to know about geographic variations in the proportion of households with at least one member living with a disability. Maps 7.2a and 7.2b show that this indicator varied considerably across the country.

According to the 2014 Census, 15.8 per cent of households in Myanmar had at least one member living with a disability. In general, disability was more likely to be found in rural households than in urban households. Regionally, larger proportions of households in the north, west and south had one or more members living with a disability than households in the middle corridor or in Shan State in the east. At the State/Region level, the highest proportions were in Chin, Kayin, Ayeyawady and Tanintharyi, while Nay Pyi Taw, Mandalay, Yangon, Sagaing, Bago, and Shan had the lowest proportions, reflecting to some degree the prevalence of disability at the individual level.

Tables 7.2 and 7.3 show that, in general, local variations in the proportions of households with members living with disabilities conformed to broader regional patterns. The 10 Districts with the highest proportions are all in Chin, Kayin, Ayeyawady or Tanintharyi. Chin State’s three Districts all had very high proportions of households with members living with disabilities, with Falam and Mindat in the top 10, and Haka, with 22.4 per cent, only just outside the top 10. Districts in Kayin State had similarly high incidence rates for disabilities within households, with Pharpun, Kawkareik and Hpak-An among the 10 Districts with the highest proportions. Interestingly in Myawady, the fourth of Kayin’s four Districts, the proportion was only 11.1 per cent, placing it joint ninth with West Yangon among the 10 Districts with the lowest incidences of households with at least one member living with a disability.

Considering that for most socio-economic indicators Shan State scored relatively poorly in the 2014 Census, disability was not found to be as big a problem here as it was in most other parts of the country. Table 7.3 shows that 4 of the 10 Districts and 4 of the 10 Townships with the lowest proportions of households with members living with a disability were in Shan State.

However, though Shan State is notable for having generally low rates of disability within households, it also had a few Townships at the other end of the scale. For example, in Panlon, Kongyan and Mawhtike, at least one member of approximately one-third of households was living with some form of disability.

### Table 7.2 Districts with Lowest and Highest Proportions of Households with One or More Members Living with a Disability

<table>
<thead>
<tr>
<th>District</th>
<th>State/Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tachileik</td>
<td>Shan State</td>
<td>8.4</td>
</tr>
<tr>
<td>Ottara (North)</td>
<td>Nay Pyi Taw Union Territory</td>
<td>9.4</td>
</tr>
<tr>
<td>Pyin Oo Lwin</td>
<td>Mandalay Region</td>
<td>9.8</td>
</tr>
<tr>
<td>Mandalay</td>
<td>Mandalay Region</td>
<td>9.8</td>
</tr>
<tr>
<td>Laikho</td>
<td>Shan State</td>
<td>9.8</td>
</tr>
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<td>Kyaukse</td>
<td>Mandalay Region</td>
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</tr>
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<td>Shan State</td>
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</tr>
<tr>
<td>Kengtung</td>
<td>Shan State</td>
<td>10.8</td>
</tr>
<tr>
<td>Myawady</td>
<td>Kayin State</td>
<td>11.1</td>
</tr>
<tr>
<td>West Yangon</td>
<td>Yangon Region</td>
<td>11.1</td>
</tr>
</tbody>
</table>

### Table 7.3 Townships with Lowest and Highest Proportions of Households with One or More Members Living with a Disability

<table>
<thead>
<tr>
<th>Township</th>
<th>District</th>
<th>State/Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reau (S-T)</td>
<td>Mindat</td>
<td>Chin State</td>
<td>35.3</td>
</tr>
<tr>
<td>Falang</td>
<td>Falang</td>
<td>Chin State</td>
<td>35.4</td>
</tr>
<tr>
<td>Panlon (S-T)</td>
<td>Hpak</td>
<td>Shan State</td>
<td>35.7</td>
</tr>
<tr>
<td>Tanintharyi</td>
<td>Myeik</td>
<td>Tanintharyi</td>
<td>36.4</td>
</tr>
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<td>Machanbaw</td>
<td>Putho</td>
<td>Kachin State</td>
<td>37.1</td>
</tr>
<tr>
<td>Shandar</td>
<td>Lomkaw</td>
<td>Kayah State</td>
<td>38.1</td>
</tr>
<tr>
<td>Panmanmon (S-T)</td>
<td>Putho</td>
<td>Kachin State</td>
<td>38.3</td>
</tr>
<tr>
<td>Lekkho (S-T)</td>
<td>Hpak-An</td>
<td>Kayin State</td>
<td>38.5</td>
</tr>
<tr>
<td>Law-pol (S-T)</td>
<td>Rama</td>
<td>Kachin State</td>
<td>38.6</td>
</tr>
<tr>
<td>Maunglamyegyun</td>
<td>Labutta</td>
<td>Ayeyawady Region</td>
<td>39.0</td>
</tr>
</tbody>
</table>

Administrative units in Table 7.3 with (S-T) after their names were Sub-Townships at the same level as Townships.
Map 7.2 Disability within Households

a) Districts

Percentage of conventional households with at least one member living with a disability

Average at Union level: 15.8

- 3.7 - 7.0
- 7.1 - 14.0
- 14.1 - 21.0
- 21.1 - 28.0
- 28.1 - 35.0
- 35.1 - 39.0

The base for this indicator was the total number of conventional households. The indicator gives the proportion of those households in which at least one member reported ‘some difficulty’, ‘a lot of difficulty’ or ‘cannot do at all’ in at least one of the four disability domains - seeing, hearing, walking and remembering - at the time of the 2014 Census.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
Table 7.4 shows that the percentage of the population living with disabilities of all four kinds is higher in rural areas than in urban areas in almost all States/Regions. The only exceptions are in Kayah, where the proportion of the population with at least some level of difficulty is higher in urban areas (3.3 per cent) than in rural areas (3.1 per cent), and in Nay Pyi Taw, where the proportions with seeing disabilities among urban and rural populations are the same (1.6 per cent). Maps 7.3 a to d illustrate the urban/rural differences more graphically. This general pattern is not uncommon internationally, especially in developing countries, where urban populations are generally younger and fitter than rural populations, and where access to medical and social support services in rural areas is often very limited (Department of Population, 2017e). The advantages of urban areas over rural areas in this regard reveal themselves very clearly in the numbers for the three States/Regions with the largest urban centres - Nay Pyi Taw Union Territory, Yangon Region and Mandalay Region - where rates for all four domains of disability are the lowest in the country. A look at the more detailed breakdown presented in Table 7.4 reveals substantial regional and local variability behind the broad urban-rural relationship.

The prevalence of all four kinds of disability was highest in the middle-west and southern parts of the country. Difficulties seeing were a particular problem in Ayeyawady Region (4.4 per cent in urban areas, and 4.7 per cent in rural areas) and especially so in one District, Labutta, affecting more than 7 per cent of the rural population, and in another District, Myaungmya, affecting 6 per cent of the urban population. Large numbers of people in Ayeyawady also reported varying degrees of difficulty walking, with rates exceeding 4 per cent in Labutta. Chin State had by far the highest proportion of its rural population living with cognitive disabilities, which limit people's ability to remember and think clearly. In all three of Chin State's Districts, more than 4 per cent of the rural population reported at least some level of difficulty remembering.
Map 7.3 Prevalence of Disabilities by Domain, States/Regions, Urban and Rural

a) Seeing

b) Hearing

c) Walking

d) Remembering

The base population for this indicator is individuals that were living in conventional and institutional households at the time of the 2014 Census.

The indicator gives the proportion of individuals that were living with at least one form of disability in urban and rural areas.

© Department of Population, Ministry of Labour, Immigration and Population.

Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
7.4 Prevalence of Multiple Disabilities

This section looks at the distribution of people living with multiple disabilities, defined as those reporting either ‘some difficulty’, ‘a lot of difficulty’ or ‘cannot do at all’ for two or more of the disability domains - seeing, hearing, walking and remembering. Out of the total number of 50,279,900 enumerated in the 2014 Census, 841,612 (1.7 per cent) were reported to be living with multiple disabilities. The distribution among urban and rural populations, were 165,710 out of 14,877,943 (1.1 per cent) in urban areas and 675,902 out of 35,401,957 (1.9 per cent) in rural areas (Table 7.5).

Though the prevalence was much lower, the geographic distribution of individuals living with multiple disabilities was very similar to that for the proportion of households with at least one member living with a disability. Among the States and Regions, the highest rates for urban and rural populations combined were again in Chin, Ayeyawady, Kayin and Tanintharyi (Figure 7.2). Here, between 2.6 and 3.6 per cent of the population lived in rural areas (Department of Population, 2015), also had a relatively low rate of people living with multiple disabilities, at only 1.1 per cent. At the District level, the urban populations with the lowest multiple disability rates were in Mohnyin (in Kachin), Mandalay and Kyaukse (in Mandalay Region), and Makman (in Shan), all at between 0.4 and 0.6 per cent. For rural populations, the lowest rates were again in Mohnyin and Kyaukse, but also in Myawady (in Kayin), Katha, Tamu and Mawlaik (in Sagaing), Pyin Oo Lwin (in Mandalay), Lashio and Tachileik (in Shan), and Ottara (in Nay Pyi Taw). The proportion of people in rural areas living with disabilities was less than 1 per cent in all of these Districts.

Table 7.5 Proportion of Urban and Rural Population with Multiple Disabilities, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region District</th>
<th>Percentages</th>
<th>Disurban &amp; Rural</th>
<th>Urban</th>
<th>Rural</th>
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<td>1.9</td>
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<tr>
<td>Chin</td>
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<td>1.5</td>
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</table>

Figure 7.2 Proportion of Urban and Rural Populations with Multiple Disabilities, States/Regions

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Percentages</th>
<th>Urban</th>
<th>Rural</th>
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<td>Dakhing (South)</td>
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<td>1.2</td>
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</tbody>
</table>
Map 7.4 Prevalence of Multiple Disabilities

a) Districts

b) Townships

The base population for this indicator was individuals living in conventional households and institutions at the time of the 2014 Census. The indicator gives the proportion of those individuals who reported 'some difficulty', 'a lot of difficulty' or 'cannot do at all' in two or more of the four disability domains - seeing, hearing, walking and remembering.

Percentage of population with multiple disabilities
Average at Union level: 1.7

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<tr>
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<td>5.1 - 6.2</td>
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Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
Household and Housing

Household and housing indicators provide a keen insight into the ways members of societies live together in groups, and the conditions in which they live. From the eight questions shown below (relating only to conventional households), the 2014 Census gleaned a wealth of detailed information about: the types of houses people live in; their access to amenities such as clean water, hygienic sanitation facilities and electricity; the durability of their houses; and the availability of a wide range of communication and transportation assets. Data collected from other sections of the questionnaire enabled the size and composition of households, and the relationships between household members, to be derived.

The analysis of household and housing data presented in this chapter revealed some interesting and strikingly consistent regional patterns. Almost without exception, household and housing characteristics in areas in the middle corridor are markedly different to those in the outer ring. In general, people in the middle corridor live in smaller households, in more durable houses, and with better access to safe drinking water, improved sanitation facilities and electricity than people living in the outer ring. Analyses comparing the household and housing characteristics of urban populations with those of rural populations also revealed distinct differences. Though the average size of households is about the same for both groups, housing quality is generally much better in urban areas than it is in rural areas. People in towns and cities are more likely to be living in more durable houses, have higher quality water and sanitation facilities and be connected to the electricity grid than people living in rural areas. On the other hand, a much larger proportion of rural households own the house they live in, with rented accommodation being more common in urban areas.

Regional and local differences in household and housing characteristics show up clearly in the data presented in this chapter and on the maps derived from that data. By showing where housing quality (as determined from the information available from the 2014 Census) is poorest and in which parts of the country people are least able to access household amenities, the chapter is intended to serve as a guide to policymakers, local authorities and communities working towards achieving the United Nations Sustainable Development Goals. Understanding the geography of housing quality is vital as Myanmar works towards, ‘ensuring the availability and sustainable management of water and sanitation for all’ (SDG 6), ‘ensuring access to affordable reliable and modern energy for all’ (SDG 7), and ‘making cities and human settlements inclusive, safe, resilient and sustainable’ (SDG 11).
8.1 Average Size of Households

The average size of conventional households in Myanmar at the time of the 2014 Census was 4.4 persons. This is slightly larger than the average household size in all countries in South-East Asia except for Malaysia (Department of Population, 2017f). In 2014 there was, at the Union level, very little difference in the average sizes of urban households (4.5 persons) and rural households (4.4 persons), but Table 8.1 shows that there were substantial regional and local variations. Among the 15 States and Regions, Kachin and Chin had the largest households. Here the average household size was, at the State/local level.

Though average household sizes were, at the State/Region level, largest in Kachin and Chin, at the District level they were largest among rural communities in Shan State, in Districts such as Hpak (6.5), Makman (6.2) and Laukine (5.9). At the other end of the scale, the average size of rural households in several Districts was less than four persons, including Pyay (3.6) and Thayawady (3.8) (in Bago), Hinthada (in Ayeyawady) (3.7), and Thayet (in Magway) (3.9). The urban parts of Gangaw (also in Magway), also had an atypically low average household size of 3.9 persons, though not as low as the 3.8 reported in urban Hinthada (in Ayeyawady).

In some parts of the country, household size is quite uniform. In Mandalay Region, for example, the average size in all seven Districts is either slightly above or slightly below the national average, ranging from 4.2 persons in Kyaukme, Meiktila and Yame’thin, to 4.9 in Mandalay itself. In contrast, other parts of the country show great variability in average household sizes among neighbouring Districts and Townships. Shan State provides a good example of both the wide range of household sizes and local variability. The range in average household size among Shan’s Townships is 3.2 persons, from 7.0 in Naphang down to 3.8 in Linkhe’. This means that in some parts of Shan State, households were, on average, more than double the size of those in other parts of the State. And the distance between Townships with large households and those with small households is not necessarily very great. Mankan Sub-Township, for example, where the average household size was 4.3, contrasts sharply with neighbouring Townships with much larger households, such as Makman (5.7), Minemaw (6.6) and Naphang (7.0). Such localized variability in demographic characteristics is often found where populations are fluid and dynamic. Parts of Shan State near the borders with Thailand, Lao PDR and China have young, ethnically diverse, highly mobile populations that are typically characterized by high degrees of variability in demographic characteristics and social practices. Conversely, the more stable, longer-established populations, such as those in the middle corridor Regions of Bago, Magway and Mandalay, are generally more socially, economically and demographically homogeneous.

While this section has discussed geographic variations in the distribution of average household size, the following section looks at variations in distributions of the extremes – the very smallest households with only one person and the largest with six or more persons.

### Table 8.1 Average Size of Conventional Households, States/Regions and Districts, Urban and Rural

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The 2014 Census defined ‘conventional households’ as households that are comprised of one or more persons who are either related or unrelated and share living quarters in either a stand-alone unit or a compound. Members of a conventional household eat meals together, usually prepared from the same cooking pot. In most cases, one person is acknowledged by household members to be the head of the household.

The average number of persons in conventional households at the Union level is 4.4. The map shows the average size of conventional households for each district and township.

**Average number of persons in conventional households**

- 3.3 - 4.0
- 4.1 - 4.5
- 4.6 - 5.0
- 5.1 - 5.5
- 5.6 - 6.0
- 6.1 - 7.3

**Source of statistical data:** 2014 Population and Housing Census of Myanmar.

**Source of geographic data:** Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
8.2 Small and Large Households

Figure 8.1 and Maps 8.2a and b show that large households with six or more persons were, in 2014, much more common than households comprised of just one person. They also show clear regional patterns, with one-person households being relatively more prevalent in the south and west, and households with six or more persons being much more clearly in evidence in the north and east. Map 8.2b shows a particularly striking distribution of low prevalence of large households - comprising less than 25 per cent of households - in the middle corridor Townships, and of high prevalence - of more than 40 per cent - in many outer ring Townships.

What might explain these differences? Migration patterns offer some clues. Places with large numbers of in-migrants arriving in search of work often have high proportions of one-person households. Many job-seeking migrants are single and tend to live alone. Dekkhina and West Yangon Districts are typical examples of the kinds of places where economic opportunities are attractive enough to entice young, single people to come and live on their own. One-person households make up 6.8 per cent of the households in Dekkhina and 5.7 per cent in West Yangon (Table 8.2) compared with the national average of 4.6 per cent.

The circumstances that are more likely to be associated with large households are found in rural areas with high birth rates, low incomes and large numbers of people employed in the agriculture, forestry and fishing sector. This might help explain the very high proportion of large households in Townships such as Naphang, Minemaw and Panwine in Shan State, and Khaunglanphoo in Kachin State, where around 70 per cent of households had six or more persons at the time of the 2014 Census (compared with the State average of around 30 per cent). Though less prevalent than in rural areas, large households were also found in some urban areas, particularly those where housing costs are relatively high and death rates are relatively low. Examples include Mingala Taungnyunt, Dawbon and North Okkalapa Townships in East Yangon District, Pyaygyidaguon, Chamyathazari and Mahaungmye Townships in Mandalay District, and Mawlamyine Township in Mon State, in all of which the proportion of households with six or more persons was between 30 and 35 per cent.

Interestingly, some areas with relatively high proportions of one-person households also tend to have high proportions of very large households. Though these are not specifically identifiable from Maps 8.2a and b, examples include Falam, Kanpalet and Mindat Townships in Chin State, and Ingyanyan Township in Kachin State, each with more than 7 per cent one-person households and more than 36 per cent six or more person households. An explanation for this apparent paradox might be that living in very small or very large households can address the same set of socio-economic challenges, but in different ways. On the one hand, living alone or in small households reduces demand for scarce household resources such as food, space and energy. On the other, families with large numbers create an economic safety net by assembling a large group of potential bread-winners in one household. Both social arrangements have merit as rational coping strategies for living in difficult socio-economic circumstances.

Table 8.2 One-Person and Six or More Person Households, States/Regions and Districts

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<th>Six or More Persons</th>
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Figure 8.1 Proportion of One-Person and Six or More Person Households, States/Regions

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The base for this indicator is the total number of conventional households. The indicator for Map 8.2a gives the number of conventional households with just one person as a percentage of the total number of conventional households in each District. The indicator for Map 8.2b gives the number of conventional households with six or more persons as a percentage of the total number of conventional households in each Township.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
8.3 Home Ownership

At 85.5 per cent of the total number of conventional households that were enumerated in the Census, the proportion of home ownership in Myanmar is very high. A larger proportion of rural households own their own homes (93 per cent) compared with urban households (66 per cent). This difference is common throughout the world because much higher land and property prices in urban areas often make home ownership prohibitively expensive for many people.

Figure 8.2 shows urban/rural differences at the State/Region level very clearly. Nay Pyi Taw had the largest differential at this level, with ownership among the rural population more than 45 percentage points higher than the proportion of urban ownership. Given this general pattern of lower ownership rates among urban populations compared with those for rural populations (clearly illustrated in the Maps opposite), many of the Districts with low rates were, as would be expected, predominantly urban Districts such as North, East and West Yangon and Mandalay. Here, only between 50 and 60 per cent of households lived in houses that they owned (Table 8.3). People living in urban Yangon and Mandalay typically do not work on the land or own the houses they live in. Instead, many of them work in offices, shops, hotels and factories, and live at high densities in small, rented apartments and houses built on extremely high-value land.

The lowest ownership rates, however, were found among urban populations in Districts spread elsewhere across the country, where the reasons might be less obvious. Map 8.3a shows these to include Makman and Tachileik (in Shan), Myawady (in Kayin), and Kawthoung (in Tanintharyi), all with less than 50 per cent home ownership. Ottara and Dekkhina Districts in Nay Pyi Taw were reported among those having the lowest rates of all, at 46.5 per cent and 42.4 per cent, respectively. This reflects the fact that a high proportion of the population in these two Districts live in accommodation provided by the government (Department of Population 2017f).

Figure 8.2 Proportion of Households Owning their Homes, States/Regions, Urban and Rural

Table 8.3 Proportion of Households Owning their Homes, States/Regions and Districts, Urban and Rural

<table>
<thead>
<tr>
<th>State/Region District</th>
<th>Proportion of Households Owning their Homes</th>
<th>State/Region District</th>
<th>Proportion of Households Owning their Homes</th>
<th>State/Region District</th>
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<td>92.0</td>
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</table>
Map 8.3 Proportion of Home Owners, Districts

a) Urban

b) Rural

c) Urban and Rural

Percentage of households owning the housing unit they live in

Average at Union level: 66.0 urban, 93.1 rural, 85.5 urban and rural

State/Region boundary
District boundary

The base for this indicator is the total number of conventional households. The indicator gives the proportion of households owning the housing unit in which they were living at the time of the 2014 Census.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
As a means of providing a broad measure of housing quality, the 2014 Census recorded the main materials used to build the walls, roof and floors of every enumerated housing unit in the country. Table 8.4 classifies housing units by their durability as determined by the main construction materials used. By mapping and analyzing the distribution of households living in housing units that are at least partially built with non-durable materials, this section gives a broad overview of where in the country people are living in solid, permanent houses and where they are living in flimsy, non-durable houses which, in terms of Sustainable Development Goal 11 (see Box), may be more likely to be considered to be inadequate, especially when taking into account the heightened risks of climate hazards, and the basic conditions required for health and hygiene.

Map 8.4 shows the distribution of households living in housing constructed in part from non-durable materials (hereafter referred to as ‘non-durable housing’) at the Township level. A clear regional pattern shows a broad swathe across the upper-middle part of the country between Sagaing Region and India. At the State/Region level, a relatively small proportion of houses were non-durable in Ayeyawady, North Rakhine, and Kayah and Shan States, where somewhat less than one in five of households occupied housing units that were made, at least partially, of non-durable materials (Table 8.5). Nay Pyi Taw, northern Townships in Magway Region, and southern Townships in Sagaing Region and Kachin State also lie in this belt.

The parts of the country with the least durable housing were in the far north, the far south, and all along the coast of the country. At the State/Region level, Rakhine reported the largest proportion of households in non-durable housing, at more than 70 per cent. Non-durable housing was also prevalent in Tanintharyi (68 per cent of houses) and Ayeyawady (a little less than 64 per cent).

Large proportions of poorly-housed households were also found in northern parts of Kachin State and Sagaing Region. In Kachin, poor quality housing was common throughout Putao District, where more than three quarters of households lived in non-durable housing. In Sagaing Region, the prevalence of non-durable housing materials was more localized, with significant differences being more notable between Townships than between Districts. For example, in Hkamti District, more than 75 per cent of households lived in non-durable housing in Lahe, Nanyun, Htanparkway, Panasaung and Donhee. In contrast, the proportions for Homa, and Sonemara were only about 23 and 36 per cent, respectively. Map 8.4 clearly shows this localized variability in housing quality along the northern border between Sagaing Region and India.

Table 8.5 Proportion of Households living in Non-Durable Housing Units, States/Regions and Districts

<table>
<thead>
<tr>
<th>State/Region District</th>
<th>Total Number of Conventional Housing Units</th>
<th>Households living in Housing Constructed in part from Non-Durable Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Per Cent</td>
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<tr>
<td>94</td>
<td>101,152</td>
<td>25,251</td>
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<tr>
<td>Thaung</td>
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<td>17,462</td>
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<td>Putao</td>
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<td>9,199</td>
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<td>7,382</td>
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Table 8.4 Type and Durability of House-Construction Materials

<table>
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<tr>
<th>State/Region District</th>
<th>Total Number of Conventional Housing Units</th>
<th>Households living in Houses Constructed in part from Non-Durable Materials</th>
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<td>Number</td>
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Sustainable Development Goal 11
Make cities and human settlements inclusive, safe, resilient and sustainable.

Target 11.1: By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

Indicator 11.1.1: Proportion of population living in slums, informal settlements or inadequate housing.
Household and Housing

Map 8.4 Houses Constructed in part from Non-Durable Materials, Townships

The base population for this indicator is the total number of conventional households. The indicator gives the proportion of households living in housing that was constructed, at least in part, from non-durable materials, as a percentage of the total number of conventional households in each Township. ‘Non-durable materials’ are defined here to mean non-woody vegetation including dhani, theke, in phet and other leaves. Houses were classified as ‘non-durable’ if the walls, roof or floors were mainly constructed from such materials.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
Ensuring universal access to clean, safe drinking water is a Sustainable Development Goal (SDG). The United Nations definition of what constitutes safe sources of drinking water differs slightly from that used by the 2014 Census. The two are generally in line, and the Census data presented in this section can contribute to Myanmar’s ongoing efforts to set the baseline and develop the locally meaningful indicators. It will use to monitor progress towards achieving SDG 6 between now and 2030.

The general United Nations indicator for SDG 6 is managed drinking water services. The proportion of the population with access to safely managed water services, and in broad terms, is what the maps, table and figure in this section of the atlas attempt to show. At the time of the 2014 Census, slightly less than 70 per cent of the Union population was considered to be using safe drinking water. Level of use was higher among urban residents (87 per cent) but much lower among rural residents (62 per cent). Figure 8.3 confirms that use of safe drinking water was higher in urban areas in all States and Regions. The largest urban/rural differentials were in Yangon Region and Shan State, at more than 40 percentage points, and in Kayin State, at more than 30 percentage points. People for whom safe drinking water was most readily available generally live in middle corridor Districts. These include Mandalay, East, West and North Yangon, and Hinthada Districts, all with around or better than 95 per cent access. As a District with an overall level of use of safe drinking water also at around the 95 per cent mark, Haka in Chin State was an exception to this general pattern.

Hinthada District was also an interesting anomaly because it is in the State/Region with generally the lowest proportions of residents using safe drinking water. Less than half (49 per cent) of all residents in conventional households in Ayeyawady used safe drinking water, and such use in some Districts was extremely limited, with Labutta District at just over 11 per cent and Pyay a very low 4 per cent. Districts in Yangon Region showed the largest disparities in urban and rural access. Safe drinking water was used by more than 95 per cent of people in highly urbanized East and West Yangon Districts, whereas it was used by less than 30 per cent of the residents of South Yangon, which has a much larger rural population. Map 8.5 suggests that difficulty accessing safe drinking water is related to the location of the poorly-served Districts on the coastal edges of the delta in both Ayeyawady and Yangon Regions. Here people face similar difficulties to those communities living in Districts such as Sittway and Myauk U, on or near the Rakhine coast. Here, less than 20 per cent of the rural population and, in Myauk U less than a quarter of the urban population, reported using safe drinking water at the time of the 2014 Census.

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<td>NyaungU</td>
<td>77.8</td>
</tr>
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</table>
Map 8.5 Use of Safe Drinking Water, Districts

a) Urban

b) Rural

c) Urban and Rural

The base population for this indicator is individuals that were living in conventional households. The indicator gives the percentage of the population that was using drinking water from taps or pipes; boreholes, tubewells, other protected wells, springs, bottles or other purified sources at the time of the 2014 Census.

Safe drinking water - a water source is considered to be ‘safe’ if, by nature of its construction or through active intervention, it is likely to be protected from outside contamination from, amongst other, pollutants and fecal matter (Department of Population, 2017f). For the 2014 Census:

- Sources of drinking water considered to be ‘improved’ and therefore safe included: piped water delivered via a tap; tube wells and bore holes; protected wells and springs; and bottled water and water obtained from a vending machine.
- Sources of drinking water considered ‘unimproved’ and therefore potentially unsafe included: pools, ponds and lakes; rivers, streams and canals; rainfall; and unprotected wells and springs.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
Table 8.7 Proportion of Population in Conventional Households with Access to Improved Sanitation, States/Regions, Urban and Rural

<table>
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<tr>
<td>Thayyi</td>
<td>58.7 87.4 52.5</td>
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</table>

Figure 8.4 Proportion of Population in Conventional Households with Access to Improved Sanitation, States/Regions, Urban and Rural

Among urban communities, around, or more than, 90 per cent of the population of all States and Regions except for Rakhine and Magway had access to improved sanitation facilities. Figure 8.4 shows the urban/rural contrast in general terms, but the disparity is more clearly evident when seen at the District level. Table 8.7 shows that, while more than 80 per cent of the urban population had access to improved sanitation in 70 out of the 74 Districts, the same level of access among rural communities was only found in 17 Districts.

Maps 8.6b and 8.6c clearly show that improved sanitation facilities were least accessible in Rakhine and Shan States, with the rural-dominated Districts in Rakhine State standing out as facing by far the biggest challenges in this regard. State-wide access in Rakhine was only just over 30 per cent, and in Districts such as Sittwe and Myauk U, this dropped to only about 13 per cent for those living in rural areas. Though improved sanitation was somewhat more accessible in Shan State, rates were still low in many places. For example, less than a third of the household population of rural communities in Minesat, Kunlan, Laukine, and Maikin Districts, and less than one in five in Hopan had access to improved sanitation facilities.

For access to ‘improved sanitation’, as with access to safe drinking water, the indicators for monitoring progress towards Sustainable Development Goals are not directly obtainable from the data collected by the 2014 Census. For example, while the targets and indicators presented in the Box above are concerned with the extent to which households share latrines, the data presented here, which, again, only refers to persons in conventional households, does provide some insight into the varying quality of sanitation facilities to which people have access around the country, and can be used as a proxy in lieu of the more detailed information that could only be generated from specialized surveys.

The Census revealed that, for the country as a whole, almost three quarters of the population had access to improved sanitation facilities. In Yangon Region, Kayah and Khanin States and Nay Pyi Taw, improved sanitation was accessible to more than 85 per cent of the population (Table 8.7). However, as with safe drinking water described in the previous section, hygienic sanitation was generally more readily available in urban areas (Map 8.6a) than it was in rural areas (Map 8.6b).

8.6 Access to Improved Sanitation
Map 8.6 Access to Improved Sanitation, Districts

a) Urban

b) Rural

c) Urban and Rural

Proportion of population with access to improved sanitation
Average at Union level: 95.2 urban, 67.2 rural, 74.5 urban and rural

The base population for this indicator is individuals that were living in conventional households. The indicator gives the percentage of the population that was using improved sanitation facilities, defined as flush toilets or improved pit latrines at the time of the 2014 Census.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.

**Improved sanitation** - a sanitation facility is considered to be improved if it allows for the hygienic disposal of human excreta without it coming into contact with humans (Department of Population, 2017f). For the 2014 Census:
- Improved sanitation facilities included flush toilets and water-sealed pit latrines.
- Unimproved sanitation facilities included traditional pit latrines, buckets and no toilet (open defecation).
This final section describes geographic and urban/rural differences in the proportion of the population living in conventional households that, as reported in the 2014 Census, had access to electricity. Of all the household amenities, it is electricity to which access was most scarce and unequal. For the Union as a whole, only one-third of the population had access to electricity for lighting and cooking purposes, and among the populations of States and Regions, access ranged from more than 70 per cent in Yangon to less than 10 per cent in Tanintharyi. In all States/Regions except for Yangon, less than 50 per cent of the population had access to electricity (Table 8.8).

The difference between access in urban areas (78.1 per cent) and access in rural areas (15.2 per cent) is striking. Figure 8.5 shows that these particularly large urban/rural differentials in levels of access were in evidence in all but one State/Region. The widest gap was in Magway, where the proportion for urban residents was 78 percentage points higher than for rural residents. Differentials in Mandalay, Nay Pyi Taw and Shan were also notable, at more than 70 per cent in Yangon to less than 10 per cent in Tanintharyi. In all States/Regions except for Yangon, less than 50 per cent of the population had access to electricity (Table 8.8).

Table 8.8 Proportion of the Population in Conventional Households with Access to Electricity, States/Regions, Urban and Rural

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<tr>
<th>State/Region</th>
<th>Proportion of Population in Households with Access to Electricity</th>
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The maps opposite show three striking aspects of access to electricity in Myanmar. Firstly, Map 8.7c shows the generally low access rates in Districts throughout the country. Secondly, comparing Maps 8.7a and b reveals the even greater magnitude of the urban/rural differential at the District level. Thirdly, the three maps together reflect the fact that Myanmar is, as has been noted elsewhere in this atlas, still a predominantly rural country. The low proportion of the total population with access to electricity shown in Map 8.7c is influenced much more strongly by access rates in rural areas (Map 8.7b) than by access rates in urban areas (Map 8.7a). This is also true of the pattern of access to safe drinking water and improved sanitation mapped in the previous sections.

That electricity only reached a third of the population in 2014 means that attaining Sustainable Development Goal 7 (see Box above) will require Myanmar to invest very heavily in electricity generation and distribution infrastructure. This will pose major financial and engineering challenges, but it also represents a great opportunity for Myanmar to modernize its energy sector in ways that are innovative, efficient and sustainable.

Eighty Seven Percent Access to Electricity

Figure 8.5 Proportion of Population in Conventional Households with Access to Electricity, States/Regions, Urban and Rural

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<th>State/Region</th>
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<td>Diawe</td>
<td>5.0</td>
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</table>
Map 8.7 Access to Electricity, Districts

a) Urban

b) Rural

c) Urban and Rural

Percentage of population with access to electricity

Average at Union level: 78.1 urban, 15.2 rural, 33.4 urban and rural

- 2.3 - 15.0
- 15.1 - 30.0
- 30.1 - 45.0
- 45.1 - 60.0
- 60.1 - 75.0
- 75.1 - 97.5
- No rural population (West Yangon)

The base population for this indicator is individuals that were living in conventional households. The indicator gives the percentage of the population that was using electricity as its main source for lighting or cooking at the time of the 2014 Census.


Source of geographic data: Department of Population GIS Unit.

Administrative boundaries are shown on maps in this atlas purely for the purpose of presenting census data. They may not reflect the true location of administrative boundaries on the ground.
References


**List of Contributors**

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<th>Institution</th>
<th>Role</th>
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<td>Permanent Secretary, Ministry of Labour, Immigration and Population</td>
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<td>Deputy Director General, Department of Population (DoP)</td>
<td>Administration, coordination and quality control</td>
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<td>Fredrick Okwayo</td>
<td>Chief Technical Advisor</td>
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<tr>
<td>Daniel Msonda</td>
<td>Programme Specialist</td>
<td>Administration and coordination</td>
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<tr>
<td>Thet Thet U</td>
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<td>Administration and logistics</td>
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<td>Project Assistant</td>
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<td>Daw Lin Lin Mar</td>
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<td>Daw Hnin Hnin Wai</td>
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<td><strong>Reviewers and Editors</strong></td>
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<tr>
<td>Werner Haug</td>
<td>UNFPA Consultant</td>
<td>Editing and review</td>
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<td>University of Bern</td>
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<td>Daniel Msonda</td>
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<td>Proof reading, editing and review</td>
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<td>Kyung Ae Park</td>
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<tr>
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<td>Daw Khlong Khlong Soe</td>
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<td><strong>Data Processing and IT Team</strong></td>
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<td>Director, DoP</td>
<td>Programming and generation of tables</td>
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<td></td>
<td>UNFPA Census IT Manager</td>
<td>Information technology service</td>
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<tr>
<td><strong>GIS and mapping</strong></td>
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<tr>
<td>Daw Lin Lin Mar</td>
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<td>Generation of maps</td>
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<tr>
<td>U Thant Zin Oo</td>
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<td>Daw Cho Cho Than</td>
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<tr>
<td>Daw Khlong Sabbe Tun</td>
<td>Junior Clerk, DoP</td>
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<tr>
<td>Karlien Truyens</td>
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