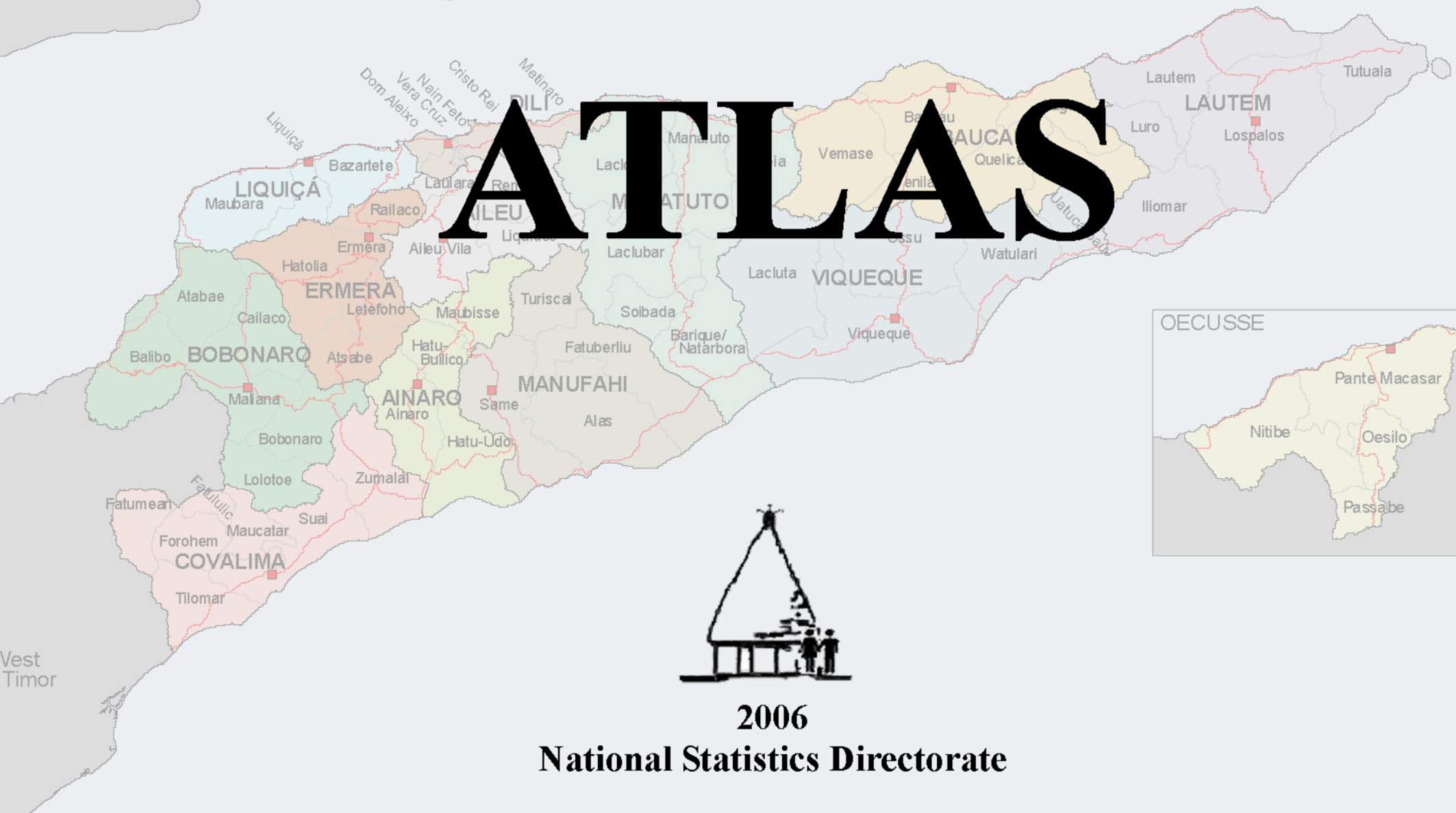
TIMOR-LESTE

CENSUS OF POPULATION AND HOUSING

2004

ATLAS



2006

National Statistics Directorate

Foreword

Conducting the 2004 Population and Housing Census of Timor-Leste was a huge financial, logistical and human effort, but the benefits it will yield will be much larger than the effort made. Collecting and compiling reliable socioeconomic and demographic data for the whole country was essential for Timor-Leste because, during and after the independence struggle, substantial transformations in the characteristics of the population took place. Data that was available previously quickly became outdated and inaccurate and would have been misleading for planning in a new country.

The publication is a good example of how we are putting the results of the census to the work. It presents the complexities of our society clearly and simply and it makes multifaceted and sometimes controversial patterns and trends understandable to a broad audience.

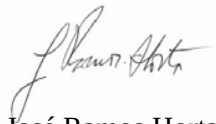
When analyzing and presenting information on the spatial distribution of the population and some of its economic, socio and demographic characteristics, maps are invaluable aid to understanding patterns and trends. In fact, important findings have arisen from visualizing data in map form. A famous case was John Snow's mapping of dwellings of people infected in a cholera epidemic in London in 1854. From the map that he developed, the author discovered that a public water pump, used locally for drinking water, was the font of the disease.

Until about the late 1960's, map required manual drawing, which was time consuming, limited the use of small area data and created high production costs. Since the late 1980's mapping programs for personal computers have increasingly changed the quality, flexibility and accessibility of mapping as an analytical tool.

The census atlas was produced with state of the art computer equipment and software donated within the UNFPA (United Nations Population Fund) Programme of support to the government of Timor-Leste for the realization, processing and analysis of the 2004 Census. During the production of the Atlas, Timorese staff received relevant training that will allow them to produce population maps on demand and to initiate new projects in spatial distribution studies and analyses. The National Statistics Directorate is now providing diverse types of population and socioeconomic maps to a large variety of users.

The first Timorese census used a *Geographic Information System* (GIS) and all the households of Timor-Leste are *geocoded*, that is, each one of them has co-ordinates on a standard reference grid to facilitate accurate tabulation and mapping. This was possible due to the use of a Global Position System (GPS) technology that allowed the enumeration of all the household and persons in our country during the census data collection process.

Timor-Leste now known more about the characteristics of its people than is has ever known before. This knowledge is a more prerequisite for developing our nation. Now that we know how and where we are we can more easily determine how and where we want to go in our country development process.



José Ramos Horta
Prime Minister – RDTL

SENSUS UMA KAIN TIMOR-LESTE
2004

Timor-Leste

National Statistics Directorate

CENSUS OF POPULATION AND HOUSING 2004

ATLAS

1st Edition

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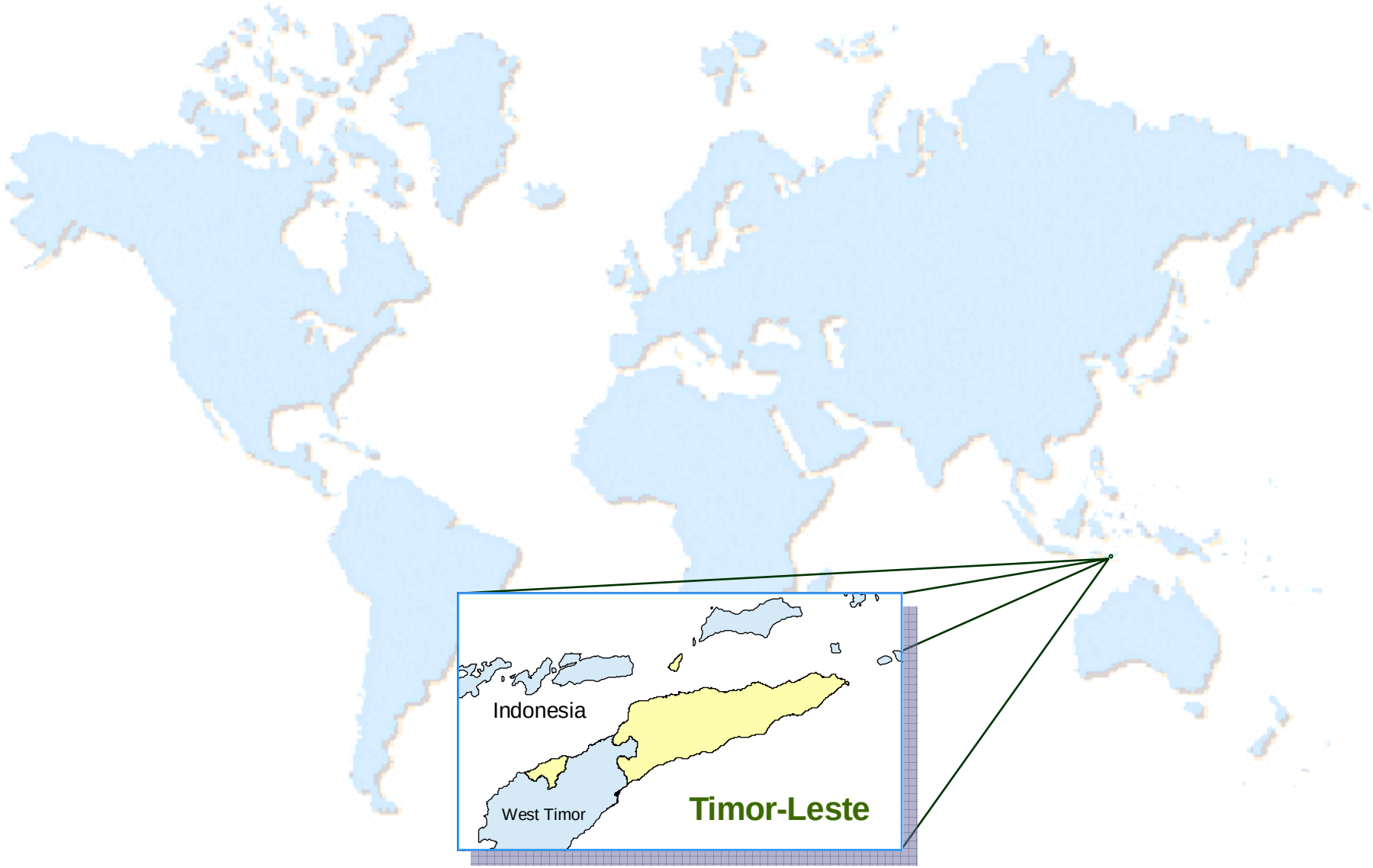
Indonesia
West Timor
Timor-Leste

Preface

The 2004 housing and population census generated a wealth of data about the lives and livelihoods of the people who live in Timor-Leste. A database now exists which, if properly processed and analyzed, can yield diverse information about where people live, how old they are, what languages they use, how well educated they are, what work they do, how they move about the country, and even what materials their houses are made of. The National Statistics Directorate (NSD) has a record of the geographic coordinates of every dwelling in the country linked to a database that describes the demographic characteristics of the individuals and families living in those dwellings. But databases are only useful if the information they contain is processed and the results are made available to the people that need them. The NSD, with the support of the United Nations Population Fund (UNFPA), has published this atlas as one way of making the results of the 2004 census accessible and useful to the people of Timor-Leste.

Who are those people, and how might they benefit from the information contained in this publication? First of all, government officials will be able to use it to help them determine priorities for social and economic development, set policies to target vulnerable groups, develop plans to implement those policies and conduct new surveys to monitor how effective they are being. The information in the atlas will help donors and NGOs develop their programs and allocate their funds to address specific needs in specific places. Local authorities can use it to see how their particular district or subdistrict compares with others around the country on a range of demographic characteristics.

But it is the subjects of the census – the people of Timor-Leste - who stand to benefit the most from this atlas and publications like it. Politicians, representatives of donor organizations and community leaders make decisions based on information and, generally speaking, better information means better decisions. Conducting the 2004 population and housing census was one of Timor-Leste's first major achievements as a new nation; we are now very proud to be able to put the fruits of that effort to work towards the growth and development of our young country.

Manuel Mendonça
Director, National Statistics Directorate
Ministry of Planning and Finance
Democratic Republic of Timor-Leste

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Introduction

The Census Mapping Unit has compiled this atlas to illustrate demographic patterns and trends revealed in the data collected for Timor-Leste's 2004 population and housing census. The material is presented in a series of 23 thematic plates which are organized into 6 parts – Physical and Administrative Structure, General Population Characteristics, Age Structure, Economy and Employment, Language and Education, and Fertility and Mortality. Each plate contains maps, tables, charts and explanatory text on a specific demographic topic. Although most of the information presented here is derived from data collected for the 2004 census, in some cases we used data from other sources to make comparisons or to illustrate changes over time.

The census generated so much data that it would be impossible to present all of it in a publication of this kind. The maps, tables and charts presented in this atlas therefore show only a selection of the most important trends and geographic patterns in the demographics of Timor-Leste. The maps in particular are useful in this regard because they often reveal patterns that are not so easily discernable in tables or with sophisticated statistical methods. Because each of the graphics in this atlas offers just one way to view the data from the census, we have included the tables of the source data behind the maps and charts in each plate so that the data can be viewed in other ways as well.

It is important to emphasize that our purpose with this atlas is not just to present geographic and demographic information; our intention is to raise important issues about relationships among demographic, economic, social and cultural characteristics, issues we feel Timor-Leste's development planners and policy makers will want to consider and address. The atlas does not attempt to answer all the questions it asks or address all the issues it raises – it merely puts them on the table as topics for further discussion and research. We hope that Timor-Leste's development community – the government, the donors, the NGOs and the people – will use the information presented here to help them investigate and address demographic issues that have a significant bearing on the future of their country.

This publication should be recognized as one small group's interpretation of some of the data collected in Timor-Leste's 2004 population and housing census. No doubt some of the material will be controversial – indeed, it is our intention to catch peoples' attention, raise awareness of demographic issues and, hopefully, stimulate debate and analysis. This is not *the* atlas of Timor-Leste's 2004 census, it is *an* atlas of Timor-Leste's 2004 census. We hope you find it useful, informative and stimulating, but most of all we hope you enjoy reading it.

Census Mapping Team
Dili
September 2006

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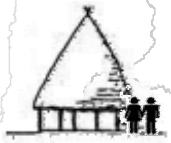
Part 1



Physical and Administrative Structure

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Timor-Leste is approximately 14,900 square kilometers in area and occupies approximately half of the island of Timor, the easternmost of the Lesser Sunda Islands. The Indonesian province of West Timor occupies the other half of the island. The national territory is comprised of the main part of the country on the eastern half of Timor Island (approximately 14,000 square kilometers), Atauro Island to the north of Dili (141 square kilometers), Jaco Island off the eastern tip of the main island (11 square kilometers), and the exclave of Oecusse in the west (815 square kilometers). Oecusse is one of Timor-Leste's 13 districts and it is bounded to the west, south and east by Indonesian territory and to the north by the Savu Sea (GERTiL, 2002).

Physically, Timor-Leste is a land of contrasts, from the broad plains along the south coast to the undulating plateaus of the east to the steep rugged mountains of the western interior. In terms of elevation the country is divided into three distinct zones, each with its own physical, cultural and economic characteristics. The first zone, between 0 and 500 meters above sea level, occupies approximately 65% of the total area, including a broad band along the entire length of the south coast, most of Baucau, Lautem and Viqueque districts in the east, and a narrow band along the north coast. Home to almost 560,000 people, or two-thirds of the country's total population, this low-lying zone has most of Timor-Leste's arable land and is best connected in terms of transportation and communications infrastructure. The middle zone, Zone 2, lies between 500 and 1,500 meters above sea level and takes up approximately 32% of Timor-Leste's total land area. This is the coffee-growing zone of the western highlands, and many of the 340,000 people who live at these mid-elevations belong to coffee-farming families. Only 2.6% of the land is higher than 1,500 meters above sea level.

Table 1
Land Area and Population by Elevation Zone

Elevation		Land Area		Population	
Zone	Meters	Sq. Km.	% Total	Number	% Total
1	0 – 500	9,742	65.3	559,458	60.6
2	500 – 1,500	4,782	32.1	339,740	36.8
3	Higher than 1,500	395	2.6	24,000	2.6
Total		**14,919**	**100**	**923,198**	**100**

Though the land is high, remote and relatively infertile, it still manages to support some 24,000 people, or almost 3% of the country's total population. This high elevation zone is characterized by high annual rainfall, cool temperatures and poor, rocky soils. It is the most sparsely populated and least productive of Timor-Leste's three elevation zones.

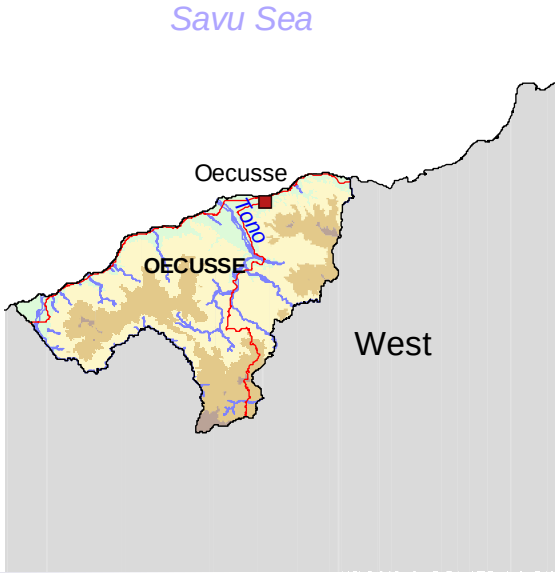
Timor-Leste has a dry tropical monsoon climate with two distinct seasons – dry and relatively cool from May to October and wet and relatively warm from November to April. In general the south of the country is wetter than the north of the country, and mountainous areas are wetter than lowland areas. Average annual rainfall statistics for specific towns illustrate these general patterns – 1,800mm for Ainaro, 1,500mm for Viqueque, 1,100mm for Baucau and 800mm for Dili. Temperature also varies regionally, with daily averages ranging from approximately 20°C in the interior highlands to 27°C in lowland coastal areas (Durand, 2002).

Timor-Leste's mountains, plateaus and coastal plains are dissected by numerous river valleys. Many rivers are dry from May to October, but several of the larger ones, including the Laclo, Seical, Irabere, Bebui, Dilor, Karau Ulun, Nunura, Loes and Tono, carry at least some water all year round. Not surprisingly population centers and agricultural activities are concentrated near the larger rivers that provide fresh water year-round.

Table 2
Comparisons of Land Area and Population

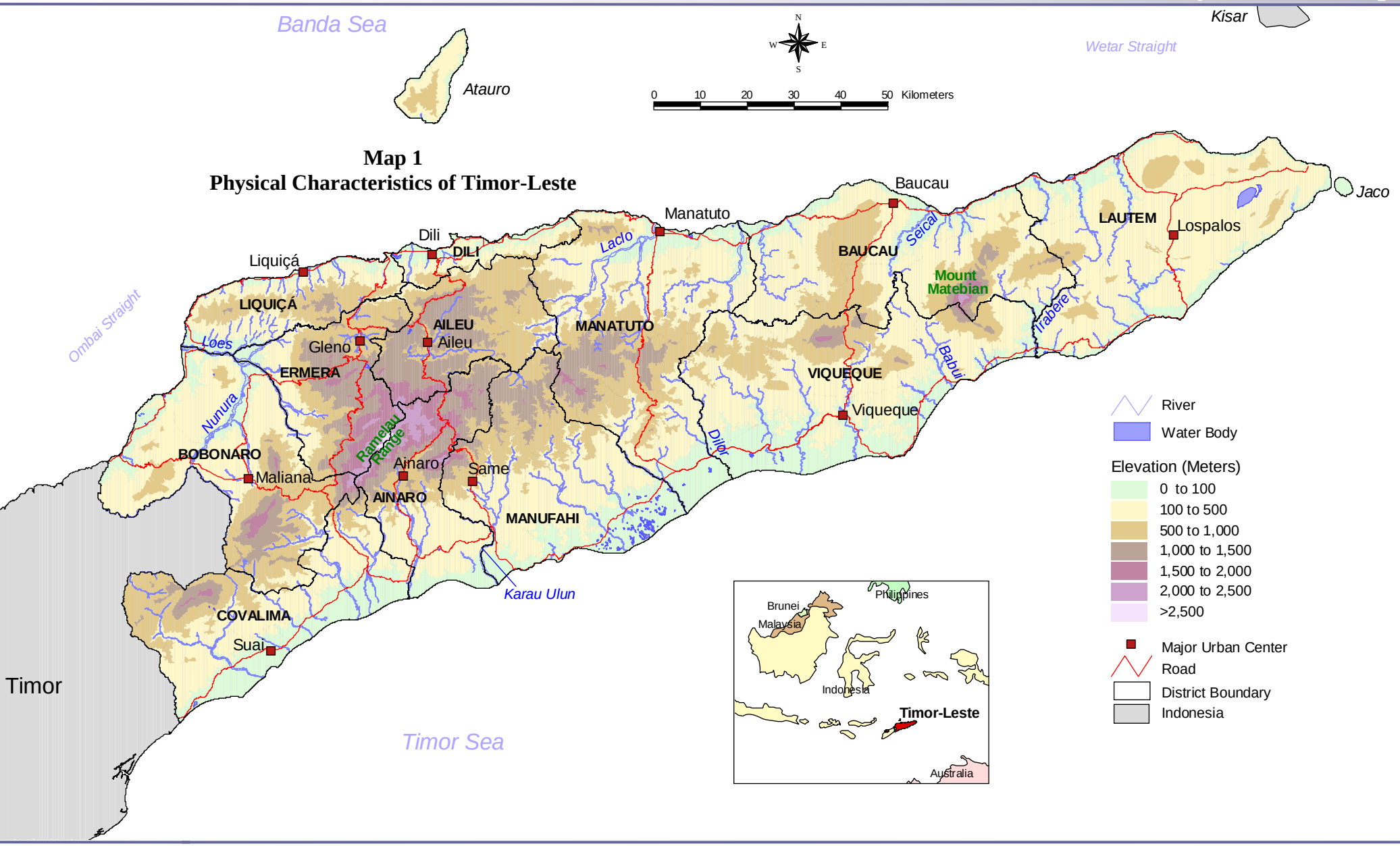
Nation	Area (Sq. Km.)	Population
Timor-Leste	14,919	923,198
Vanuatu	14,000	190,000
Cyprus	9,000	800,000
Brunei	6,000	320,000
Luxembourg	3,000	430,000

People often refer to Timor-Leste as a 'small' or even a 'tiny' country, but compared to many other countries of the world it is neither small in terms land area nor small in terms of population. Physically, Timor-Leste is larger than 41 other countries or territories and it has a larger population than 43 countries and territories (Durand, 2002). This means that almost 25% of the world's nations are smaller than Timor-Leste. Table 2 gives a few examples.



Map 1 shows the various parts of Timor-Leste in their true geographic locations relative to one another. It shows how Oecusse is separated from the main part of the country and how it is surrounded on three sides by the Indonesian territory of West Timor. On most of the other maps in the atlas, Oecusse is shown as an inset in a box below the map of the main part of Timor-Leste. This was done to use the space on the page more efficiently and to maximize the scale and the amount of detail shown on the maps.

Plate 1 - Physical Landscape



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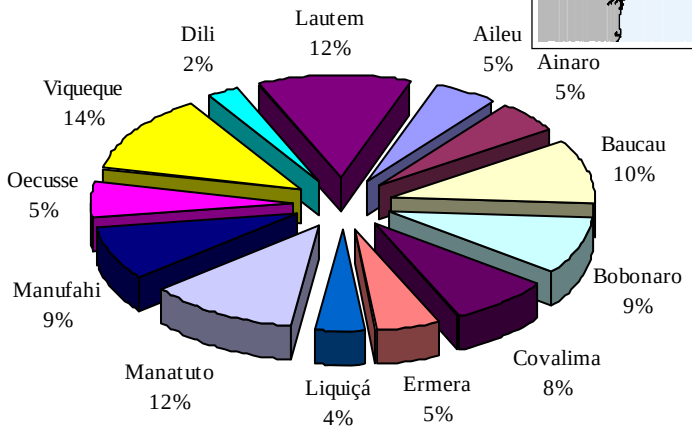
Administrative Structure

Administratively, Timor-Leste is organized into districts, subdistricts, *sucos* and *aldeias*. Districts and subdistricts are arms of the central government and are staffed by government-appointed civil servants. Sucos and aldeias are local authorities whose leaders and council members are directly elected by the people they represent. At the beginning of the census enumeration on 11 July 2004, Timor-Leste was comprised of 13 districts, 67 subdistricts and 496 sucos. On 14 July 2004 the Ministry of State Administration issued a supplement to Ministerial Diploma No. 9/2004 which reorganized the country's 13 districts into 65 subdistricts and 442 sucos. Since then the districts have been aggregated into 5 regions, each represented in the national government by a secretary of state. The regions are becoming increasingly significant for planning, budgeting and policy-making purposes.

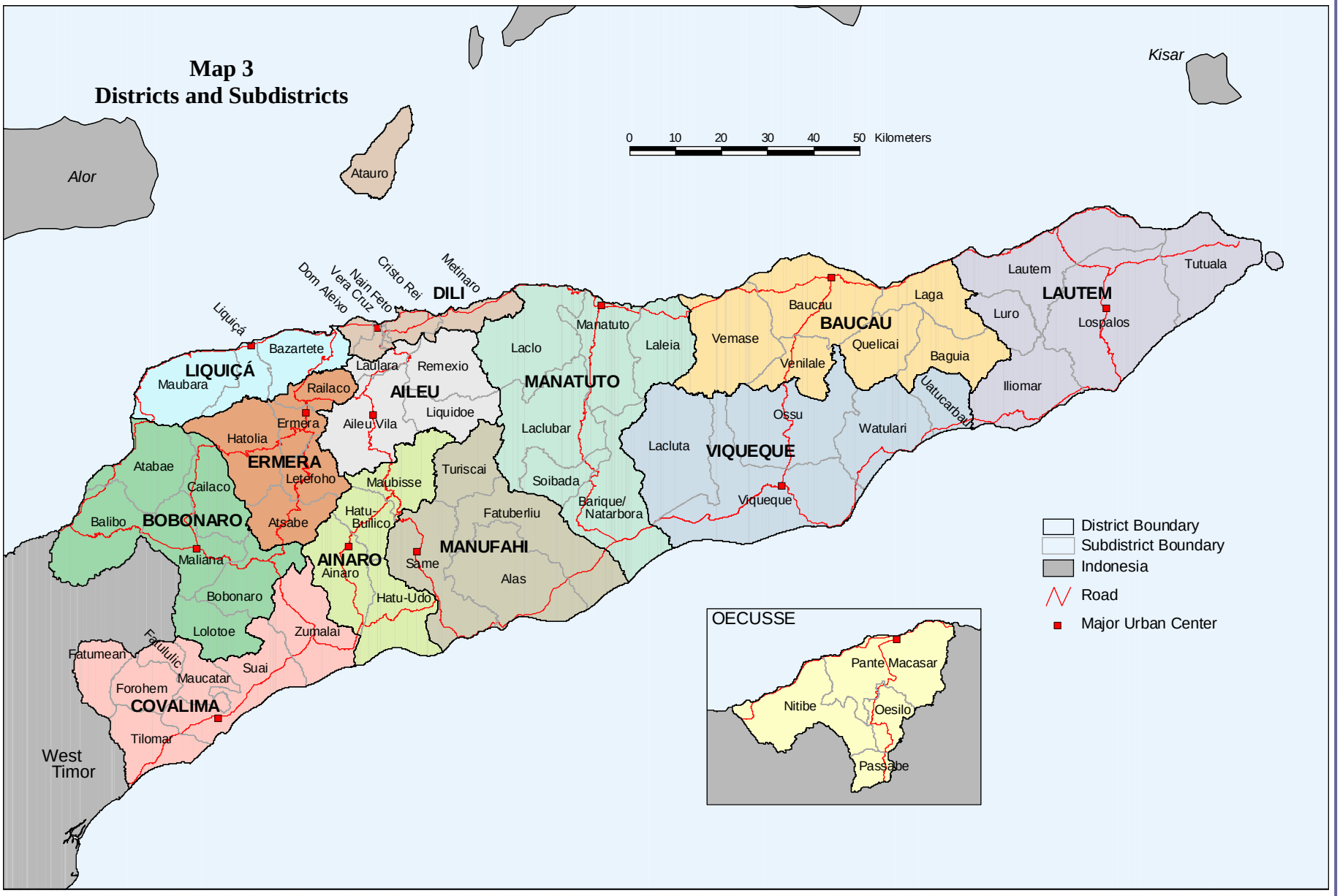
Map 2
Regions and Districts

Chart 1
District Land Area as a Percentage of Timor-Leste's Total Land Area

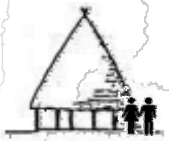


Maps 2 and 3 show the current administrative structure of the country which has it divided into 5 regions, 13 districts and 65 subdistricts, a structure that is based on the Indonesian model of provinces, kabupatens and kecamatens. As it matures, the world's youngest country is evaluating alternative administrative models that better reflect its culture and meet its administrative needs, and most recently a proposal to replace districts and subdistricts with units called municipalities is being given serious consideration.

Plate 2 — Administrative Structure



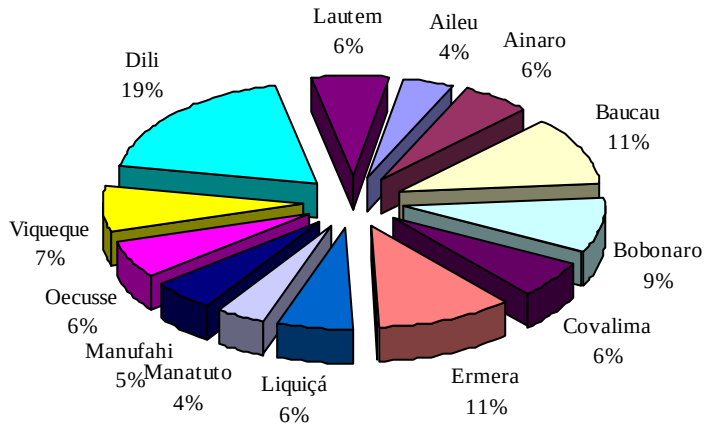
Part 2



General Population Characteristics

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Chart 2
District Population as a Percentage of Total Population



Enclave or Exclave?

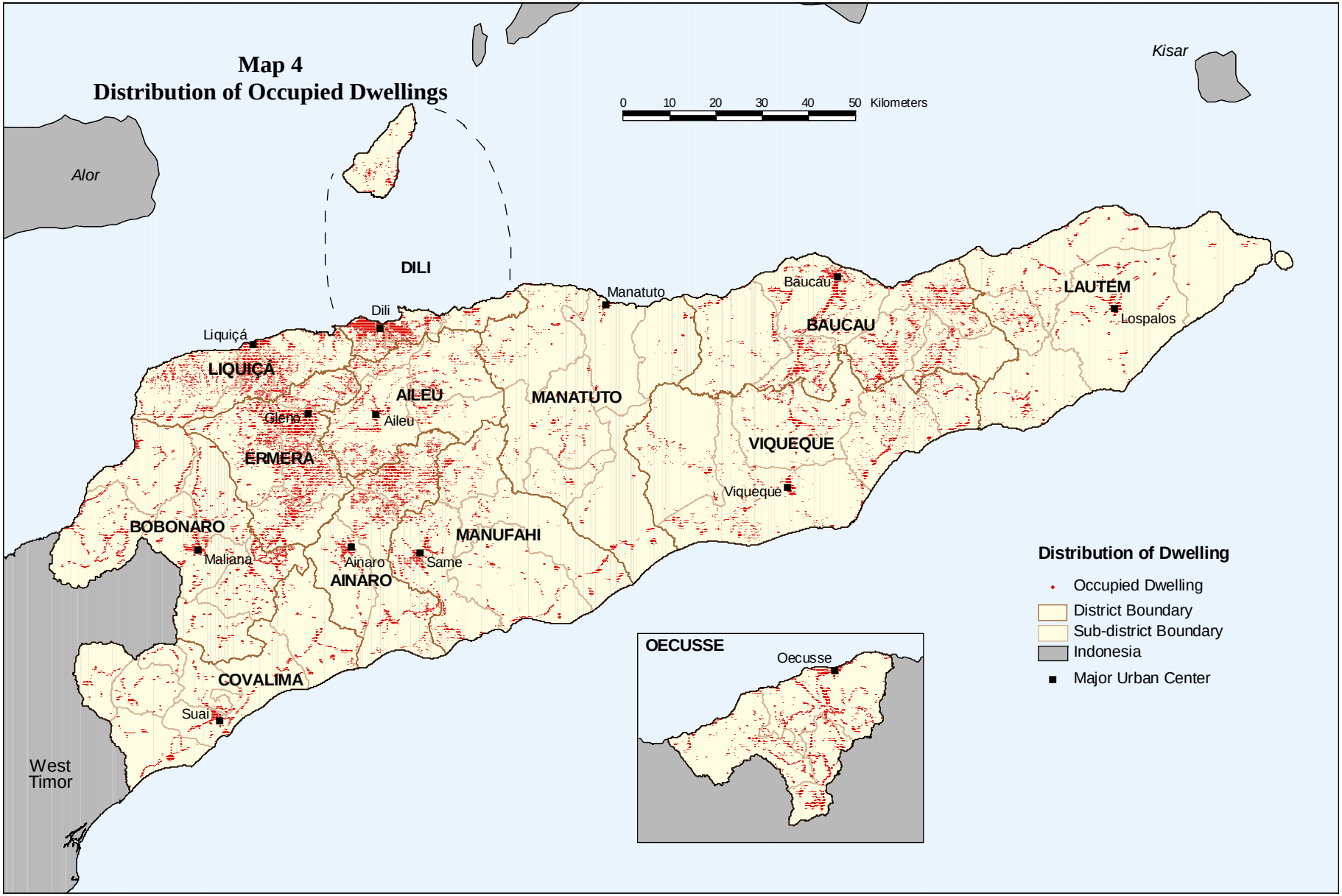
Oecusse is frequently referred to as "the enclave", but in fact it is not an enclave at all. An enclave is "a piece of land which is totally surrounded by a foreign territory", but that isn't true of Oecusse. It is bordered by Indonesian territory to the west, south and east, but to the north lies the Savu Sea which allows people and goods to move freely between Oecusse and mainland Timor-Leste without them having to pass through any part of Indonesia.

An exclave is a piece of land which is politically attached to a larger piece of land but is not actually contiguous with it. Oecusse is, therefore, an ***exclave***, but it is an exclave of Timor-Leste, not of Indonesia.

Source: http://en.wikipedia.org/wiki/Enclave

In July 2004 census enumeration teams traveled throughout Timor-Leste armed with 700 Global Positioning System (GPS) receivers and carrying census questionnaires in 4 different languages - Tetum, Portuguese, English and Indonesian. In just 4 weeks the enumerators produced a geo-referenced database containing the locations of every single dwelling in Timor-Leste. No other country in the world can claim to have done this. The richness of this database can be seen quite clearly in Map 3 which shows the location of the 162,686 dwellings that were occupied at the time of the census. In addition to locating occupied houses, enumerators also recorded the locations of 23,256 dwellings that were not occupied at the time, either because the buildings were damaged or destroyed, the occupants were traveling, or the owners had moved to another part of the country or overseas.

The 162,686 occupied dwellings in Timor-Leste are distributed at an average density of 11 dwellings per square kilometer. Dwellings in Ainaro and Bobonaro districts are distributed at this average density, whilst 6 districts have lower than average densities and 5 districts have higher than average densities. Manatuto district has both the fewest occupied dwellings (6,249) and the lowest density of dwellings per square kilometer (4). At the other extreme, Dili district has the most occupied dwellings (26,114) at the highest density per square kilometer (71). Nain Feto subdistrict is the most densely built-up subdistrict with 565 occupied dwellings on each of its 5 square kilometers, whilst Barique/Natarbora, Lacluta and Tutuala subdistricts have the lowest housing densities with only 2 dwellings per square kilometer. As would be expected, the housing densities shown in Table 1 mirror very closely the population densities given in Table 2.


Map 4
Distribution of Occupied Dwellings
0 10 20 30 40 50 Kilometers
Kisar
Alor
DILI
Dili
Liquiçá
LIQUICA
Manatuto
MANATUTO
Baucau
BAUCAU
LAUTEM
Lospalos
AILEU
Aileu
Gleno
ERMERA
VIQUEQUE
Viqueque
BOBONARO
Maliana
MANUFAHI
Ainaro
Same
AINARO
COVALIMA
Suai
West Timor
OECUSSE
Oecusse
Distribution of Dwelling
Occupied Dwelling
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Table 3
Number of Dwellings, by District and Subdistrict

District	Subdistrict	Square KM	Households	
			Number	Per Sq Km
Manatuto		**1,782**	**6,249**	**4**
	Barique/Natarbora	397	967	2
	Laclo	368	1,326	4
	Laclubar	391	1,293	3
	Laleia	226	599	3
	Manatuto	271	1,667	6
	Soibada	130	397	3
Manufahi		**1,323**	**7,264**	**5**
	Alas	406	1,064	3
	Fatuberliu	375	1,049	3
	Same	354	4,209	12
	Turiscai	188	942	5
Lautem		**1,813**	**11,028**	**6**
	Iliomar	302	1,351	4
	Lautem	448	2,860	6
	Lospalos	624	4,909	8
	Luro	128	1,202	9
	Tutuala	310	706	2
Viqueque		**1,877**	**12,556**	**7**
	Lacluta	416	1,021	2
	Ossu	427	2,922	7
	Uatucarbau	132	1,343	10
	Watulari	294	3,286	11
	Viqueque	610	3,984	7
Covalima		**1,203**	**9,445**	**8**
	Fatululic	46	347	8
	Fatumean	132	555	4
	Fohorem	132	758	6
	Zumalai	283	1,836	6
	Suai	302	3,758	12
	Tilomar	194	1,148	6
	Maucatar	114	1,043	9
Aileu		**737**	**6,292**	**9**
	Aileu Vila	314	2,971	9
	Laulara	61	874	14
	Liquidoe	151	1,064	7
	Remexio	211	1,383	7
Ainaro		**804**	**8,999**	**11**
	Ainaro	235	1,953	8
	Hatu-Builico	129	1,669	13
	Hatu-Udo	242	1,529	6
	Maubisse	197	3,848	20
Bobonaro		**1,376**	**14,807**	**11**
	Atabae	252	1,497	6
	Balibo	296	2,590	9
	Bobonaro	216	3,979	18
	Cailaco	204	1,646	8
	Lolotoe	169	1,258	7
	Maliana	239	3,837	16
Baucau		**1,506**	**19,168**	**13**
	Baguia	206	1,816	9
	Baucau	370	6,232	17
	Laga	199	2,973	15
	Quelicai	206	3,676	18
	Vemase	374	1,740	5
	Venilale	151	2,731	18
Oecusse		**814**	**12,716**	**16**
	Nitibe	300	2,386	8
	Oesilo	97	2,239	23
	Pante Macasar	356	6,472	18
	Passabe	61	1,619	27
Liquiçá		**549**	**9,277**	**17**
	Bazartete	187	3,072	16
	Liquiçá	98	3,084	31
	Maubara	264	3,121	12
Ermera		**768**	**18,771**	**24**
	Atsabe	167	3,059	18
	Ermera	93	4,825	52
	Hatolia	274	5,504	20
	Letefoho	129	3,811	30
	Railaco	105	1,572	15
Dili		**367**	**26,114**	**71**
	Atauro	140	1,470	11
	Cristo Rei	65	6,172	95
	Dom Aleixo	33	11,225	340
	Metinaro	91	558	6
	Nain Feto	5	2,824	565
	Vera Cruz	33	3,865	117
Total		**14,919**	**162,686**	**11**

Plate 3 — Where the People Live

The dwelling, household or population density of an area gives an initial impression of crowding or emptiness, the degree of pressure a population exerts on natural resources and the environment, and the level of demand for goods and services. At an average of 65 people per square kilometer, Timor-Leste's population density is higher than the year 2000 world average of 45 people per square kilometer. However, compared with many countries around the world, Timor-Leste is quite sparsely settled. Bangladesh (890 people per square kilometer), Taiwan (616), the Netherlands and the United Kingdom (244) and France (108) are examples of states that are more densely populated than Timor-Leste. The vast and largely empty countries of U.S.A. (29) and Australia (2) are examples of less densely populated countries.

The simple measure of population density, as the ratio of population to total land area, is useful as a general indication of population pressure and demand for resources in a country, but it can also be misleading if interpreted and applied inappropriately. Average population densities hide internal variations, masking the fact that large areas of some countries are uninhabited whilst other areas are densely settled. This is the case in countries such as China, Saudi Arabia, Canada and Australia (Rowland, 2003; Population Reference Bureau, 2000). A more useful measure would be number of people per unit area of arable land, which gives a better sense of the relationship between the supply of and demand for productive land. This measure is particularly useful in agriculture-based economies such as Timor-Leste's, and is an important issue for future analyses.

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Table 4
Land Area, Population and Population Density, by Subdistrict

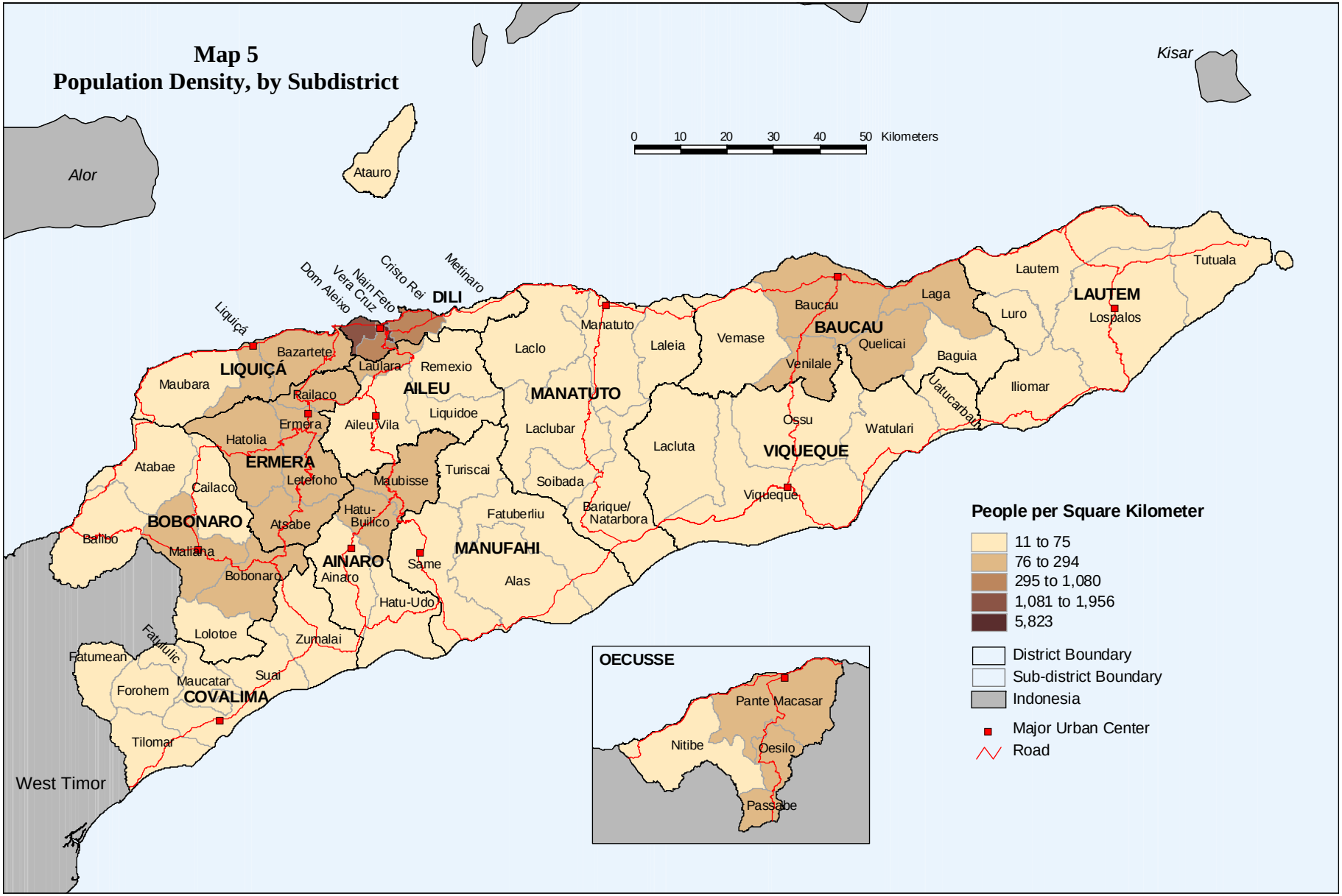
Subdistrict	Area, Sq. Km.	Total Population	Population per Sq. Km.
Tutuala	310	3,712	12
Barique/ Natarbora	397	4,874	12
Lacluta	416	5,187	12
Laleia	226	3,211	14
Alas	406	6,505	16
Fatuberliu	375	6,326	17
Laclo	368	7,558	21
Laclubar	391	8,039	21
Soibada	130	2,760	21
Iliomar	302	6,726	22
Vemase	374	8,886	24
Fatumean	132	3,366	25
Lautem	448	13,870	31
Fohorem	132	4,122	31
Tilomar	194	6,186	32
Turiscai	188	6,088	32
Viqueque	610	20,706	34
Hatu-Udo	242	8,817	36
Nitibe	300	11,052	37
Ossu	427	15,731	37
Atabae	252	9,638	38
Liquidoe	151	5,819	39
Manatuto	271	10,455	39
Fatululic	46	1,814	40
Cailaco	204	8,394	41
Lospalos	624	25,780	41
Lolotoe	169	6,992	41
Baguia	206	8,964	44
Metinaro	91	3,963	44
Remexio	211	9,493	45
Balibo	296	13,663	46
Zumalai	283	13,323	47
Luro	128	6,205	48
Uatucarbau	132	6,725	51
Maucatar	114	5,876	51
Ainaro	235	12,640	54
Aileu Vila	314	17,207	55
Atauro	140	7,863	56
Watulari	294	17,100	58
Suai	302	18,376	61
Maubara	264	16,456	62
Same	354	26,162	74
Laga	199	15,167	76
Quelicai	206	15,971	77
Pante Macasar	356	29,187	82
Hatu-Builico	129	10,807	83
Railaco	105	9,343	89
Laulara	61	5,448	90
Maliana	239	22,126	93
Venilale	151	14,338	95
Atsabe	167	16,037	96
Baucau	370	37,422	101
Maubisse	197	20,216	103
Bobonaro	216	22,766	105
Oesilo	97	10,238	106
Bazartete	187	20,213	108
Hatolia	274	30,659	112
Passabe	61	7,139	118
Letefoho	129	19,917	155
Liquiçá	98	18,304	186
Ermera	93	27,366	293
Cristo Rei	65	34,151	524
Vera Cruz	33	35,259	1,079
Dom Aleixo	33	64,574	1,955
Nain Feto	5	29,920	5,823
Timor-Leste	**14,919**	**923,198**	**62**

Map 5 shows the density of population per square kilometer in each of Timor-Leste's 65 subdistricts. The map clearly shows the contrast between the relatively densely populated subdistricts in and around Dili and Baucau and the sparsely populated subdistricts in the rest of the country.

With 5,823 people per square kilometer, Nain Feto, in Dili district, is the country's most densely populated subdistrict. At 5.14 square kilometers it also happens to be the smallest subdistrict in Timor-Leste. Tutuala, in Lautem district, is the most sparsely populated subdistrict with only 12 people per square kilometer. Two hundred two is the mean population density for the subdistricts, and with 186 people per square kilometer, Liquiçá comes closest to the mean.

In the five most densely populated subdistricts – Nain Feto, Dom Aleixo, Vera Cruz, Cristo Rei and Ermera – 21% of the country's population occupy only 1.5% of its land area. In contrast, the 25 most sparsely populated subdistricts are also home to 21% of the population but these cover almost 50% of the country's land area.

In addition to population density there are other measures of population distribution. Examples include the index of redistribution and the index of concentration (see Rowland, 2003; pp361-362). Other useful measures include number of people per unit area of agricultural land or urban land. Measures such as these are beyond the scope of this publication, which is intended to give general insights into demographic patterns based on the results of Timor-Leste's first ever national census. More specialized, in-depth studies will be crucial to guide development planning and policy-making in the future.


Map 5
Population Density, by Subdistrict
0 10 20 30 40 50 Kilometers
Alor
Atauro
Kisar
DILI
Metinaro
Cristo Rei
Nain Feto
Vera Cruz
Dom Aleixo
Liquiçá
LIQUIÇÁ
Bazartete
Maubara
Laulara
Remexio
AILEU
Railaco
Ermera
Aileu Vila
Liquidoe
Hatolia
ERMERA
Letefoho
Maubisse
Turiscai
Atabae
Cailaco
BOBONARO
Atsabe
Hatu-Builico
Balibo
Maliana
Bobonaro
AINARO
Ainaro
Same
Hatu-Udo
MANUFAHI
Alas
Fatuberliu
Laclo
Manatuto
Laleia
MANATUTO
Laclubar
Soibada
Barique/
Natarbora
Vemase
Baucau
BAUCAU
Venilale
Quelicai
Laga
Baguia
Luro
Lautem
LAUTEM
Lospalos
Tutuala
Iliomar
Uatucarbau
Ossu
Watulari
Lacluta
VIQUEQUE
Viqueque
Fatululic
Lolotoe
Zumalai
Fatumean
Maucatar
Suai
Forohem
COVALIMA
Tilomar
West Timor
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
People per Square Kilometer
11 to 75
76 to 294
295 to 1,080
1,081 to 1,956
5,823
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

The population of Timor-Leste increased quite slowly during the 1990s but grew very rapidly in the first few years of the 21st Century. In the 11-year period from 1990 to 2001, the country's population increased by 39,795, or 0.47% annually. Between 2001 and 2004, however, the increase was 135,856, representing an average annual increase of 5.31%. This rapid increase in the rate of growth reflects the impact of independence, a period of political and social stability which encouraged exiles to return home and families to have more children.

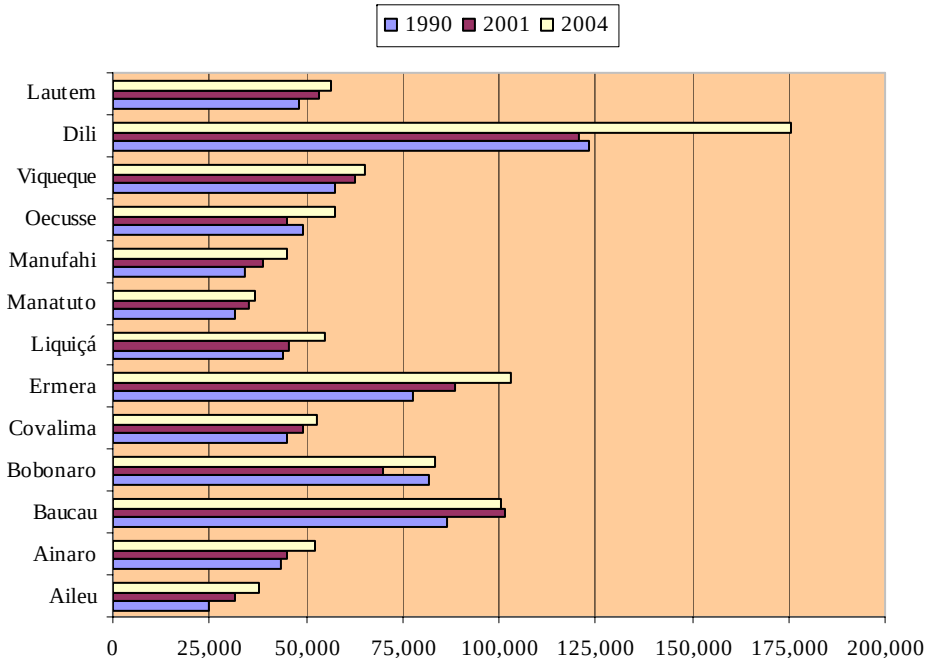
The Population of Dili district did not change much between 1990 and 2001, but then it shot up by 12.58% per year between 2001 and 2004. Ermera, Bobonaro and Oecusse also experienced rapid population growth in the post-referendum period.

The population of several districts declined between 1990 and 2001. The biggest drop was in Bobonaro, where the population decreased by 11,760 people at an average annual rate of 1.41% during the 11-year period. Dili and Oecusse districts also experienced small population declines during the 1990s.

Table 5
Population Change, 1990 to 2004, by District

District	Total Population			Annual Population Growth Rates (%)		
	1990	2001	2004	1990-2001	2001-2004	1990-2004
Aileu	24,657	31,827	37,967	2.32	5.88	3.08
Ainaro	43,375	45,093	52,480	0.35	5.06	1.36
Baucau	86,675	101,517	100,748	1.44	-0.25	1.07
Bobonaro	81,692	69,932	83,579	-1.41	5.94	0.16
Covalima	45,310	49,234	53,063	0.76	2.50	1.13
Dili	123,305	120,474	175,730	-0.21	12.58	2.53
Ermera	77,570	88,415	103,322	1.19	5.19	2.05
Lautem	48,390	53,467	56,293	0.91	1.72	1.08
Liquiçá	44,235	45,575	54,973	0.27	6.25	1.55
Manatuto	31,805	35,446	36,897	0.99	1.34	1.06
Manufahi	34,275	38,616	45,081	1.08	5.16	1.96
Oecusse	48,979	45,042	57,616	-0.76	8.21	1.16
Viqueque	57,279	62,704	65,449	0.82	1.43	0.95
Timor-Leste	**747,547**	**787,342**	**923,198**	**0.47**	**5.31**	**1.51**

Chart 3
Population Change, 1990 - 2004



Sources of Data:

1990 data – Central Bureau of Statistics, 1992 - *Population of Timor Timur; Results of the 1990 Population Census*. Jakarta, Indonesia.
2001 data – National Statistics Directorate, 2003 - *Timor-Leste Survei Suco Nian; Resultado save no aktualijadu*. Dili, Timor-Leste
2004 data – National Statistics Directorate, 2006 - *National Priority Tables; Census of Population and Housing, 2004.* Dili, Timor-Leste.

Population Change

Businesses, government agencies, donors, NGOs and other members of the development community, are all very interested in how many people there are and whether the number of people is likely to increase or decrease. This is true in Timor-Leste just as it is in countries throughout the world. Only by knowing how many people there are can authorities and businesses make sensible estimates of the demand for infrastructure, products and services and the supply of labor; only by having a good idea of how much and how quickly a population is likely to expand or contract can organizations make rational plans for future developments.

But what causes the size of a population to change, both in general demographic terms and in the context of Timor-Leste's recent history? Population change is influenced by three elements: births, deaths and migration. As people in an area are born, die and change residence, the population of that area changes.

It is important to recognize that changes in population in Timor-Leste have been strongly influenced by the tragic events of the past three decades. The size of the population, its distribution and its profile would have been very different had history followed an alternative course. For example, in most parts of the world, the search for better economic opportunities is the driving force behind migrations. In Timor-Leste, however, large numbers of people have chosen or been forced to move because of violence and political turmoil. Civil unrest has also shaped trends in fertility and mortality rates. The demographic consequences of the Indonesian occupation of Timor-Leste is a chapter that still has to be written.

In the late 1990's the world's population was growing at an annual rate of 1.4%. Niger was the country with the highest rate of increase at 3.5%, and Ukraine was bottom of the table with negative growth of -0.8% (Population Reference Bureau, 2000). In 2004, at 3.2%, Timor-Leste isn't very far behind Niger and other countries experiencing population explosions. Such high rates of growth should be major sources of concern, not only for their demographic implications, but also for their economic, social and political impacts. If the present annual growth continues, the population of Timor-Leste will increase by 31,000 people per year, or by 2,583 people per month, or by 85 people per day. The population of the country will double in approximately 22 years. Will the economic and social structures and institutions of Timor-Leste be able to accommodate such growth?

Migration

People migrate to where they perceive there to be more opportunities for economic advancement. In Timor-Leste in recent years people have moved in large numbers from outlying districts to the capital city, Dili. Is the continued concentrating of the country's population in one city good or bad for Timor-Leste's prospects for development? Rapid population growth and urbanization in a primary city can cause social, economic and political problems, witness the events in Dili since April 2006. On the other hand, under certain circumstances, growth centers can provide benefits over a broader area. Analyzing these issues is beyond the scope of this publication, but we raise them here as matters that should be of serious concern to those responsible for planning and guiding the development of Timor-Leste.

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Map 6 shows lifetime migration patterns for Timor-Leste. The arrows show the contribution each district had made to the 2004 population of Dili district. The width of the arrows is proportionate to net lifetime migration from each district to Dili.

Red districts have gained population due to lifetime migration (more people have moved to those districts than have moved from them during their lifetimes). Blue districts have lost population due to lifetime migration (more people have left those districts than have moved to them during their lifetimes). Dili, Covalima and Oecusse have net gains of lifetime migrants whilst the other 10 districts are all net losers. At 71,480, Dili has by far the largest net gain. Baucau has the largest net loss at 10,218 people, and Viquque (9,118) and Bobonaro (7,631) also experienced sizeable net losses.

The population of Dili district in July 2004 was 173,541. Only 93,784 of these people, representing 54% of the total, were born in Dili district. Of the 79,757 people born in other districts, 12,519 (7%) came from Baucau, 9,277 (5%) were born in Viqueque, and 7,981 (5%) were born in Bobonaro.

In four districts, people born outside Timor-Leste made a significant contribution to the total 2004 population. Those four districts were Dili (5,519 people, or 3.2%), Oecusse (1,241, 2.2%), Covalima (1,054, 2.0%) and Bobonaro (996, 1.2%). Having a relatively large number of foreign-born residents can be attributed either to the obvious attractions of the national capital or, in the cases of Oecusse, Covalima and Bobonaro districts, to sharing a border with Indonesia.

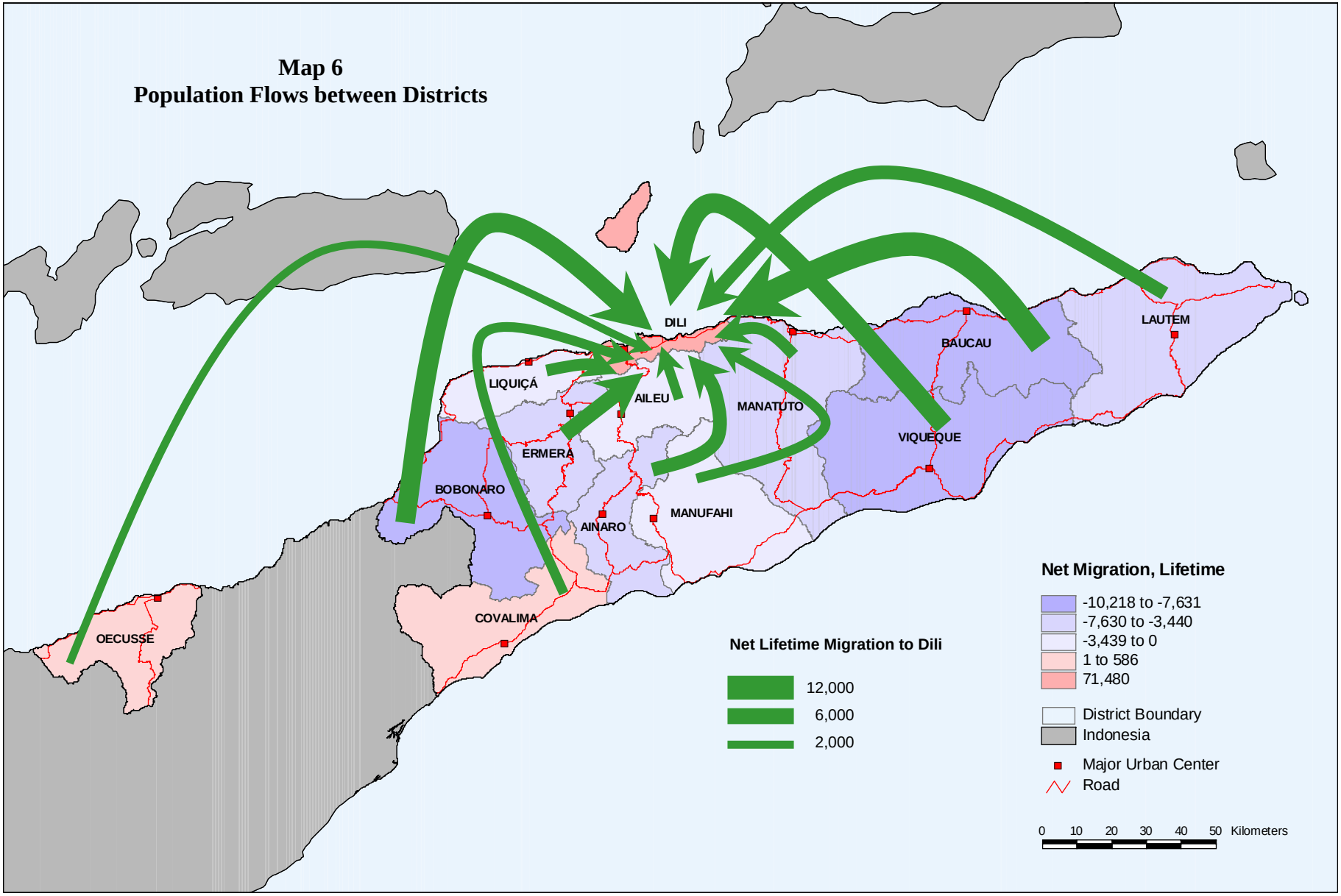
The census tells us how many people born overseas lived in Timor-Leste in 2004, but it does not tell us how many people born in Timor-Leste lived abroad in 2004. This means it is not possible to calculate net migration flows between Timor-Leste and foreign countries.

Table 6
Net Lifetime Migration to Dili

District	Born in Dili, Moved to District	Born Outside Dili, Moved To Dili	Net Migration to Dili	% of Dili Population Born Outside Dili
Baucau	677	12,519	11,842	7%
Viqueque	462	9,277	8,815	5%
Bobonaro	467	7,981	7,514	5%
Ermera	628	6,486	5,858	4%
Lautem	309	5,405	5,096	3%
Ainaro	444	5,102	4,658	3%
Manatuto	879	4,287	3,408	2%
Liquiçá	816	3,991	3,175	2%
Manufahi	395	3,157	2,762	2%
Covalima	220	2,812	2,592	2%
Aileu	2,864	5,193	2,329	3%
Oecusse	116	1,917	1,801	1%
Abroad		5,519		3%
Unknown		6,111		4%

Table 7
Net Lifetime Migration, by District

District	In Migration	Out Migration	Net Migration	% Living in District of Birth
Baucau	5,692	15,910	-10,218	94%
Viqueque	3,727	12,845	-9,118	94%
Bobonaro	4,853	12,484	-7,631	94%
Lautem	1,726	6,515	-4,789	97%
Manatuto	2,920	7,113	-4,193	92%
Ainaro	4,137	8,111	-3,974	89%
Ermera	6,223	9,663	-3,440	94%
Liquiçá	3,879	5,505	-1,626	93%
Aileu	6,117	7,452	-1,335	84%
Manufahi	4,975	5,324	-349	89%
Covalima	4,942	4,785	157	91%
Oecusse	3,094	2,508	586	95%
Dili	79,757	8,277	71,480	54%


Map 6
Population Flows between Districts
DILI
LIQUIÇÁ
AILEU
MANATUTO
BAUCAU
LAUTEM
VIQUEQUE
ERMERA
BOBONARO
AINARO
MANUFAHI
COVALIMA
OECUSSE
Net Lifetime Migration to Dili
12,000
6,000
2,000
Net Migration, Lifetime
-10,218 to -7,631
-7,630 to -3,440
-3,439 to 0
1 to 586
71,480
District Boundary
Indonesia
Major Urban Center
Road
0 10 20 30 40 50 Kilometers

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

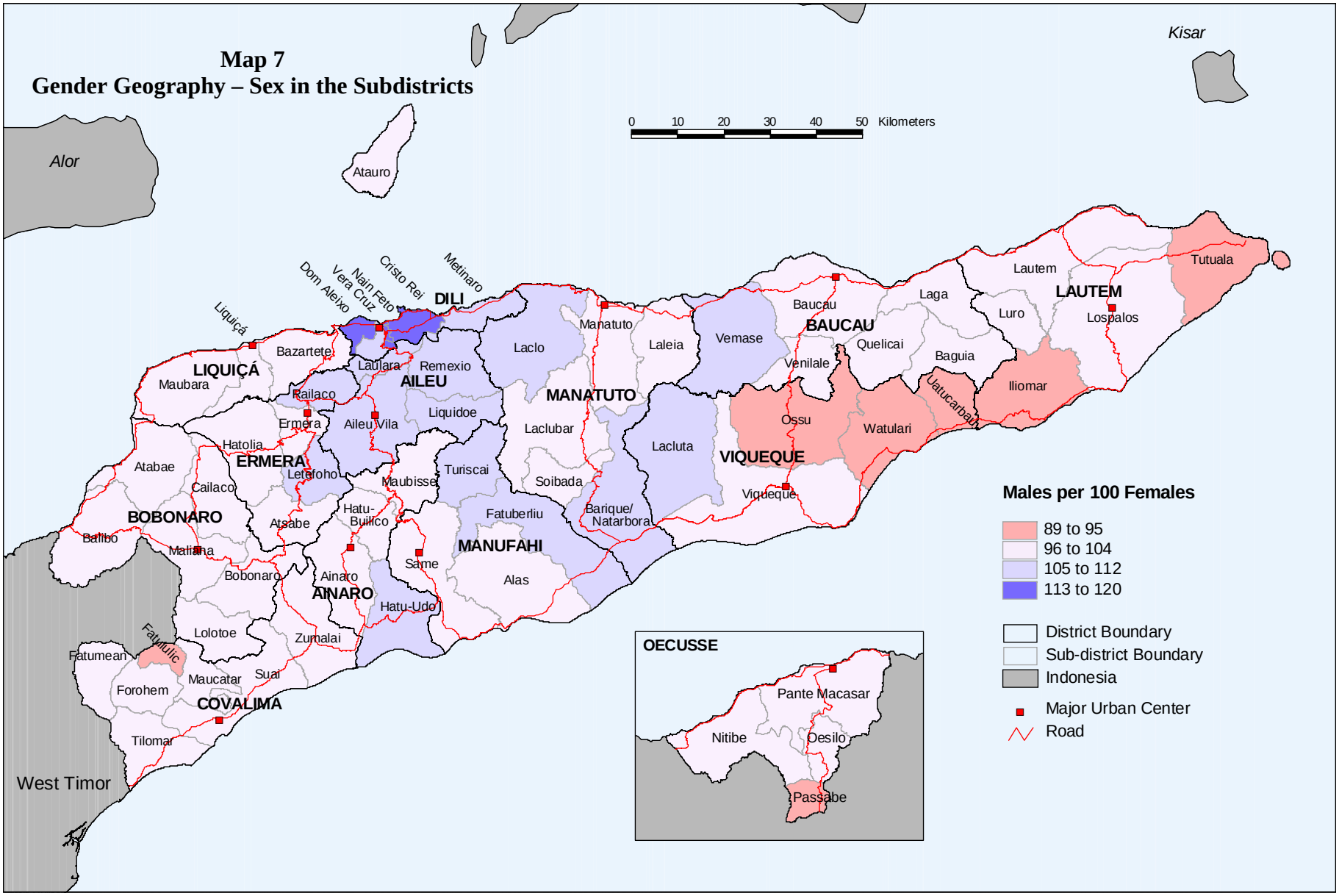
Table 8
Number of Males and Females and Sex Ratio, by Subdistrict

Subdistrict	Males	Females	Males per 100 Females
Iliomar	3,164	3,562	89
Tutuala	1,770	1,937	91
Passabe	3,458	3,681	94
Fatululic	879	935	94
Watulari	8,287	8,796	94
Uatucarbau	3,272	3,453	95
Ossu	7,601	8,009	95
Lautem	6,774	7,092	96
Bobonaro	11,126	11,630	96
Oesilo	4,998	5,222	96
Baguia	4,376	4,567	96
Lolotoe	3,425	3,567	96
Quelicai	7,801	8,114	96
Lospalos	12,497	12,920	97
Atsabe	7,921	8,116	98
Soibada	1,332	1,360	98
Maucatar	2,909	2,967	98
Atauro	3,893	3,970	98
Nitibe	5,472	5,580	98
Laclubar	3,981	4,053	98
Laleia	1,590	1,615	98
Suai	9,103	9,123	100
Laga	7,561	7,572	100
Maliana	10,892	10,871	100
Viqueque	10,362	10,278	101
Cailaco	4,208	4,166	101
Ainaro	6,356	6,284	101
Balibo	6,818	6,722	101
Pante Macasar	14,643	14,415	102
Zumalai	6,706	6,599	102
Hatu-Builico	5,449	5,358	102
Luro	3,131	3,074	102
Alas	3,276	3,209	102
Hatolia	15,495	15,164	102
Maubara	8,271	8,069	103
Fohorem	2,084	2,032	103
Maubisse	10,239	9,973	103
Manatuto	5,294	5,155	103
Baucau	18,867	18,245	103
Tilomar	3,119	3,016	103
Venilale	7,289	7,048	103
Fatumean	1,702	1,644	104
Same	13,267	12,799	104
Bazartete	10,283	9,907	104
Ermera	13,904	13,389	104
Atabae	4,902	4,707	104
Liquiçá	9,340	8,964	104
Letefoho	10,190	9,727	105
Laulara	2,788	2,660	105
Laclo	3,869	3,689	105
Fatuberliu	3,243	3,083	105
Remexio	4,867	4,626	105
Vemase	4,574	4,312	106
Turiscai	3,130	2,943	106
Metinaro	1,757	1,652	106
Lacluta	2,681	2,506	107
Railaco	4,814	4,479	107
Hatu-Udo	4,576	4,241	108
Aileu Vila	8,954	8,212	109
Liquidoe	3,037	2,782	109
Barique/Natarbora	2,504	2,277	110
Vera Cruz	18,414	16,409	112
Nain Feto	15,613	13,860	113
Cristo Rei	17,733	15,720	113
Dom Aleixo	35,132	29,388	120
Timor-Leste	**466,963**	**451,495**	**103**

The sex ratio is the ratio between the number of males to females in a population. In this plate we express the ratio as the number of males per 100 females (the ratio is also frequently expressed in terms of the number of males per 1,000 females). For most places the sex ratio will be between 95 and 105 males per 100 females. Large deviations from this range often forewarn of social influences such as sex-selective migration, or may indicate problems with data quality. Such deviations for Timor-Leste are clearly shown on Map 7 which shows the relative number of males and females in each subdistrict. Red subdistricts have sex ratios of 95 or less and blue subdistricts have sex ratios of 105 or more, a pattern that is largely indicative of the selective migration of males from eastern to central subdistricts, and in particular, to Dili.

The number of males per 100 females ranges from 89 in Iliomar subdistrict to 120 in Dom Aleixo. This means that Iliomar has 13% more females than males, whereas Dom Aleixo has 20% more males than females. Suai, Laga and Maliana subdistricts have the same number of males and females.

Regional patterns are clear. There is a concentration of males in and around Dili reflecting the movement of males, and particularly young men, to the capital in search of work. This leaves a disproportionate number of females in the rest of the country, and in particular in the eastern subdistricts of Viqueque, Baucau and Lautem districts.


Map 7
Gender Geography – Sex in the Subdistricts
0 10 20 30 40 50 Kilometers
Kisar
Alor
Atauro
West Timor
DILI
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
Liquiçá
LIQUIÇÁ
Maubara
Bazartete
Railaco
AILEU
Laulara
Remexio
Aileu Vila
Liquidoe
MANATUTO
Manatuto
Laclo
Laclubar
Soibada
Laleia
Lacluta
Vemase
BAUCAU
Baucau
Venilale
Quelicai
Laga
Baguia
Luro
Lautem
LAUTEM
Lospalos
Tutuala
Iliomar
Uatucarbau
VIQUEQUE
Viqueque
Ossu
Watulari
ERMERA
Ermera
Hatolia
Letefoho
Atabae
Cailaco
Turiscai
Maubisse
Barique/
Natarbora
Fatuberliu
BOBONARO
Balibo
Maliana
Bobonaro
Atsabe
Hatu-
Builico
MANUFAHI
Same
Alas
AINARO
Ainaro
Hatu-Udo
Lolotoe
Zumalai
Fatululic
Fatumean
Maucatar
Suai
Forohem
COVALIMA
Tilomar
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Males per 100 Females
89 to 95
96 to 104
105 to 112
113 to 120
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Table 9
Population and Average Size of Households, by Subdistrict

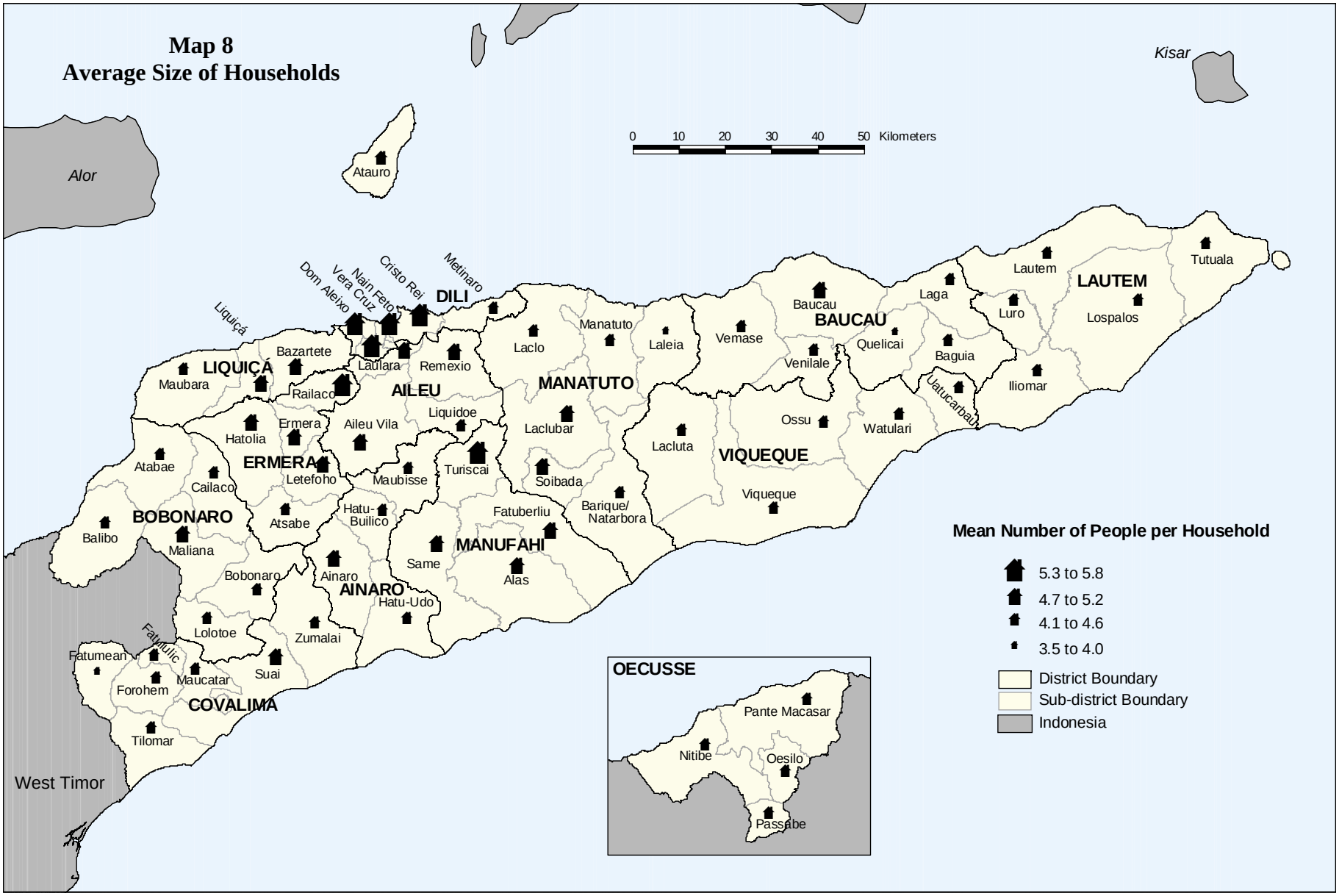
Subdistrict	Total Household Population	Number of Households	Average Size of Households
Nain Feto	29,473	5,110	5.8
Vera Cruz	34,823	6,087	5.7
Turiscai	6,073	1,087	5.6
Cristo Rei	33,453	5,941	5.6
Dom Aleixo	64,520	11,974	5.4
Railaco	9,293	1,720	5.4
Bazartete	20,190	3,856	5.2
Alas	6,485	1,284	5.1
Fatuberliu	6,326	1,229	5.1
Liquiçá	18,304	3,558	5.1
Remexio	9,493	1,860	5.1
Ermera	27,293	5,424	5.0
Hatolia	30,659	6,177	5.0
Laulara	5,448	1,081	5.0
Soibada	2,692	539	5.0
Aileu Vila	17,166	3,492	4.9
Same	26,066	5,301	4.9
Ainaro	12,640	2,636	4.8
Baucau	37,112	7,734	4.8
Laclubar	8,034	1,674	4.8
Maliana	21,763	4,491	4.8
Suai	18,226	3,799	4.8
Letefoho	19,917	4,232	4.7
Atabae	9,609	2,091	4.6
Atauro	7,863	1,696	4.6
Hatu-Builico	10,807	2,332	4.6
Lolotoe	6,992	1,512	4.6
Maubisse	20,212	4,429	4.6
Maucatar	5,876	1,272	4.6
Bobonaro	22,756	5,087	4.5
Lospalos	25,417	5,619	4.5
Manatuto	10,449	2,322	4.5
Maubara	16,340	3,649	4.5
Viqueque	20,640	4,602	4.5
Atsabe	16,037	3,612	4.4
Liquidoe	5,819	1,312	4.4
Vemase	8,886	2,017	4.4
Venilale	14,337	3,225	4.4
Watulari	17,083	3,926	4.4
Zumalai	13,305	3,015	4.4
Metinaro	3,409	767	4.4
Barique/ Natarbora	4,781	1,115	4.3
Laclo	7,558	1,774	4.3
Laga	15,133	3,550	4.3
Pante Macasar	29,058	6,796	4.3
Tilomar	6,135	1,420	4.3
Uatucarbau	6,725	1,561	4.3
Balibo	13,540	3,233	4.2
Cailaco	8,374	1,983	4.2
Luro	6,205	1,478	4.2
Oesilo	10,220	2,425	4.2
Tutuala	3,707	893	4.2
Baguia	8,943	2,192	4.1
Fatululic	1,814	440	4.1
Fohorem	4,116	1,015	4.1
Hatu-Udo	8,817	2,130	4.1
Lacluta	5,187	1,257	4.1
Lautem	13,866	3,383	4.1
Nitibe	11,052	2,690	4.1
Ossu	15,610	3,769	4.1
Passabe	7,139	1,748	4.1
Iliomar	6,726	1,625	4.1
Quelicai	15,915	3,941	4.0
Fatumean	3,346	859	3.9
Laleia	3,205	914	3.5
Timor-Leste	**918,458**	**194,962**	**4.7**

The average size of households generally fluctuates between 5.5 in less developed countries and 2.1 in more developed countries. At 4.7 people, the average size of households in Timor-Leste is typical of high-fertility countries where extended nuclear households predominate (Population Reference Bureau, 2000).

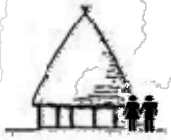
Mean household size is larger than average in 22 subdistricts, smaller than average in 32 districts, and exactly 4.7 in 1 subdistrict, Letefoho. Map 8 shows the mean size of households in each subdistrict and it is compiled from the data in Table 9. Nain Feto in Dili district has the largest households with a mean of 5.8 people, whilst Laleia in Manatuto district has the smallest with a mean of only 3.5 people per household.

In general larger households are concentrated in the west of the country and smaller households are concentrated in the east. Baucau is the only subdistrict in the eastern half of the country where households are larger than the national average of 4.7 members. Household size averages more than 5.2 in six subdistricts, of which four are in Dili district. This probably reflects the higher-than-average birth rates and housing costs and the lower-than-average death rates in and around the nation's capital city. It might also be partially explained by the large numbers of people who have migrated from rural areas to urban centers in recent years.

Average household size is a general measure that varies according to the complexity of household structure and fertility rates. More refined measures take into account the number of adults, the number of generations and the number of children in the household.


Map 8
Average Size of Households
Kisar
Alor
0 10 20 30 40 50 Kilometers
Atauro
Liquiçá
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
DILI
LIQUIÇÁ
Maubara
Bazartete
Railaco
Laulara
Remexio
AILEU
Aileu Vila
Liquidoe
Ermera
Hatolia
ERMERA
Letefoho
Atabae
Cailaco
Atsabe
BOBONARO
Balibo
Maliana
Bobonaro
Maubisse
Turiscai
Hatu-Builico
Laclo
Manatuto
Laleia
MANATUTO
Laclubar
Soibada
Fatuberliu
MANUFAHI
Same
Alas
Barique/
Natarbora
Ainaro
AINARO
Hatu-Udo
Lolotoe
Zumalai
Fatumean
Fatululic
Maucatar
Suai
Forohem
COVALIMA
Tilomar
West Timor
Vemase
Baucau
BAUCAU
Venilale
Quelicai
Laga
Baguia
Luro
Lautem
LAUTEM
Lospalos
Tutuala
Iliomar
Uatucarbau
Ossu
Watulari
Lacluta
VIQUEQUE
Viqueque
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Mean Number of People per Household
5.3 to 5.8
4.7 to 5.2
4.1 to 4.6
3.5 to 4.0
District Boundary
Sub-district Boundary
Indonesia

Part 3



Age Structure

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

The age composition of societies and the ages at which people engage in certain types of behavior are of great interest to demographers and other social scientists. The age structure of a population is essential to understanding the nature and functioning of societies.

The median age divides the population exactly in half – in any given subdistrict, 50% of the people are older and 50% are younger than the median age for that subdistrict. At 15.4 years, Hatolia in Ermera district is the subdistrict with the youngest median age. Lacluta in Viqueque district has the oldest median age at 20.9 years.

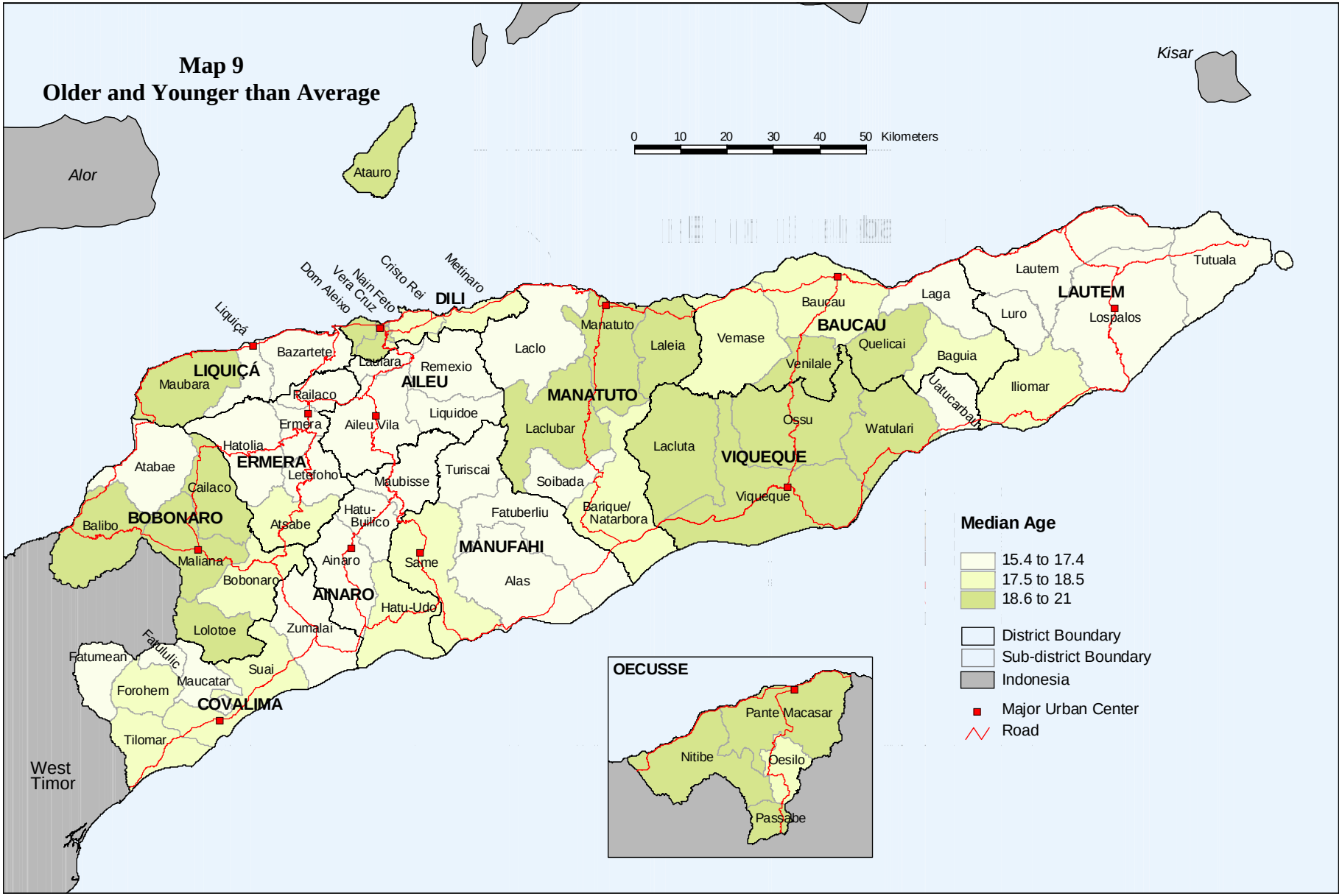
These two subdistricts fit the regional pattern for median age quite well. The population in Ermera, Aileu, Manufahi and Lautem districts is quite young relative to the population in Oecusse, Bobonaro, Manatuto, Baucau and Viqueque districts. Viqueque and Oecusse districts in particular have a distinct shortage of young people, with 7 of their 9 subdistricts in the 18.6 – 20.9 median age group. At the other extreme, all four of Aileu's subdistricts are in the youngest median age class.

Timor-Leste has a very young population – 43% of the population is under 15 years of age. In contrast, the proportion for Europe is only 18%. A high proportion of children in a population has several important demographic and social implications. It indicates an in-built potential for rapid population growth as large numbers of young people marry and have children. It also means that there will be a substantial and on-going need to invest heavily in education. In contrast, the older populations in Europe and other parts of the world result in diminishing labor supply and, in some cases, population decline. They also demand different kinds of support such as funding for pension schemes and health services and facilities.

The population pyramid shows the percentage of the total population of males and females in various age categories. The bottom-heavy pyramid for Timor-Leste clearly shows the very high proportion of young people in the country. The pyramid also helps us understand the history of the population and its prospects for the future. Its triangular shape tells us that both fertility rates and mortality rates have been high in recent years. It also tells us that Timor-Leste can expect its population to grow very rapidly in the future because such a high proportion of its population is already, or soon will be, in the reproductive age categories.

Table 10
Median Age, by Subdistrict

Subdistrict	Median Age	Subdistrict	Median Age
Hatolia	15.4	Suai	18.1
Railaco	15.8	Baguia	18.2
Fatumean	16.0	Barique/ Natarbora	18.2
Liquidoe	16.0	Bobonaro	18.2
Turiscai	16.0	Same	18.2
Remexio	16.1	Iliomar	18.2
Laulara	16.2	Vemase	18.3
Fatululic	16.3	Cristo Rei	18.3
Maubisse	16.3	Baucau	18.4
Lautem	16.4	Fohorem	18.4
Soibada	16.5	Tilomar	18.4
Ermera	16.6	Laclubar	18.5
Letefoho	16.6	Maliana	18.5
Bazartete	16.7	Cailaco	18.6
Aileu Vila	16.8	Lolotoe	18.6
Lospalos	16.8	Nitibe	18.8
Hatu-Builico	16.9	Venilale	18.8
Laclo	17.0	Quelicai	18.9
Zumalai	17.0	Atauro	19.0
Ainaro	17.1	Manatuto	19.0
Liquiçá	17.1	Viqueque	19.0
Fatuberliu	17.2	Ossu	19.2
Maucatar	17.2	Pante Macasar	19.2
Laga	17.3	Vera Cruz	19.4
Luro	17.3	Watulari	19.4
Alas	17.4	Maubara	19.5
Uatucarbau	17.4	Passabe	19.5
Tutuala	17.4	Balibo	20.0
Atabae	17.5	Dom Aleixo	20.0
Atsabe	17.7	Laleia	20.0
Hatu-Udo	17.7	Nain Feto	20.2
Metinaro	17.8	Lacluta	20.9
Oesilo	18.1	**Timor-Leste**	**18.3**


Map 9
Older and Younger than Average
Kisar
Alor
Atauro
0 10 20 30 40 50 Kilometers
Liquiçá
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
DILI
Bazartete
Laulara
Remexio
AILEU
LIQUIÇÁ
Maubara
Railaco
Ermera
Aileu Vila
Liquidoe
Laclo
Manatuto
Laleia
Vemase
Baucau
BAUCAU
Laga
Quelicai
Venilale
Baguia
Lautem
Luro
LAUTEM
Lospalos
Tutuala
Iliomar
Uatucarbau
MANATUTO
Laclubar
Ossu
Watulari
Lacluta
VIQUEQUE
Viqueque
Hatolia
ERMERA
Atabae
Letefoho
Maubisse
Turiscai
Soibada
Cailaco
Hatu-Builico
Barique/
Natarbora
Fatuberliu
Balibo
BOBONARO
Atsabe
Maliana
Ainaro
Same
MANUFAHI
Alas
Bobonaro
AINARO
Hatu-Udo
Zumalai
Lolotoe
Fatululic
Fatumean
Suai
Maucatar
Forohem
COVALIMA
Tilomar
West
Timor
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Median Age
15.4 to 17.4
17.5 to 18.5
18.6 to 21
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Dependency ratios are simple summary measures of the age composition of a population. They indicate the relationship between the numbers of people in age groups that are considered to be 'dependent' or 'unproductive' and the numbers of people in age groups that are considered to be 'supportive' or 'productive.

Dependency ratios are calculated as follows:

Total Dependency Ratio = Population 0 to 14 + Population >64/Population 15 to 65 x 100

Child Dependency Ratio = Population 0 to 14/Population 15 to 65 x 100

Aged Dependency Ratio = Population >64/Population 15 to 65 x 100

Typical values in more developed countries are 50 for the total dependency ratio, 32 for the child dependency ratio and 18 for the aged dependency ratio. In less developed countries with relatively high fertility and mortality rates, typical values are 67, 59 and 8, respectively. At 89, Timor-Leste's total dependency ratio is very high indeed. The child dependency ratio of 82 shows that most of the country's dependents are children.

Maps 10, 11 and 12 show how the age structure of the population varies from subdistrict to subdistrict. In conjunction with the other maps in Part 3, they illustrate a number of demographic patterns and trends in Timor-Leste. For example, Dili has a large number of working age people in relation to young and old people. In other words, it has very low dependency ratios. Conversely, many subdistricts in outlying areas of the country, and particularly those in the eastern districts of Baucau, Viqueque and Lautem, have small numbers of working age people in relation to young and old people. They have high dependency ratios. Together these two characteristics reflect the movement of working age people from the countryside to Dili in search of work.

There is a cluster of high-dependency subdistricts in the southwest of the country that includes Fatumean, Fatululic, Forohem and Maucatar subdistricts in Covalima district. Here, large numbers of children are the dominant characteristic, though there are significant numbers of over-65s, especially in Forohem and Fatululic subdistricts. The ageing of the east is another regional pattern that can be seen clearly on Map 11. Aged dependency ratios of between 11 and 14 in eastern subdistricts are among the highest in the country.

Chart 4
Age Pyramid for Timor-Leste

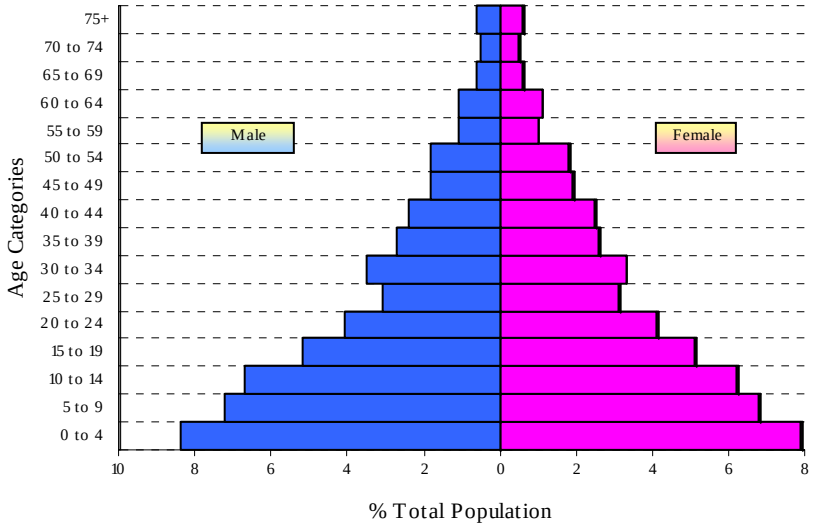
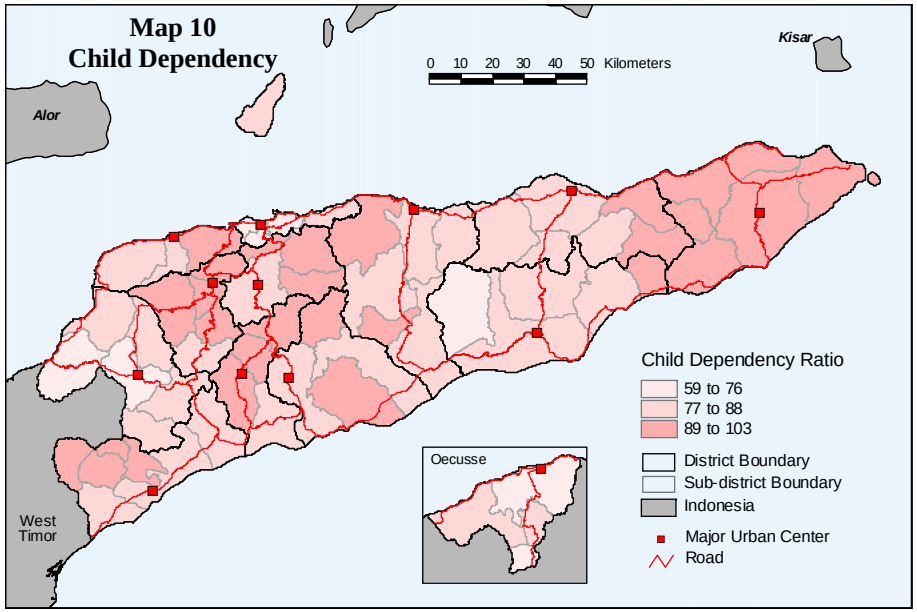


Table 11
Population by Age Category and by Subdistrict

Subdistrict	Total Population	Population 0-14 Years		Population 15-64 Years		Population 65+ Years	
		Number	Percent	Number	Percent	Number	Percent
Dom Aleixo	64,520	23,732	36.8%	40,005	62.0%	783	1.2%
Liquidoe	5,819	2,762	47.5%	2,975	51.1%	82	1.4%
Vera Cruz	34,823	13,603	39.1%	20,581	59.1%	639	1.8%
Cristo Rei	33,453	14,100	42.1%	18,725	56.0%	628	1.9%
Maubisse	20,212	9,516	47.1%	10,293	50.9%	403	2.0%
Aileu Vila	17,166	7,840	45.7%	8,966	52.2%	360	2.1%
Railaco	9,293	4,464	48.0%	4,618	49.7%	211	2.3%
Nain Feto	29,473	10,918	37.0%	17,864	60.6%	691	2.3%
Letefoho	19,917	9,167	46.0%	10,278	51.6%	472	2.4%
Nitibe	11,052	4,802	43.4%	5,987	54.2%	263	2.4%
Laulara	5,448	2,570	47.2%	2,746	50.4%	132	2.4%
Pante Macasar	29,058	11,848	40.8%	16,492	56.8%	718	2.5%
Remexio	9,493	4,468	47.1%	4,788	50.4%	237	2.5%
Ermera	27,293	12,568	46.0%	13,987	51.2%	738	2.7%
Hatu-Builico	30,659	15,098	49.2%	14,722	48.0%	839	2.7%
Metinaro	3,409	1,478	43.4%	1,837	53.9%	94	2.8%
Zumalai	13,305	6,030	45.3%	6,896	51.8%	379	2.8%
Maliana	21,763	9,024	41.5%	12,112	55.7%	627	2.9%
Bazartete	20,190	9,274	45.9%	10,334	51.2%	582	2.9%
Turiscai	6,073	2,903	47.8%	2,991	49.3%	179	2.9%
Suai	18,226	7,768	42.6%	9,892	54.3%	566	3.1%
Liquiçá	18,304	8,131	44.4%	9,592	52.4%	581	3.2%
Same	26,066	11,284	43.3%	13,903	53.3%	879	3.4%
Laclo	7,558	3,460	45.8%	3,840	50.8%	258	3.4%
Fatululic	6,326	2,857	45.2%	3,250	51.4%	219	3.5%
Passabe	7,139	2,961	41.5%	3,920	54.9%	258	3.6%
Oesilo	10,220	4,452	43.6%	5,397	52.8%	371	3.6%
Ainaro	12,640	5,766	45.6%	6,414	50.7%	460	3.6%
Laclubar	8,034	3,566	44.4%	4,174	52.0%	294	3.7%
Hatu-Udo	10,807	5,050	46.7%	5,344	49.4%	413	3.8%
Barique/Natarbora	4,781	2,072	43.3%	2,525	52.8%	184	3.8%
Alas	6,485	2,956	45.6%	3,273	50.5%	256	3.9%
Hatolia	8,817	3,933	44.6%	4,535	51.4%	349	4.0%
Tilomar	6,135	2,685	43.8%	3,206	52.3%	244	4.0%
Lospalos	25,417	11,750	46.2%	12,641	49.7%	1,026	4.0%
Lacluta	5,187	2,116	40.8%	2,861	55.2%	210	4.0%
Atsabe	16,037	7,165	44.7%	8,208	51.2%	664	4.1%
Baucau	37,112	15,808	42.6%	19,743	53.2%	1,561	4.2%
Cailaco	8,374	3,620	43.2%	4,395	52.5%	359	4.3%
Luro	6,205	2,850	45.9%	3,087	49.8%	268	4.3%
Viqueque	20,640	8,908	43.2%	10,836	52.5%	896	4.3%
Atabae	9,609	4,247	44.2%	4,942	51.4%	420	4.4%
Manatuto	10,449	4,338	41.5%	5,642	54.0%	469	4.5%
Vemase	8,886	3,949	44.4%	4,536	51.0%	401	4.5%
Soibada	2,692	1,251	46.5%	1,318	49.0%	123	4.6%
Fatumean	3,346	1,602	47.9%	1,591	47.5%	153	4.6%
Atauro	7,863	3,264	41.5%	4,224	53.7%	375	4.8%
Maucatar	5,876	2,665	45.4%	2,930	49.9%	281	4.8%
Venilale	14,337	6,057	42.2%	7,587	52.9%	693	4.8%
Lautem	13,866	6,555	47.3%	6,640	47.9%	671	4.8%
Lolotoe	6,992	2,924	41.8%	3,724	53.3%	344	4.9%
Maubara	16,340	6,866	42.0%	8,633	52.8%	841	5.1%
Balibo	13,540	5,426	40.1%	7,399	54.6%	715	5.3%
Tutuala	3,707	1,687	45.5%	1,821	49.1%	199	5.4%
Laleia	3,205	1,335	41.7%	1,697	52.9%	173	5.4%
Bobonaro	22,756	9,863	43.3%	11,650	51.2%	1,243	5.5%
Watulari	17,083	7,466	43.7%	8,668	50.7%	949	5.6%
Uatucarbau	6,725	3,096	46.0%	3,250	48.3%	379	5.6%
Quelicai	15,915	6,906	43.4%	8,101	50.9%	908	5.7%
Iliomar	6,726	3,048	45.3%	3,290	48.9%	388	5.8%
Laga	15,133	6,880	45.5%	7,312	48.3%	941	6.2%
Fatuberliu	1,814	864	47.6%	837	46.1%	113	6.2%
Baguia	8,943	4,018	44.9%	4,359	48.7%	566	6.3%
Fohorem	4,116	1,864	45.3%	1,984	48.2%	268	6.5%
Ossu	15,610	6,699	42.9%	7,826	50.1%	1,085	7.0%
Timor-Leste	**918,458**	**398,193**	**43.4%**	**488,194**	**53.2%**	**32,071**	**3.5%**

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.



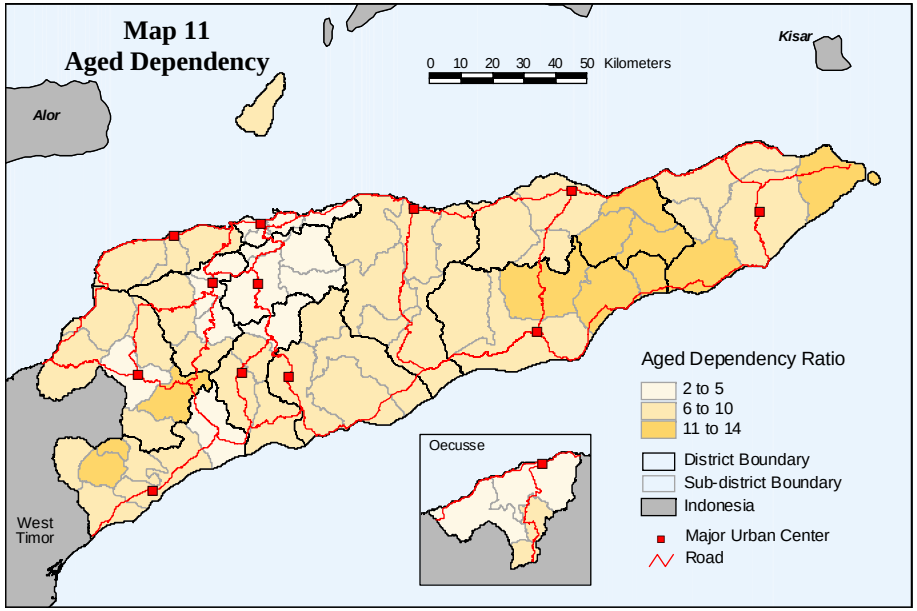
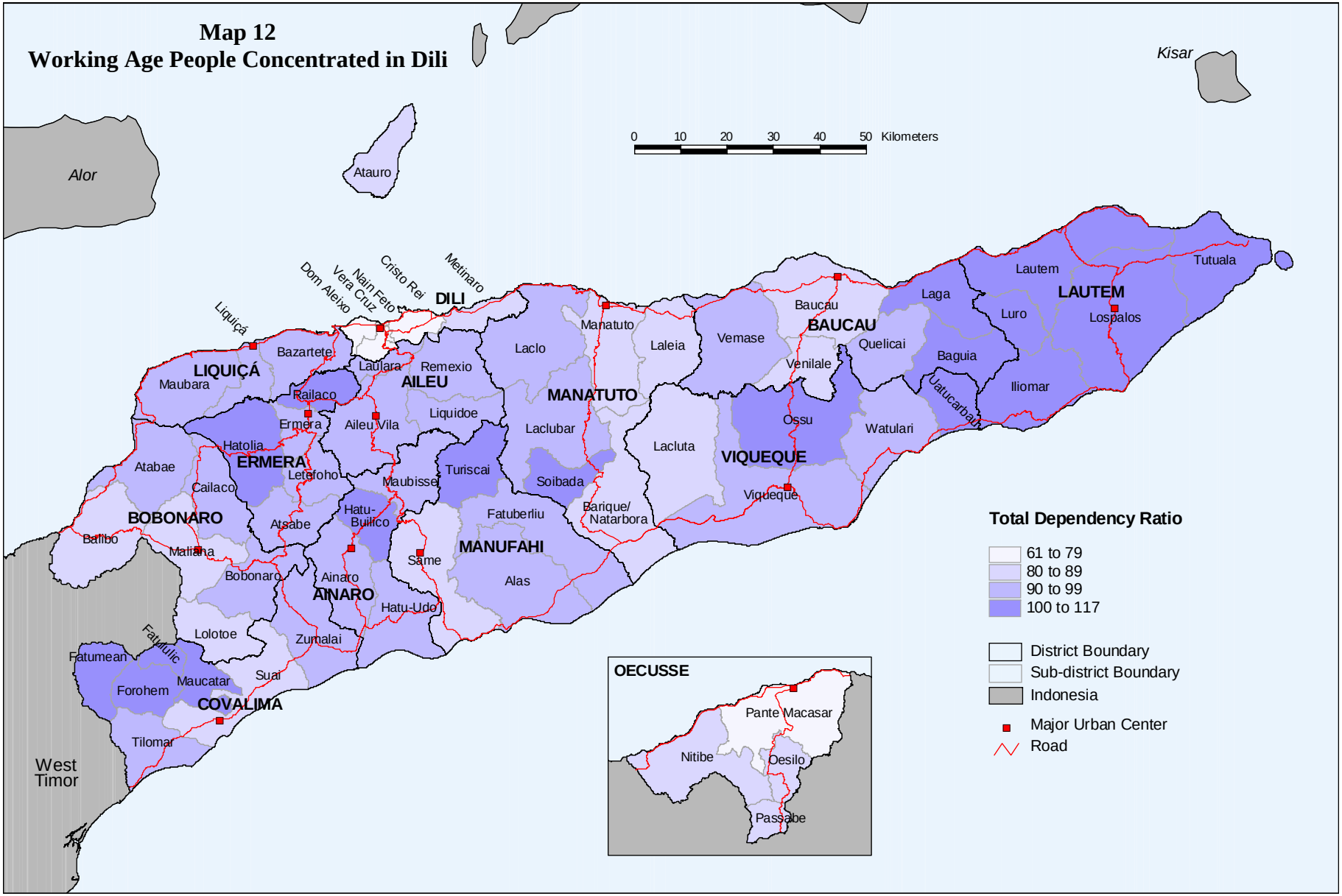


Table 12
Dependency Ratios, by Subdistrict

Subdistrict	Dependency Ratios		
	Child	Aged	Total
Dom Aleixo	59	2	61
Nain Feto	61	4	65
Vera Cruz	66	3	69
Pante Macasar	72	4	76
Cristo Rei	75	3	78
Maliana	75	5	80
Lacluta	74	7	81
Balibo	73	10	83
Passabe	76	7	83
Nitibe	80	4	84
Metinaro	80	5	85
Manatuto	77	8	85
Suai	79	6	85
Atauro	77	9	86
Same	81	6	87
Baucau	80	8	88
Lolotoe	79	9	88
Barique/ Natarbora	82	7	89
Laleia	79	10	89
Oesilo	82	7	89
Venilale	80	9	89
Cailaco	82	8	90
Viqueque	82	8	90
Maubara	80	10	90
Aileu Vila	87	4	91
Liquiçá	85	6	91
Zumalai	87	5	92
Laclubar	85	7	92
Tilomar	84	8	92
Atabae	86	8	94
Letefoho	89	5	94
Atsabe	87	8	95
Ermera	90	5	95
Fatuberliu	88	7	95
Hatu-Udo	87	8	95
Liquidoe	93	3	96
Maubisse	92	4	96
Quelicai	85	11	96
Vemase	87	9	96
Bazartete	90	6	96
Bobonaro	85	11	96
Ainaro	90	7	97
Laclo	90	7	97
Watulari	86	11	97
Alas	90	8	98
Remexio	93	5	98
Laulara	94	5	99
Ossu	86	14	100
Lospalos	93	8	101
Luro	92	9	101
Maucatar	91	10	101
Hatu-Builico	94	8	102
Railaco	97	5	102
Turiscai	97	6	103
Soibada	95	9	104
Tutuala	93	11	104
Baguia	92	13	105
Iliomar	93	12	105
Laga	94	13	107
Uatucarbau	95	12	107
Fohorem	94	14	108
Lautem	99	10	109
Hatolia	103	6	109
Fatumean	101	10	111
Fatululic	103	14	117
Timor-Leste	**82**	**7**	**89**

Plate 9 — Dependency Ratios



Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

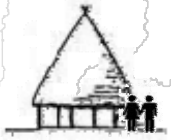
Map 13 shows clear evidence that older people are being left behind in the countryside as the under-65s seek opportunities for education and employment closer to Dili. Ossu subdistrict in Viqueque district has the highest proportion of elderly with 7.0% in the over-65 age group. In contrast, Dom Aleixo subdistrict in Dili district has the smallest percent of over-65s with 1.2%.

The youthful subdistricts in and around Dili form a clearly identifiable region. Relatively few elderly people live in Dili and Aileu districts and in the neighboring subdistricts of Liquiçá, Ermera and Ainaro districts.

Recent migration and growth patterns in Timor-Leste are evident in the contrast between values for subdistricts near Dili and those for subdistricts in the east of the country. More than half the subdistricts in Baucau, Viqueque and Lautem districts have a higher-than-average percentage of over-65s, whilst the elderly comprise a relatively small proportion of the population in and around Dili.

Map 13
The Ageing of the East
Kisar
Alor
Atauro
0 10 20 30 40 50 Kilometers
Liquiçá
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
DILI
Bazartete
LIQUIÇÁ
Maubara
Lautara
Remexio
AILEU
Railaco
Ermera
Aileu Vila
Liquidoe
ERMERA
Hatolia
Atabae
Letefoho
Cailaco
Maubisse
Turiscai
Hatu-Builico
BOBONARO
Balibo
Atsabe
Maliana
Bobonaro
Ainaro
AINARO
Hatu-Udo
Same
Fatuberliu
MANUFAHI
Alas
Lolotoe
Zumalai
Fatumean
Fatululic
Maucatar
Suai
Forohem
COVALIMA
Tilomar
West Timor
Laclo
Manatuto
MANATUTO
Laclubar
Soibada
Barique/
Natarbora
Laleia
Vemase
Baucau
BAUCAU
Venilale
Quelicai
Laga
Baguia
Uatucarbau
Lautem
LAUTEM
Luro
Lospalos
Tutuala
Iliomar
Lacluta
VIQUEQUE
Ossu
Watulari
Viqueque
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Percent of Population 65 Years or Older
1.2 to 3.1
3.2 to 5.1
5.2 to 7.0
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Part 4



Economy and Employment

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

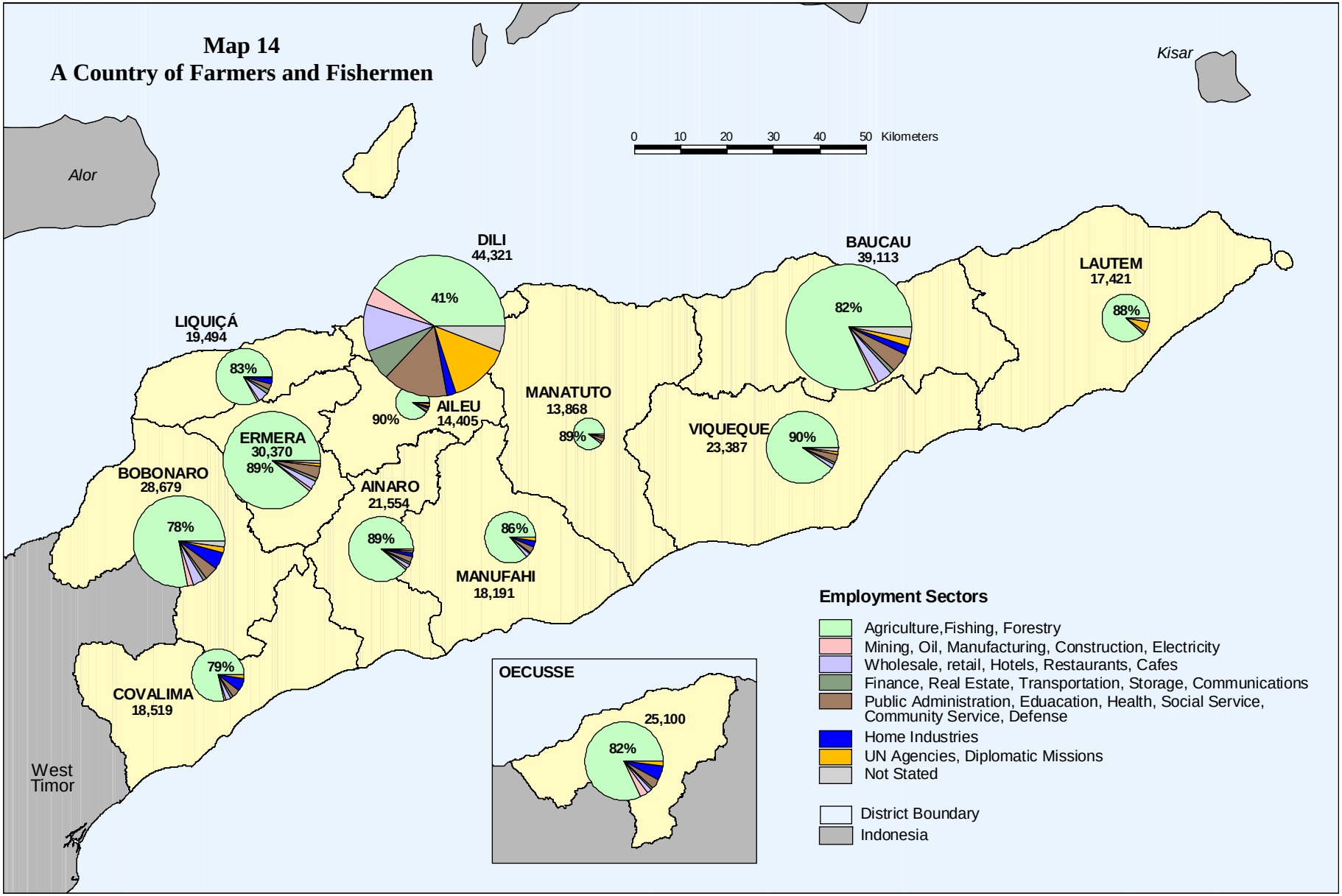
Table 13
Sectoral Employment by Sex and by District

District	Agriculture, Fishing, Forestry			Mining, Oil, Manufacturing, Construction, Electricity			Wholesale, Retail, Hotels, Restaurants, Cafes			Finance, Real Estate, Transportation, Storage, Communications		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Aileu	13,035	5,938	7,097	21	4	17	91	32	59	21	4	17
Ainaro	19,224	9,415	9,809	239	44	195	431	234	197	139	19	120
Baucau	32,122	14,577	17,545	460	30	430	1,700	1,104	596	423	37	386
Bobonaro	22,241	7,961	14,280	460	67	393	1,275	596	679	345	30	315
Covalima	14,550	5,500	9,050	139	17	122	603	355	248	292	23	269
Dili	18,331	11,706	6,625	1,885	217	1,668	5,027	1,869	3,158	3,183	386	2,797
Ermera	27,131	8,977	18,154	235	5	230	862	279	583	243	9	234
Liquiçá	16,153	6,323	9,830	98	6	92	1,187	795	392	390	247	143
Lautem	15,249	6,436	8,813	17	6	11	80	54	26	27	4	23
Manufahi	15,704	7,325	8,379	81	6	75	532	276	256	110	10	100
Manatuto	12,317	5,211	7,106	59	5	54	311	185	126	89	10	79
Oecusse	20,542	9,295	11,247	688	537	151	604	334	270	214	52	162
Viqueque	21,134	8,850	12,284	104	6	98	503	272	231	164	14	150
Timor-Leste	**247,733**	**107,514**	**140,219**	**4,486**	**950**	**3,536**	**13,206**	**6,385**	**6,821**	**5,640**	**845**	**4,795**

District	Public Admin., Education, Health, Social & Community Services, Defense, Security			Home Industries			UN Agencies, Diplomatic Missions			Not Stated		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Aileu	380	94	286	278	272	6	479	158	321	100	25	75
Ainaro	633	205	428	447	430	17	262	83	179	179	49	130
Baucau	1,980	581	1,399	937	892	45	653	223	430	838	362	476
Bobonaro	1,555	506	1,049	1,781	1,716	65	622	209	413	400	111	289
Covalima	903	208	695	1,408	1,361	47	451	192	259	173	34	139
Dili	6,520	1,785	4,735	879	533	346	6,354	1,826	4,528	2,142	462	1,680
Ermera	1,153	388	765	77	62	15	241	58	183	428	146	282
Liquiçá	764	192	572	575	551	24	229	87	142	98	38	60
Lautem	427	79	348	30	18	12	1,226	320	906	365	150	215
Manufahi	737	199	538	659	633	26	273	113	160	95	43	52
Manatuto	495	142	353	34	28	6	247	83	164	316	104	212
Oecusse	937	258	679	1,550	1,479	71	486	188	298	79	20	59
Viqueque	901	180	721	31	25	6	345	93	252	205	64	141
Timor-Leste	**17,385**	**4,817**	**12,568**	**8,686**	**8,000**	**686**	**11,868**	**3,633**	**8,235**	**5,418**	**1,608**	**3,810**

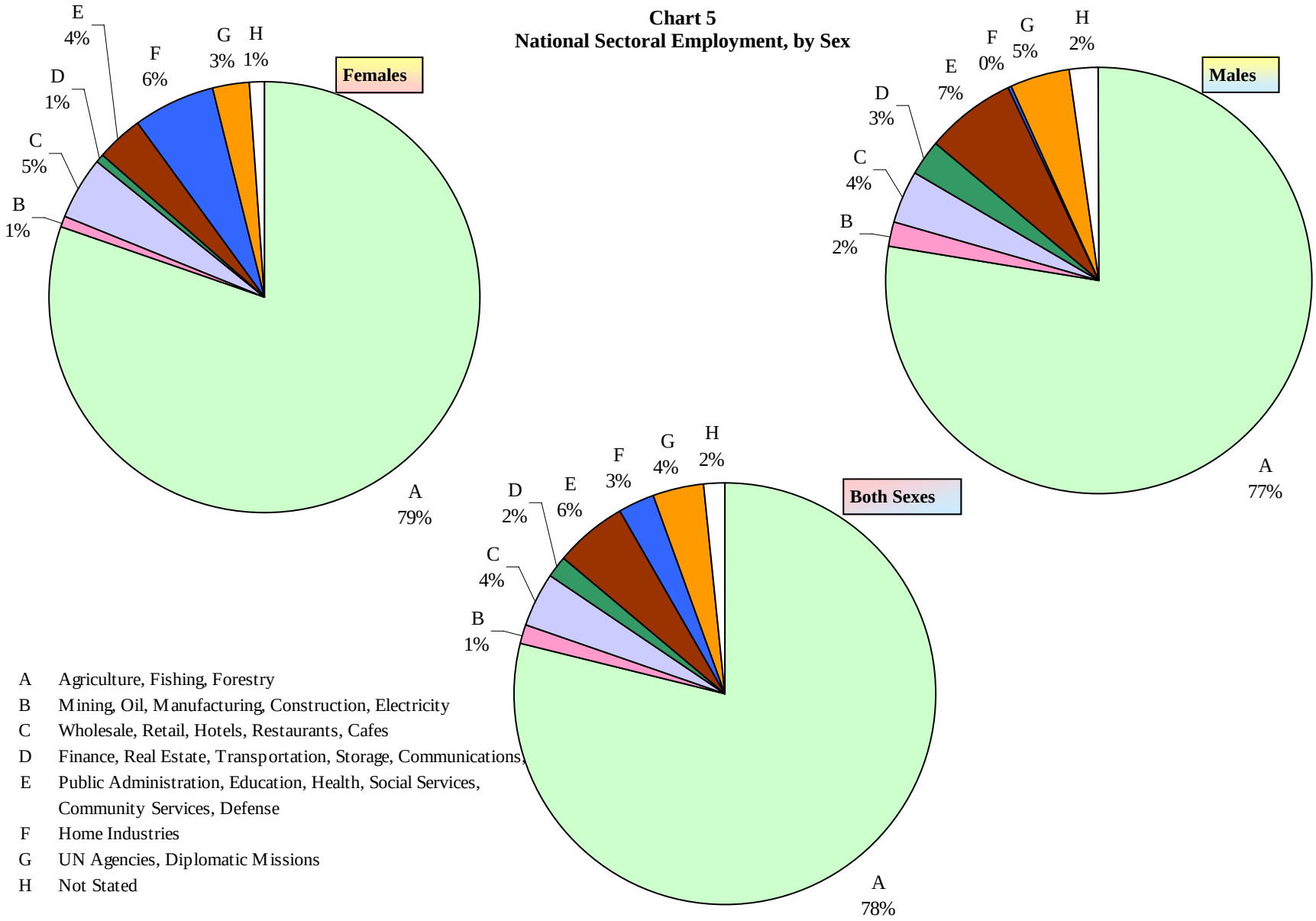
Planners and policy-makers must have a good understanding of the economic characteristics of a population, and in particular the way in which the members of that population participate in the labor market. They use this information to develop and implement policies on a range of issues including labor rights, gender equality, poverty and unemployment. They also use it as a basis for developing budgets and allocating public funds (Siegel and Swanson, 2004). The data presented in Plate 11 shows that by far the largest group in Timor-Leste's labor force works in subsistence agriculture. This is probably the single most important characteristic of the economy and it has major implications for Timor-Leste's development plans and public policies. The employment data collected for the 2004 census does not provide much detail so in-depth studies of labor markets and employment patterns will be needed to fully inform the nation's development community.

On Map 14 the numbers under the name of each district give the total number of active members of the labor force in that district. The numbers on the pie charts give the percentage of the total that is employed in the agriculture, fishing and forestry sector. Sectors with less than 1% of total employment are not shown in the pie charts.


Map 14
A Country of Farmers and Fishermen
Kisar
Alor
0 10 20 30 40 50 Kilometers
DILI
44,321
41%
BAUCAU
39,113
82%
LAUTEM
17,421
88%
LIQUIÇÁ
19,494
83%
AILEU
14,405
90%
MANATUTO
13,868
89%
VIQUEQUE
23,387
90%
ERMERA
30,370
89%
BOBONARO
28,679
78%
AINARO
21,554
89%
86%
MANUFAHI
18,191
79%
COVALIMA
18,519
West Timor
OECUSSE
25,100
82%
Employment Sectors
Agriculture,Fishing, Forestry
Mining, Oil, Manufacturing, Construction, Electricity
Wholesale, retail, Hotels, Restaurants, Cafes
Finance, Real Estate, Transportation, Storage, Communications
Public Administration, Eduacation, Health, Social Service, Community Service, Defense
Home Industries
UN Agencies, Diplomatic Missions
Not Stated
District Boundary
Indonesia

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Chart 5
National Sectoral Employment, by Sex



A Agriculture, Fishing, Forestry
B Mining, Oil, Manufacturing, Construction, Electricity
C Wholesale, Retail, Hotels, Restaurants, Cafes
D Finance, Real Estate, Transportation, Storage, Communications,
E Public Administration, Education, Health, Social Services, Community Services, Defense
F Home Industries
G UN Agencies, Diplomatic Missions
H Not Stated

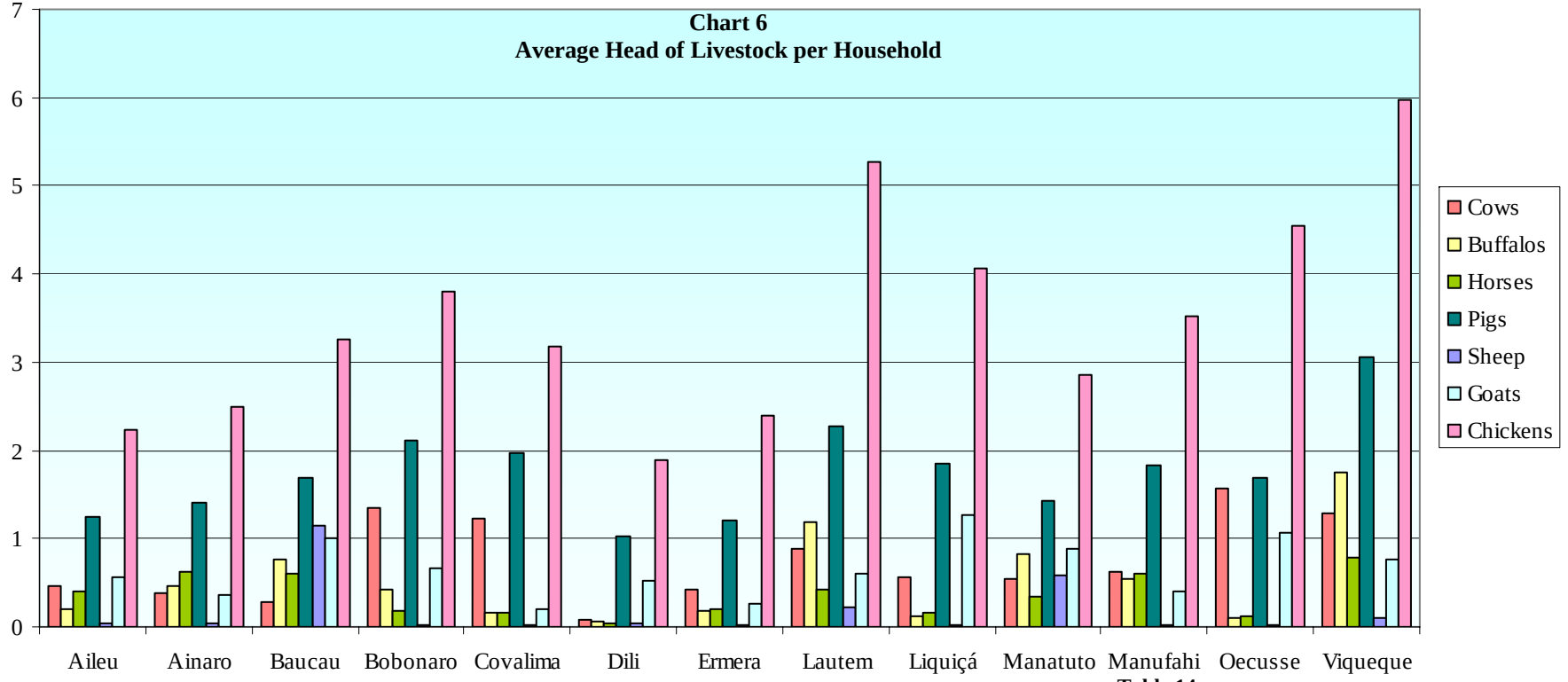
Plate 11 — Employment

Seventy-eight percent of people considered active members of the active labor force work in either agriculture, fishing or forestry. The public sector, comprised of community services, public administration, education, health, social services and defense, comes a very distant second place employing only 6% of the active labor force. Fewer than 4,500 people, or less than 1 % of the active labor force, work in industries outside the home in fields such as mining, oil extraction and processing, manufacturing, construction and electricity generation and distribution.

Geographically, employment patterns are similar throughout the country with the one exception being Dili district. In Dili, agriculture, fishing and forestry are much less significant than they are in other districts, employing only 41% of the active labor force against the national rate of 78%. In this district, and particularly in the national capital, the UN and other donor agencies employ relatively large numbers of people, as do the public sector and the hospitality sector (wholesale, retail, hotels and restaurants). For example, the UN and other donor agencies employ 14.3% of Dili district's active labor force whereas for the nation as a whole only 3.8% work in that sector. Similarly, 14.5% of Dili's workforce is engaged in the public sector versus 3.8% for Timor-Leste, and the hospitality sector employs 11.3% of workers in Dili as opposed to 4.2% for the nation as a whole.

A comparison of male with female employment patterns also reveals some interesting differences, notably in the home industries and public sectors. Females dominate the home industries sector, filling 8,000 of 8,686 jobs in it. Whereas home industries employ 7.4% of women in the active labor force, less than 0.1% of economically active men work in the sector. On the other hand, males hold most of the public sector jobs – 12,568 versus the 4,817 held by women. Nine percent of the active male labor force works in the public sector, whereas for females the rate is only 4.5%. Though comparisons such as these involve relatively small numbers of people in absolute terms, they result from significant differences in economic opportunities for men and women. As such they can help us understand other demographic and social phenomena such as migration patterns, variations in fertility and mortality rates and differences in age structure for populations in different regions of the country.

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

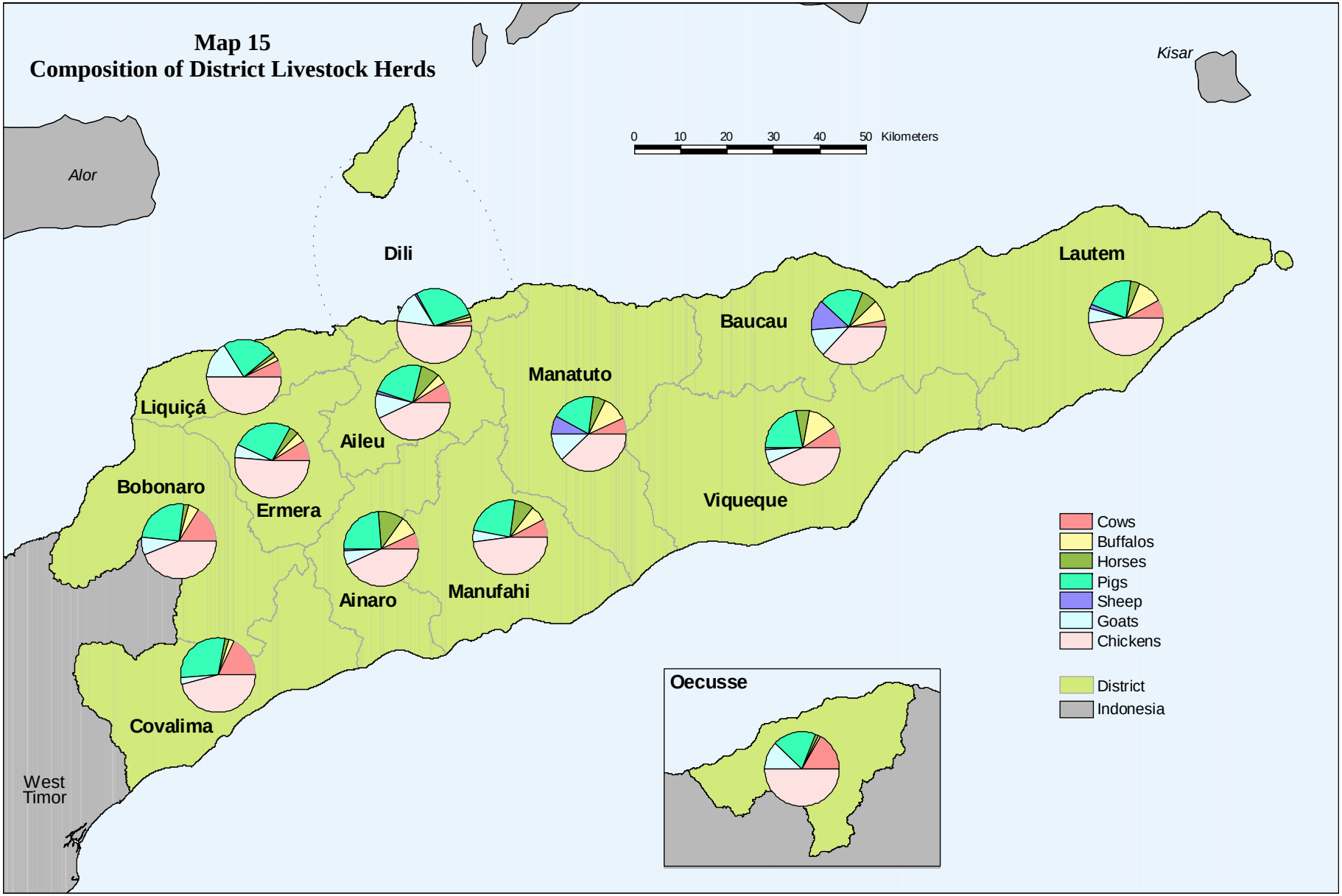


Chickens, pigs and goats are the most common animals in livestock herds throughout Timor-Leste. Other animals are important in different parts of the country. For example, cows in Bobonaro, Covalima and Oecusse, sheep in Baucau and Manatuto, buffalo in Baucau, Lautem, Manatuto and Viqueque, and horses in Ainaro and Manufahi.

But why were animals counted in a population and housing census? The reasons are that subsistence farming is by far the largest employer in Timor-Leste, and that owning livestock is a very important part of subsistence farming. At the household level, livestock ownership is probably a major socioeconomic differentiator and an indicator of wellbeing, poverty and vulnerability. Knowing how many head of livestock families own and understanding the role of livestock ownership in Timorese society are essential if social and economic policies are to be effective.

Table 14
Total Head of Livestock, by District

District	Number of Households	Total Head of Livestock per District						
		Cows	Buffalos	Horses	Pigs	Sheep	Goats	Chickens
Aileu	7,745	3,587	1,604	3,088	9,622	296	4,328	17,353
Ainaro	11,527	4,365	5,262	7,124	16,139	407	4,125	28,688
Baucau	22,659	6,468	17,311	13,654	38,374	26,098	22,995	73,925
Bobonaro	18,397	24,869	7,799	3,366	38,769	513	12,379	70,077
Covalima	11,820	14,440	1,872	1,835	23,311	189	2,445	37,622
Dili	31,575	2,284	2,200	1,054	32,620	1,107	16,386	59,949
Ermera	21,165	9,087	3,775	4,172	25,389	461	5,458	50,871
Lautem	12,998	11,390	15,410	5,383	29,628	2,924	7,833	68,481
Liquiçá	11,063	6,137	1,398	1,719	20,572	333	13,941	44,853
Manatuto	8,338	4,457	6,819	2,786	11,853	4,839	7,362	23,741
Manufahi	8,901	5,534	4,784	5,297	16,229	245	3,572	31,367
Oecusse	13,659	21,428	1,276	1,752	23,163	184	14,676	61,977
Viqueque	15,115	19,531	26,411	12,004	46,226	1,369	11,477	90,162
Timor-Leste	**194,962**	**133,577**	**95,921**	**63,234**	**331,895**	**38,965**	**126,977**	**659,066**


Map 15
Composition of District Livestock Herds
Kisar
Alor
0 10 20 30 40 50 Kilometers
Dili
Lautem
Baucau
Manatuto
Liquiçá
Aileu
Bobonaro
Ermera
Viqueque
Ainaro
Manufahi
Covalima
West Timor
Oecusse
Cows
Buffalos
Horses
Pigs
Sheep
Goats
Chickens
District
Indonesia

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Table 15
Number of Households Growing a Range of Crops, by Subdistrict

District	Sub-District	Total Number of Households	Number of Households Growing ...									
			Rice	Maize	Cassava	Vegetables	Fruit (Temporary)	Fruit (Permanent)	Coffee	Coconut	Other Temporary Crops	Other Permanent Crops
Aileu		**7,745**	**1,847**	**7,042**	**6,983**	**5,686**	**5,836**	**6,140**	**6,044**	**2,970**	**5,170**	**5,399**
	Aileu Vila	3,492	1,707	3,164	2,936	2,752	2,433	2,612	2,717	575	2,195	2,249
	Laulara	1,081	29	963	1,019	760	916	884	692	698	594	635
	Liquidoe	1,312	34	1,115	1,220	743	776	936	992	347	695	817
	Remexio	1,860	77	1,800	1,808	1,431	1,711	1,708	1,643	1,350	1,686	1,698
Ainaro		**11,527**	**1,531**	**10,686**	**9,284**	**9,735**	**10,154**	**10,262**	**8,313**	**4,115**	**9,686**	**9,994**
	Ainaro	2,636	788	2,176	2,242	1,569	2,057	2,205	1,752	1,519	2,015	2,118
	Hatu-Builico	2,332	47	2,264	1,506	2,138	2,192	2,182	1,876	365	1,973	2,031
	Hato-Udo	2,130	628	1,954	1,934	1,934	1,889	1,807	494	1,902	1,816	1,855
	Maubisse	4,429	68	4,292	3,602	4,094	4,016	4,068	4,191	329	3,882	3,990
Baucau		**22,659**	**12,967**	**15,360**	**13,721**	**8,830**	**13,536**	**15,115**	**3,529**	**15,778**	**13,400**	**15,204**
	Baguia	2,192	1,165	1,727	1,856	1,356	1,600	1,703	798	1,570	1,576	1,656
	Baucau	7,734	3,381	5,059	3,477	2,278	4,169	4,321	384	4,434	4,039	4,343
	Laga	3,550	2,353	2,638	1,258	764	1,793	2,086	194	2,473	1,610	2,079
	Quelicai	3,941	1,545	1,768	3,164	1,095	1,824	2,730	906	2,928	2,001	2,838
	Vemase	2,017	1,691	1,415	1,180	704	1,245	1,340	404	1,466	1,259	1,352
	Venilale	3,225	2,832	2,753	2,786	2,633	2,905	2,935	843	2,907	2,915	2,936
Bobonaro		**18,397**	**7,166**	**14,459**	**13,093**	**8,274**	**10,892**	**13,290**	**5,715**	**13,315**	**10,902**	**12,876**
	Atabae	2,091	648	1,335	627	330	751	1,074	59	1,308	675	866
	Balibo	3,233	551	2,953	2,473	1,568	1,817	2,344	154	2,484	2,021	2,610
	Bobonaro	5,087	1,214	4,501	4,288	3,056	3,478	3,825	2,485	3,630	3,525	3,793
	Cailaco	1,983	1,797	1,711	1,651	771	1,550	1,792	812	1,738	1,546	1,659
	Lolotoe	1,512	117	1,341	1,405	1,356	1,265	1,379	1,342	1,157	1,243	1,350
	Maliana	4,491	2,839	2,618	2,649	1,193	2,031	2,876	863	2,998	1,892	2,598
Covalima		**11,820**	**3,980**	**9,891**	**9,877**	**8,129**	**8,138**	**8,285**	**2,995**	**9,082**	**7,444**	**7,972**
	Fatululic	440	195	382	391	346	385	382	393	314	335	378
	Fatumean	859	591	748	720	576	652	629	428	572	596	587
	Fohorem	1,015	278	883	956	970	931	941	824	906	934	946
	Maucatar	1,272	137	1,210	1,201	1,175	1,154	1,142	507	1,145	1,069	1,094
	Suai	3,799	917	2,915	2,997	2,178	2,181	2,339	348	2,867	2,020	2,050
	Tilomar	1,420	444	1,236	1,212	941	885	864	105	1,094	773	1,014
	Zumalai	3,015	1,418	2,517	2,400	1,943	1,950	1,988	390	2,184	1,717	1,903
Dili		**31,575**	**658**	**6,866**	**7,813**	**4,132**	**10,468**	**11,205**	**1,257**	**11,046**	**8,910**	**9,698**
	Atauro	1,696	7	1,632	1,429	190	1,189	1,078	96	1,548	977	901
	Cristo Rei	5,941	249	2,223	2,566	1,143	2,677	2,987	331	2,811	2,276	2,432
	Dom Aleixo	11,974	263	1,120	1,619	1,472	2,780	2,892	335	2,607	2,243	2,279
	Metinaro	767	19	692	425	251	505	402	76	521	409	387
	Nain Feto	5,110	54	261	482	269	1,457	1,547	64	1,558	927	1,257
	Vera Cruz	6,087	66	938	1,292	807	1,860	2,299	355	2,001	2,078	2,442

Table 15
Number of Households Growing a Range of Crops, by Subdistrict

District	Sub-District	Total Number of Households	Number of Households Growing …									
			Rice	Maize	Cassava	Vegetables	Fruit (Temporary)	Fruit (Permanent)	Coffee	Coconut	Other Temporary Crops	Other Permanent Crops
Ermera		**21,165**	**3,641**	**18,766**	**18,638**	**14,686**	**15,382**	**16,484**	**17,943**	**7,081**	**14,892**	**15,654**
	Atsabe	3,612	1,197	3,358	3,133	1,679	1,993	2,406	2,764	1,337	2,070	2,180
	Ermera	5,424	838	4,781	4,958	4,429	4,483	4,655	4,935	1,429	4,336	4,532
	Hatolia	6,177	1,359	5,389	5,596	4,944	4,953	5,081	4,765	2,958	4,785	4,866
	Letefoho	4,232	79	3,624	3,298	2,116	2,424	2,742	3,916	202	2,168	2,471
	Railaco	1,720	168	1,614	1,653	1,518	1,529	1,600	1,563	1,155	1,533	1,605
Lautem		**12,998**	**5,526**	**10,854**	**9,921**	**8,490**	**9,081**	**9,025**	**1,027**	**10,420**	**8,360**	**9,005**
	Iliomar	1,625	1,221	1,456	1,437	833	1,417	1,482	118	1,525	1,452	1,508
	Lautem	3,383	1,162	2,536	1,927	1,879	1,837	1,829	79	2,476	1,633	1,839
	Lospalos	5,619	1,575	4,745	4,508	3,830	3,941	3,922	609	4,376	3,511	3,855
	Luro	1,478	1,330	1,337	1,275	1,231	1,198	1,173	84	1,298	1,094	1,118
	Tutuala	893	238	780	774	717	688	619	137	745	670	685
Liquiçá		**11,063**	**607**	**9,500**	**9,236**	**6,914**	**8,367**	**8,999**	**7,278**	**8,599**	**8,292**	**8,676**
	Bazartete	3,856	86	3,212	3,188	2,438	2,586	2,959	2,222	2,684	2,718	2,866
	Liquiçá	3,558	245	3,214	3,173	3,055	3,203	3,137	2,447	2,808	3,116	3,089
	Maubara	3,649	276	3,074	2,875	1,421	2,578	2,903	2,609	3,107	2,458	2,721
Manatuto		**8,338**	**4,507**	**5,158**	**5,100**	**4,273**	**4,798**	**4,673**	**2,633**	**4,764**	**4,212**	**4,416**
	Barique/Natarbora	1,115	713	911	1,050	968	944	893	333	929	903	926
	Laclo	1,774	729	1,107	919	499	688	730	221	1,054	627	655
	Laclubar	1,674	395	1,614	1,615	1,207	1,394	1,427	1,387	745	1,371	1,455
	Laleia	914	730	310	238	238	307	302	37	338	204	199
	Manatuto	2,322	1,576	757	792	870	973	843	201	1,250	630	707
	Soibada	539	364	459	486	491	492	478	454	448	477	474
Manufahi		**8,901**	**2,415**	**7,617**	**7,873**	**7,164**	**6,896**	**7,351**	**5,303**	**5,504**	**6,631**	**7,129**
	Alas	1,284	812	1,006	1,091	1,075	1,056	1,115	609	1,106	1,031	1,047
	Fatuberliu	1,229	785	1,034	1,072	1,042	1,033	1,067	571	822	920	995
	Same	5,301	794	4,531	4,657	4,081	3,925	4,195	3,144	3,422	3,829	4,172
	Turiscai	1,087	24	1,046	1,053	966	882	974	979	154	851	915
Oecusse		**13,659**	**4,378**	**2,694**	**9,662**	**6,804**	**8,469**	**7,757**	**1,498**	**10,798**	**7,464**	**8,450**
	Nitibe	2,690	790	64	1,502	1,022	1,343	1,211	303	2,097	1,141	1,667
	Oesilo	2,425	317	19	1,915	1,096	1,209	1,405	100	1,964	1,109	1,598
	Pante Macasar	6,796	3,208	2,597	4,554	3,423	4,706	3,944	550	5,153	4,065	3,895
	Passabe	1,748	63	14	1,691	1,263	1,211	1,197	545	1,584	1,149	1,290
Viqueque		**15,115**	**11,743**	**12,623**	**13,032**	**10,662**	**12,759**	**13,268**	**3,144**	**13,090**	**12,800**	**13,096**
	Lacluta	1,257	1,122	1,149	1,194	1,197	1,187	1,119	986	1,039	1,123	1,087
	Ossu	3,769	2,684	2,914	3,084	1,365	2,932	3,354	837	3,221	3,093	3,231
	Uatucarbau	1,561	1,210	1,291	1,331	1,277	1,295	1,339	367	1,344	1,248	1,327
	Viqueque	4,602	3,350	3,759	3,806	3,796	3,821	3,806	239	3,864	3,799	3,838
	Watulari	3,926	3,377	3,510	3,617	3,027	3,524	3,650	715	3,622	3,537	3,613
TIMOR-LESTE		**194,962**	**60,966**	**131,516**	**134,233**	**103,779**	**124,776**	**131,854**	**66,679**	**116,562**	**118,163**	**127,569**

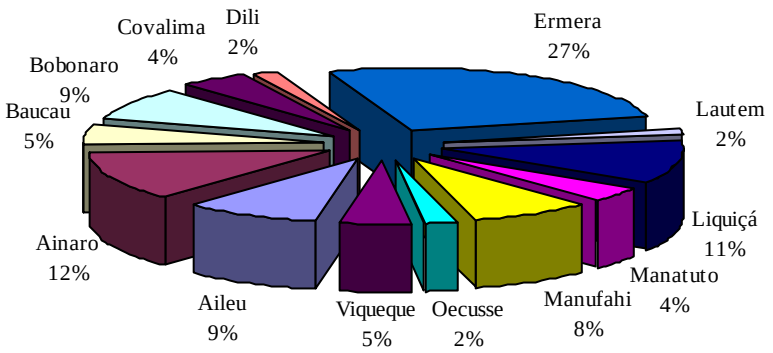
Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

As with livestock ownership, agricultural production is an important variable for the government and the development community to consider in planning the economic and social future of Timor-Leste. Unfortunately the data collected for the census tells us only whether or not households grow certain crops, not how much they grow or how many hectares of land they cultivate. Despite this limitation the crop production data is still useful for helping us understand the domestic and regional economies, which are based on barter and exchange rather than cash, and involve very low levels of inputs and outputs.

Analyzing agricultural production data can give useful insights into the workings of agricultural economies and rural societies and it can also help us understand health issues related to diet and the use of herbicides and pesticides. Certain crops are more important to the economy of Timor-Leste than others. For example, coffee is the main cash crop and rice, cassava and maize are the main staple food crops. In interesting contrast to neighboring Indonesia and most other countries in southeast Asia, more households grow cassava and maize than grow rice in Timor-Leste.

Although census experts are usually not in favor of including questions about crop production and livestock ownership in population and housing censuses, they are so central to Timor-Leste society and the economy that they could not be excluded from the country's first national census.

Chart 7
Proportion of Timor-Leste's Coffee-Growing Households



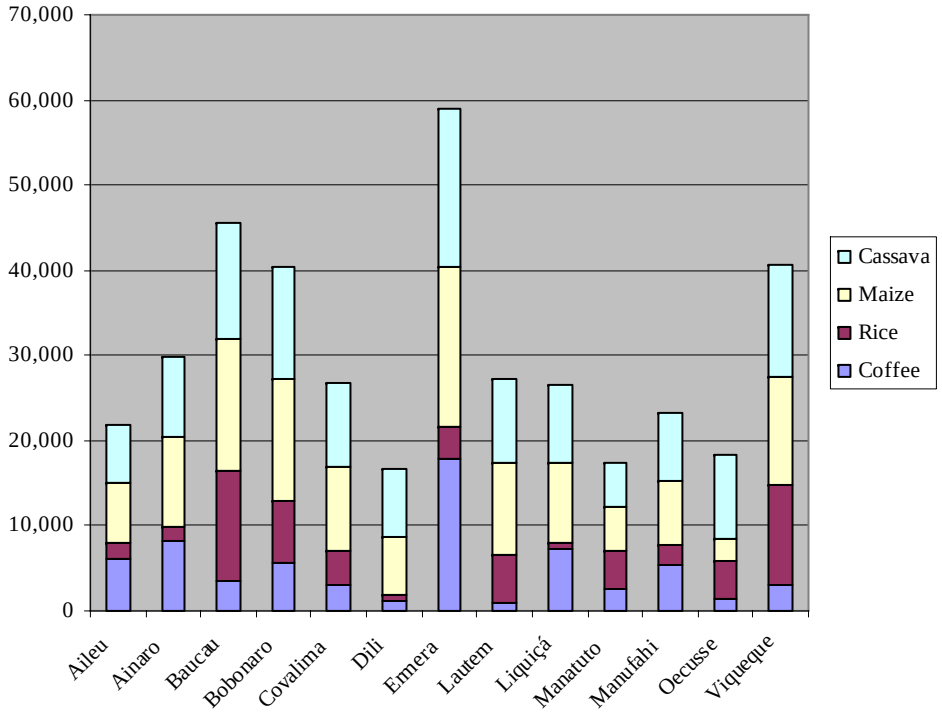
Coffee is Timor-Leste's main cash crop and most of it is grown in the western highlands. Ermera district produces the most coffee and is home to almost 18,000 coffee-growing families, representing 27% of the country's total. Eighty-five percent of families in Ermera district grow some coffee. Aileu, Ainaro, Bobonaro and Liquiçá are also major coffee-growing districts.

The maps, tables and charts in Plates 14 and 15 present data only for the numbers of households growing coffee and rice, respectively, not for quantities of crops produced. This is because the 2004 Census asked households only which crops they grew, not how much of those crops they produced.

Plate 14 — Coffee-Growing Areas

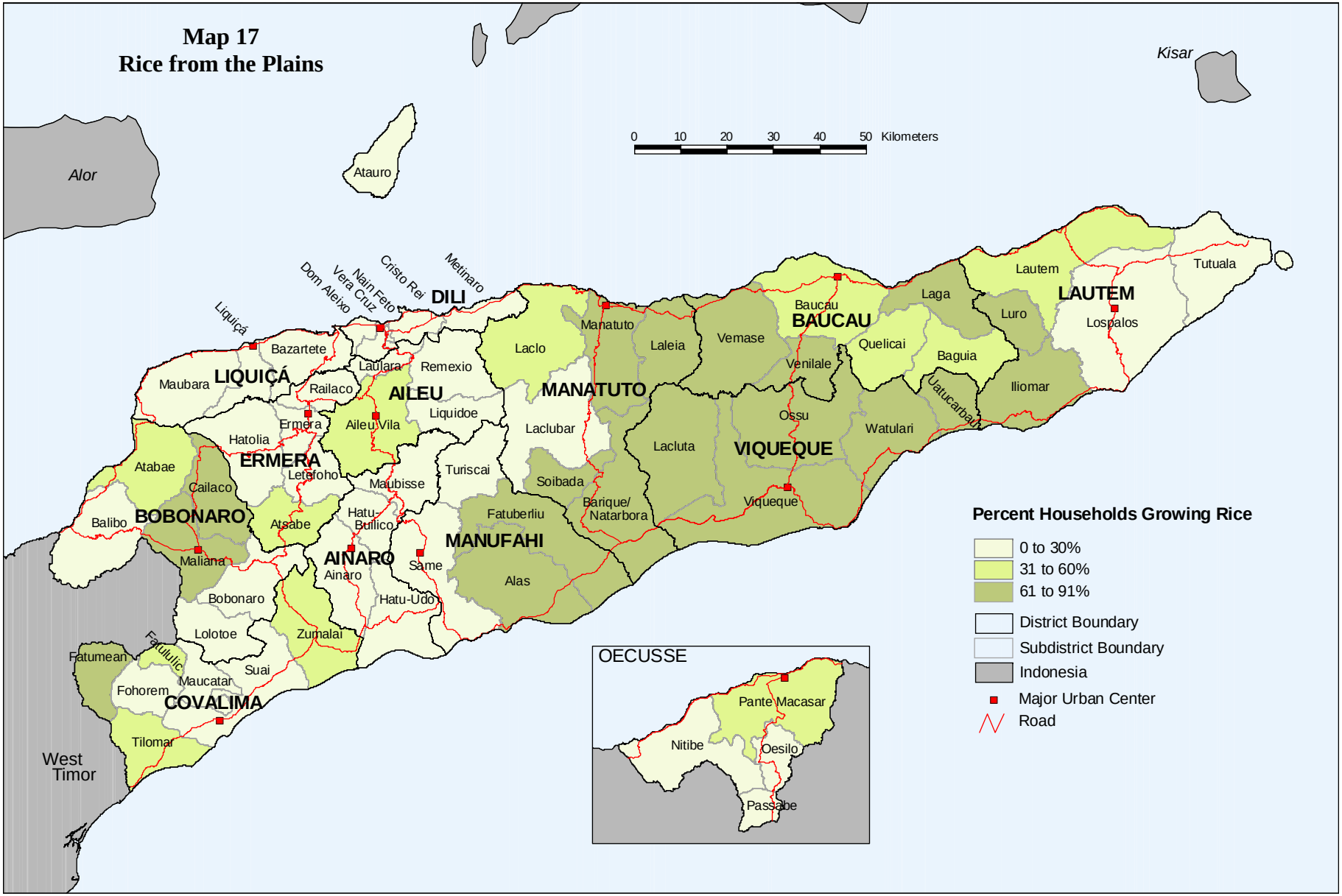
Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Chart 8
Total Number of Households Growing Major Crops



Rice is one of Timor-Leste's staples, and most of the country's rice farmers live in the east. Baucau and Viqueque districts are the largest rice producers, home to more than 40% of Timor-Leste's rice-growing families. Other important crops include cassava and maize, and Ermera district has more families producing these two crops than any other district.

Plate 15 — Rice-Growing Areas

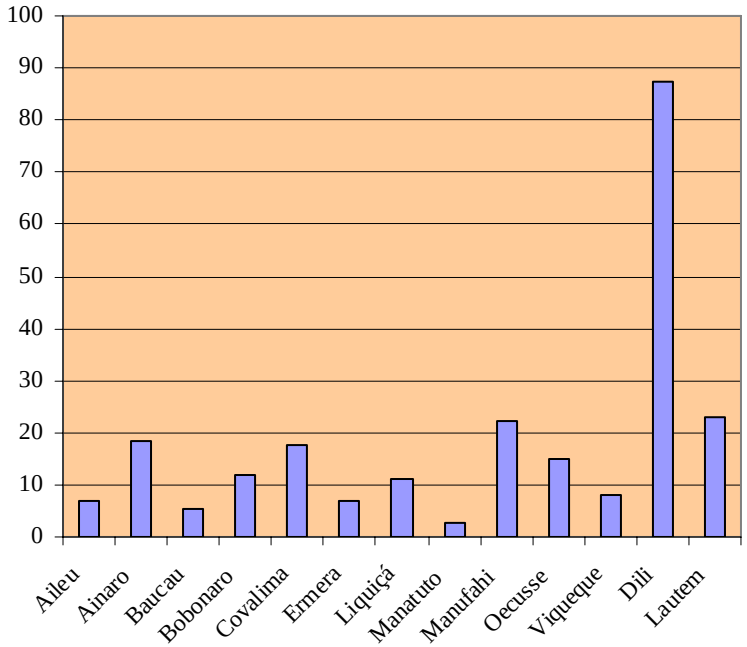


Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

A definition of an urban place that seems to apply most aptly to Timor-Leste is that it is a spatial concentration of people whose lives are organized around non-agricultural activities. What the people who live in the place do is more important than how many of them there are. Thus, by this definition, a farming village of 5,000 people would be considered to be rural, but a resort village of 2,500 people would be considered to be urban (Weeks, 2005). But what proportion of a village's population must be engaged in non-agricultural activities for that village to be considered urban? Classifying places as urban or rural is a complicated and subjective exercise, and people are always unhappy no matter how the terms are defined.

The classification of sucos into urban and rural presented in this plate is the result of an exercise carried out by the National Statistics Directorate (NSD) of the Ministry of Planning and Finance. The purpose of the exercise was to identify places with the most urban characteristics to help apportion central government budget allocations. The method used was partly objective, with each suco receiving a score based on population size, the presence or absence of education, health, market and religious worship facilities, and access to water supply and sanitation, electricity, radio and television, public administration and transportation services. The scoring method was not applied rigorously because it resulted in sucos with small populations in the center of Dili being classified as rural, and every single suco in some outlying districts being classified as rural. Using the scoring analysis as a starting point, NSD waived the requirement for a suco to have a population of more than 5,000 to be considered urban, and they added the requirement that every district should have at least 1 urban suco. Ultimately NSD classified 38 sucos as urban and 404 sucos as rural.

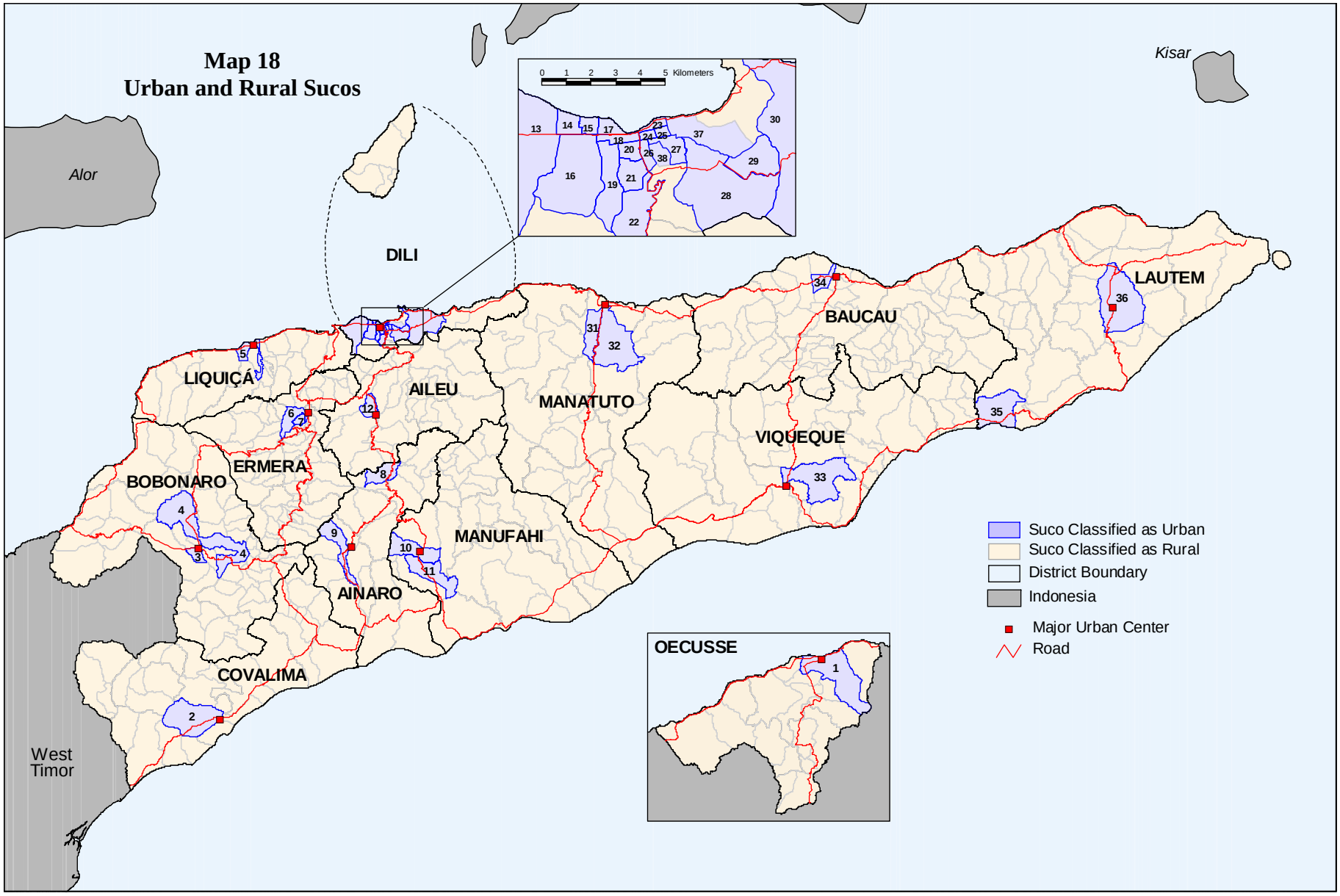
Chart 9
Percentage of Total Population Living in Urban Areas



Based on this classification, Dili district's population is by far the most urban in Timor-Leste at almost 90%. Ainaro, Covalima, Manufahi and Lautem districts form a group in second place, each about 20% urban. Manatuto, at 3%, is the least urbanized district in the country.

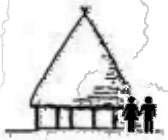
Table 16
Urban Sucos of Timor-Leste

Number	Suco	Subdistrict	District
1	Costa	Pante Macasa	Oecusse
2	Debos	Suai	Covalima
3	Holsa	Maliana	Bobonaro
4	Ritabou	Maliana	Bobonaro
5	Dato	Liquiçá	Liquiçá
6	Poetete	Ermera	Ermera
7	Talimoro	Ermera	Ermera
8	Maubisse	Maubisse	Ainaro
9	Ainaro	Ainaro	Ainaro
10	Letefoho	Same	Manufahi
11	Babulu	Same	Manufahi
12	Seloi Malere	Aileu Vila	Aileu
13	Comoro	Dom Aleixo	Dili
14	Fatuhada	Dom Aleixo	Dili
15	Kampung Alor	Dom Aleixo	Dili
16	Bairro Pite	Dom Aleixo	Dili
17	Motael	Vera Cruz	Dili
18	Colmera	Vera Cruz	Dili
19	Vila Verde	Vera Cruz	Dili
20	Caicoli	Vera Cruz	Dili
21	Macarenhas	Vera Cruz	Dili
22	Lahane Ocidental	Vera Cruz	Dili
23	Bidau Lecidere	Nain Feto	Dili
24	Gricenfor	Nain Feto	Dili
25	Acadiru Hun	Nain Feto	Dili
26	Santa Cruz	Nain Feto	Dili
27	Culu Hun	Cristo Rei	Dili
28	Becora	Cristo Rei	Dili
29	Camea	Cristo Rei	Dili
30	Hera	Cristo Rei	Dili
31	Ailili	Manatuto	Manatuto
32	Aiteas	Manatuto	Manatuto
33	Caraubalo	Viqueque	Viqueque
34	Bahu	Baucau	Baucau
35	Tirilolo	Iliomar	Lautem
36	Fuiloro	Lospalos	Lautem
37	Bidau Santana	Cristo Rei	Dili
38	Bemori	Nain Feto	Dili


Map 18
Urban and Rural Sucos
Alor
Kisar
West Timor
DILI
LIQUIÇÁ
AILEU
MANATUTO
BAUCAU
LAUTEM
VIQUEQUE
ERMERA
BOBONARO
MANUFAHI
AINARO
COVALIMA
OECUSSE
0 1 2 3 4 5 Kilometers
Suco Classified as Urban
Suco Classified as Rural
District Boundary
Indonesia
Major Urban Center
Road

1933
ESCOLA DO REINO DE VEMILALE

Part 5



Languages and Education

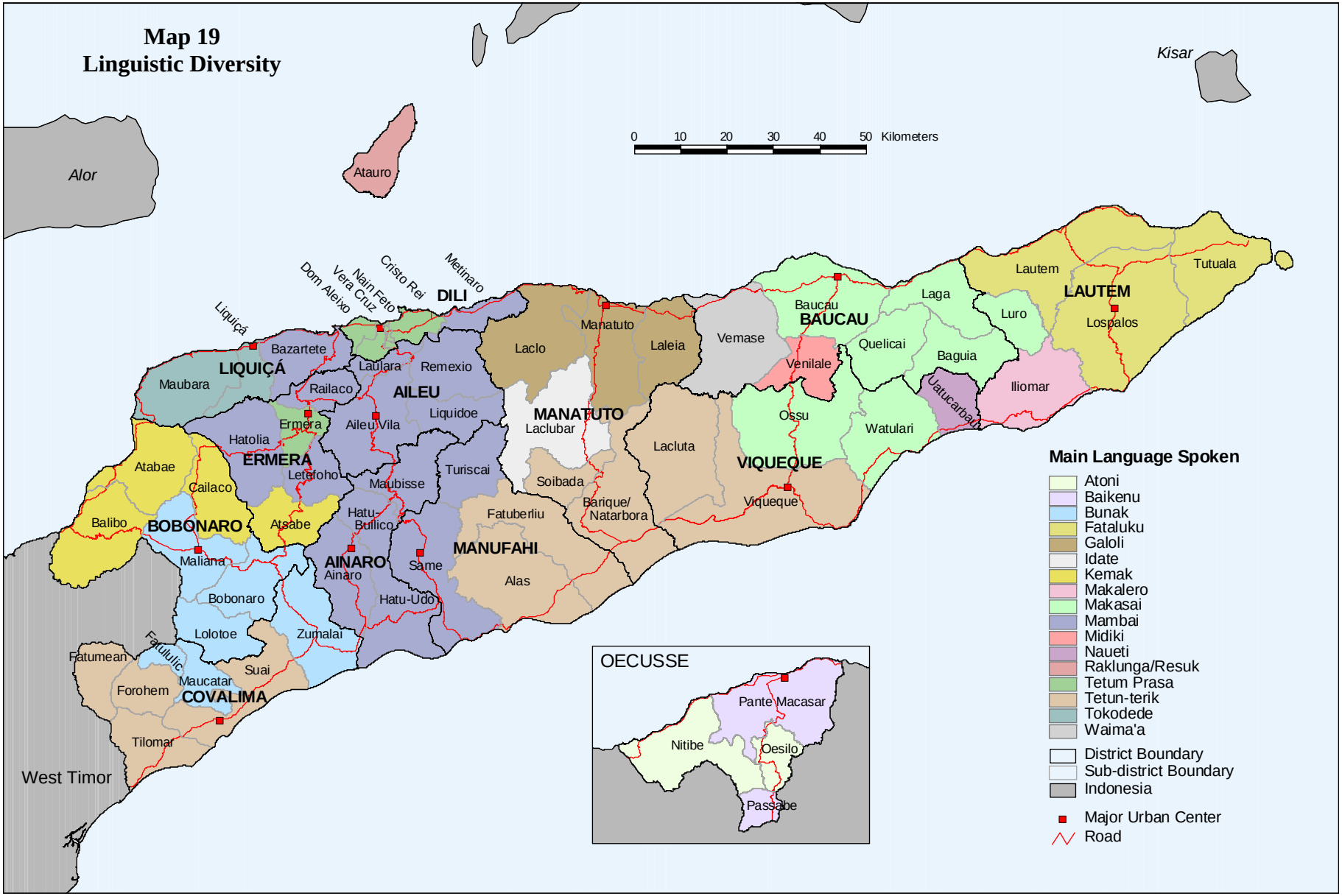
Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Most countries attempt to define their populations in terms of ethnicity, and language is a common characteristic used for this purpose. Planners, policy-makers and researchers are interested in languages and language groups, which, as a proxy for ethnicity, can give valuable insights into a population's economic and demographic characteristics (McKibben, 2004).

Timor-Leste is a small country with a small population, but it's people speak a rich diversity of languages and dialects. Map 19 shows the 17 languages most widely spoken in different parts of the country. Tetum Prasa is not dominant over a wide area, but it is the main language spoken by Dili's educated elite, and thus it has been adopted as one of the country's official languages (Portuguese is the other official language). Languages that are used extensively include Fataluku and Makasai in the east, Tetun-Terik in the southeast and south-central regions, Mambai in the western highlands, and Bunak, Kemak and Tokodede in the west. In contrast, some languages are dominant in only one subdistrict, among them Naueti in Uatucarbau, Idate in Laclubar, Waima'a in Vemase and Midiki in Venilale subsdistrict.

Tetum Prasa and Portuguese may be Timor-Leste's official languages, but they are just a part of the country's linguistic diversity which enriches cultural heritage but presents substantial challenges for economic and social development.

Plate 17 — Local Languages



Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Timor-Leste has two official languages and four working languages. Tetum and Portuguese are the official languages, and these two plus English and Indonesian are the working languages. Tetum and Indonesian are by far the most widely used languages throughout the country, with literacy rates ranging from 17% to just over 80% in each of Timor-Leste's 65 subdistricts. Portuguese ranks third with literacy rates ranging from 4.2% to 34.7%, and English is fourth with between 0.7% and 17.7% claiming some competency at subdistrict level.

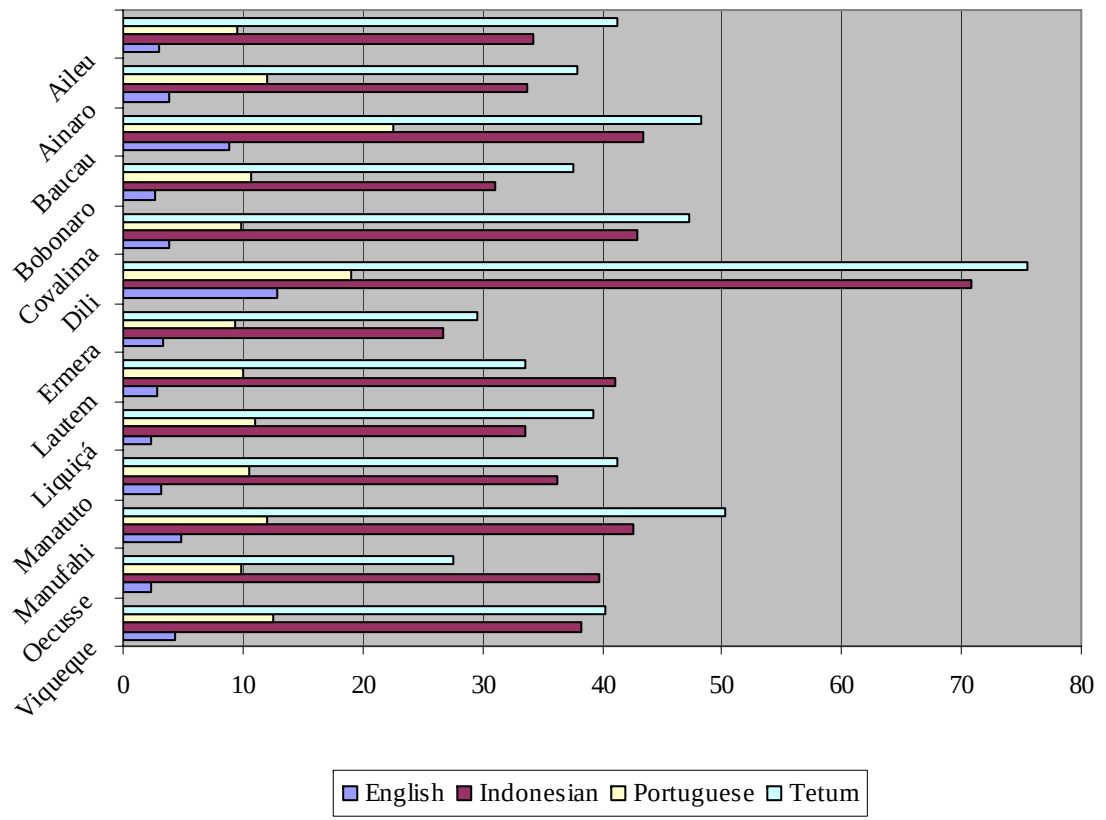
Table 17
Most and Least Proficient Subdistricts in Working Languages

Language	Percent able to Speak, Read or Write	
	Minimum	***Maximum***
Tetum	16.7% Passabe	81.2% Dom Aleixo
Portuguese	4.2 % Lacluta	34.7% Venilale
Indonesian	17.1% Laclubar	80.2% Dom Aleixo
English	0.7% Remexio	17.7% Venilale

In terms of the proportion of the population able to speak, read and write the four working languages, Dili and Baucau are the most literate districts and Dom Aleixo and Venilale are the most literate subdistricts. Oecusse and Ermera have the lowest literacy rates among the districts, whilst Passabe, Lacluta and Remexio appear to be the least literate subdistricts.

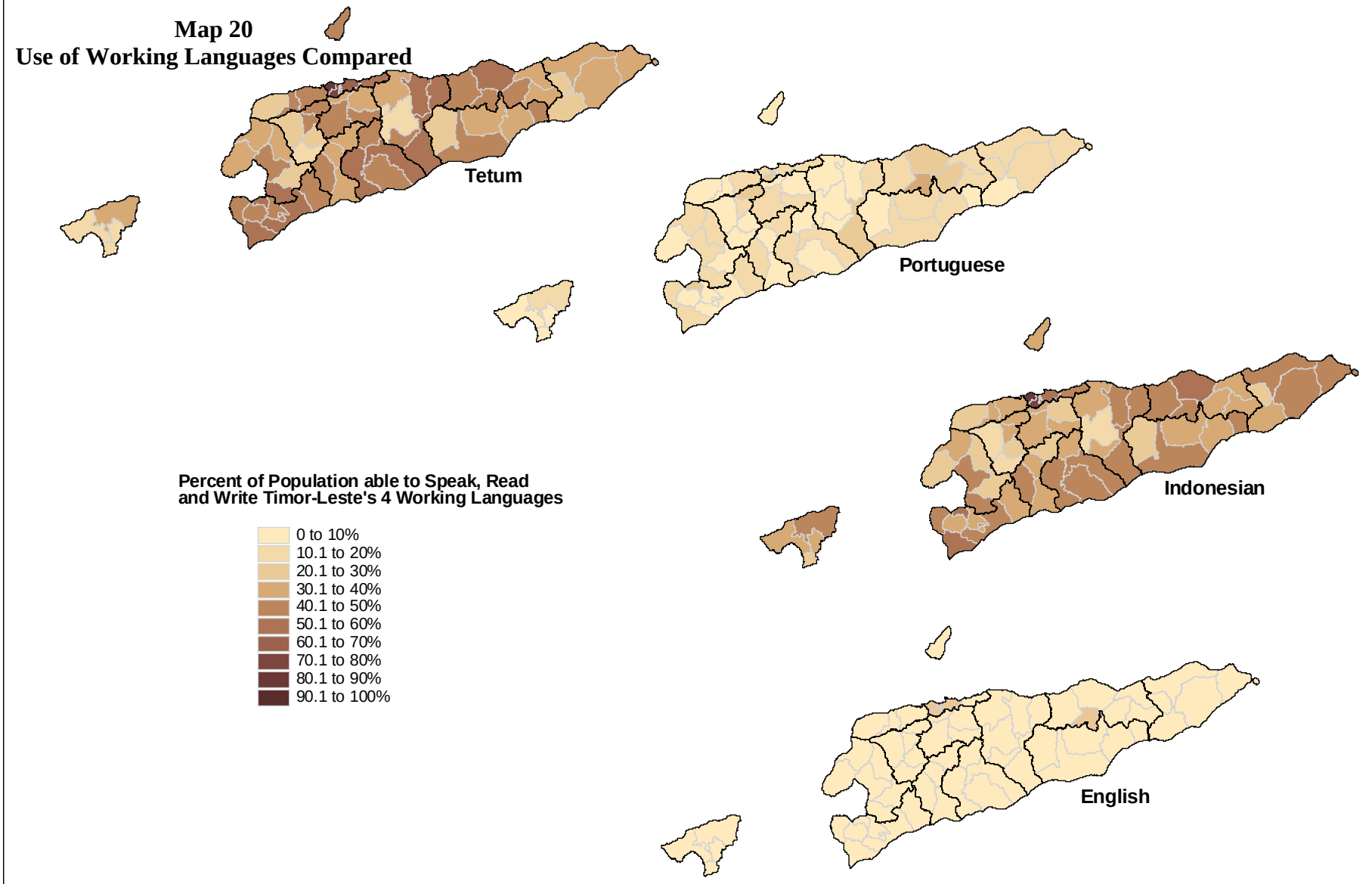
Not surprisingly, Dili is by far the most literate district as far the use of working languages is concerned. Whereas more than 80% of Dili residents use Tetum and Indonesian, fewer than 50% of people in each of the other 12 districts claim competency in these two languages. These numbers highlight both the importance of the local languages in districts outside Dili, and the extent to which Timor-Leste's educated elite are concentrated in and around the national capital.

Chart 10
Percentage of Population able to Speak, Read or Write Working Languages



Countries with serious plans for economic development are becoming increasingly interested in measuring literacy rates for their populations. A country's literacy level is closely related to its economic performance and its potential for economic growth (O'Hare, Pollard and Ritualo, 2004).

Map 20
Use of Working Languages Compared



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Portuguese is the language of the governing elite, but even in Dili district, Portuguese is used by more than 20% of the people in only 1 of the 6 subdistricts. Only 7 of Timor-Leste's 65 districts have Portuguese literacy rates higher than 20%, whilst in 42 subdistricts they are less than 15%. Though the language is not widely used anywhere in the country, its use is certainly more common in the east than in the west. All 26 subdistricts with less than 10% literacy in Portuguese are in the western half of the country, probably because Indonesian influences were stronger there, particularly between 1975 and 1999, and Indonesian replaced Portuguese as a working language faster than it did in the more remote eastern half of the country.

Table 18
Language Use, by District and Subdistrict

District	Subdistrict	Most Widely Spoken Language(s)	Tetum	Portugeuse	Indonesian	English
BAUCAU		**Makasai**	**48.3**	**22.6**	**43.4**	**8.9**
	Baguia	Makasai	39.8	19.7	34.6	6.9
	Baucau	Makasai	59.9	20.8	52.4	8.7
	Laga	Makasai	33.7	16.6	30.7	6.2
	Quelicai	Makasai	40.5	28.7	39.0	7.7
	Vemase	Waima'a	46.9	12.0	42.9	4.6
	Venilale	Midiki	48.0	34.7	43.5	17.7
LAUTEM		**Fataluku**	**33.5**	**10.1**	**41.1**	**2.9**
	Iliomar	Makalero	27.8	5.0	31.1	2.0
	Lautem	Fataluku	32.8	10.8	42.0	2.6
	Lospalos	Fataluku	38.2	10.3	45.6	3.4
	Luro	Makasai	24.0	11.4	29.0	2.7
	Tutuala	Fataluku	30.2	13.5	45.7	2.5
VIQUEQUE		**Makasai**	**40.3**	**12.5**	**38.3**	**4.4**
	Lacluta	Tetun-terik	24.9	4.2	23.6	0.7
	Ossu	Makasai	37.7	14.6	35.8	5.3
	Uatucarbau	Naueti	41.1	7.0	41.7	1.7
	Watulari	Makasai	39.0	11.3	38.8	2.7
	Viqueque	Tetun-terik	47.1	15.9	42.7	7.0
AINARO		**Mambai**	**37.9**	**12.0**	**33.7**	**3.8**
	Ainaro	Mambai	47.4	14.2	42.6	4.6
	Hatu-Builico	Mambai	34.6	9.7	30.1	2.3
	Hatu-Udo	Mambai	39.8	9.7	35.2	3.0
	Maubisse	Mambai	32.9	12.9	29.4	4.4
MANATUTO		**Galoli/Idate**	**41.2**	**10.5**	**36.2**	**3.1**
	Barique/Natarbora	Tetun-terik	51.1	23.7	46.4	7.1
	Laclo	Galoli	35.0	6.5	32.6	2.5
	Laclubar	Idate	19.2	6.7	17.1	1.8
	Laleia	Galoli	57.2	15.0	44.1	3.2
	Manatuto	Galoli	51.7	9.2	47.2	2.7
	Soibada	Tetun-terik	44.2	8.7	30.9	2.3
MANUFAHI		**Mambai/Tetum-terik**	**50.3**	**12.0**	**42.6**	**4.8**
	Alas	Tetun-terik	47.6	7.9	41.1	3.1
	Fatuberliu	Tetun-terik	51.6	12.1	44.2	3.9
	Same	Mambai	52.0	13.9	44.7	6.0
	Turiscai	Mambai	43.9	8.0	33.7	2.7
AILEU		**Mambai**	**41.2**	**9.5**	**34.2**	**3.0**
	Aileu Vila	Mambai	43.7	12.0	39.2	4.1
	Laulara	Mambai	38.4	8.9	30.7	4.0
	Liquidoe	Mambai	42.1	11.1	35.2	2.7
	Remexio	Mambai	37.8	4.5	26.6	0.7

Table 18
Language Use, by District and Subdistrict

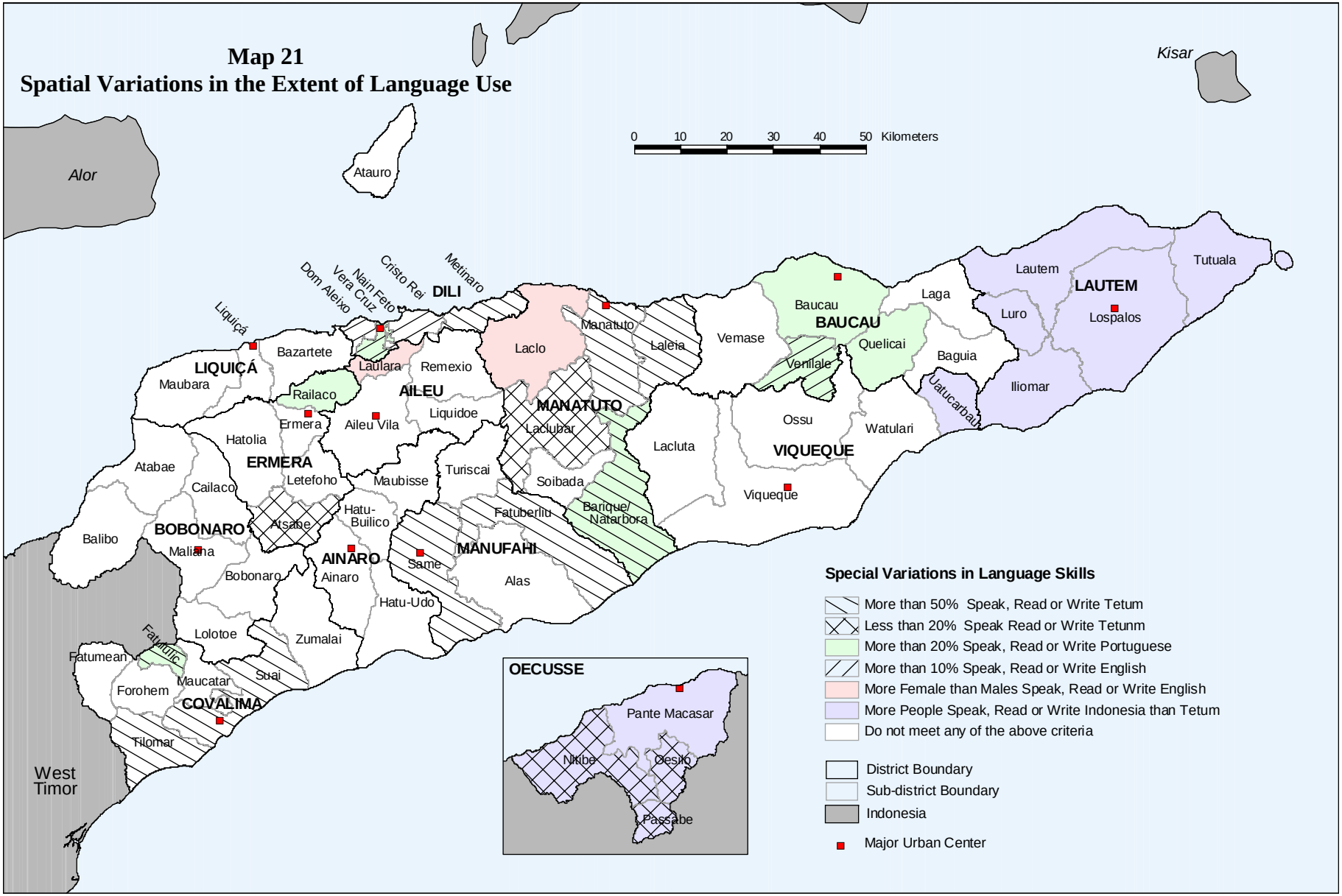
District	Subdistrict	Most Widely Spoken Language(s)	Tetum	Portugeuse	Indonesian	English
DILI		**Tetum Prasa**	**75.5**	**19.1**	**70.8**	**12.9**
	Atauro	Raklunga/Resuk	46.9	7.4	38.7	1.6
	Cristo Rei	Tetum Prasa	66.4	15.9	59.8	10.4
	Dom Aleixo	Tetum Prasa	81.2	19.3	80.2	16.4
	Metinaro	Mambai	55.0	14.5	44.8	4.3
	Nain Feto	Tetum Prasa	78.8	21.1	72.5	11.2
	Vera Cruz	Tetum Prasa	78.5	23.1	71.8	13.7
ERMERA		**Mambai**	**29.6**	**9.4**	**26.7**	**3.4**
	Atsabe	Kemak	19.7	4.8	18.2	1.8
	Ermera	Tetum Prasa	40.4	13.2	36.2	5.1
	Hatolia	Mambai	21.6	4.9	18.5	1.3
	Letefoho	Mambai	27.8	9.1	27.1	3.6
	Railaco	Mambai	45.1	21.3	39.1	8.1
BOBONARO		**Kemak**	**37.5**	**10.7**	**31.0**	**2.7**
	Atabae	Kemak	35.0	11.3	30.6	2.6
	Balibo	Kemak	31.9	6.3	29.0	2.2
	Bobonaro	Bunak	28.7	7.7	21.1	1.7
	Cailaco	Kemak	31.3	19.2	26.0	3.9
	Lolotoe	Bunak	57.9	15.8	43.3	2.9
	Maliana	Bunak	46.9	11.4	40.6	3.5
COVALIMA		**Bunak/Tetun-terik**	**47.3**	**9.9**	**42.9**	**3.8**
	Fatululic	Bunak	55.2	23.5	53.3	3.5
	Fatumean	Tetun-terik	48.4	14.5	45.8	3.4
	Fohorem	Tetun-terik	42.0	9.1	36.8	3.2
	Zumalai	Bunak	41.5	12.6	36.4	5.4
	Suai	Tetun-terik	50.8	6.2	47.0	2.4
	Tilomar	Tetun-terik	53.5	12.3	51.4	6.6
	Maucatar	Bunak	43.7	6.6	35.0	2.2
LIQUIÇÁ		**Tokodede**	**39.2**	**11.0**	**33.6**	**2.4**
	Bazartete	Mambai	46.5	15.9	38.0	3.7
	Liquiçá	Tokodede	41.8	8.4	36.5	1.9
	Maubara	Tokodede	27.5	8.1	25.1	1.3
OECUSSE		**Baikenu**	**27.5**	**9.9**	**39.8**	**2.3**
	Nitibe	Atoni	18.0	6.6	32.7	1.5
	Oesilo	Atoni	17.5	8.3	34.0	2.0
	Pante Macasar	Baikenu	36.9	11.6	47.9	2.8
	Passabe	Baikenu	16.7	10.0	25.6	2.2
Timor-Leste		Tetum Prasa	**46.2**	**13.6**	**43.3**	**5.8**

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Map 21 highlights some interesting spatial variations in the use of Timor-Leste's working languages. For example, though Tetum is one of the country's official languages, less than 20% of the population in several subdistricts can speak, read or write it. Tetum is little used in Oecusse district, where less than 20% of the population speaks, reads or writes it in three of the four subdistricts. The same is true of Atsabe subdistrict in Ermera district and Laclubar subdistrict in Manatuto district. Throughout Oecusse and Lautem districts, more people speak, read or write Indonesian than Tetum.

Venilale is a particularly interesting subdistrict in that it has the highest literacy rates for both Portuguese and English. This probably stems from the fact that, historically, teachers in Venilale's secondary schools came from the local convent, and many of them were natives of Portugal, Italy, Spain, the Philippines and other countries. Naturally the people of Venilale have been exposed to a range of different languages over an extended period of time, Portuguese and English being among the most frequently used there. It is still somewhat surprising that such a remote part of the country should have a higher proportion of Portuguese and English speakers than even Dili has

In the census questionnaire respondents were asked two questions about language. First, they were asked what was there mother tongue, and second they were asked which of the 4 working languages they could speak, read or write. Options for mother tongue included Tetum Prasa and Tetun-terik, but for the working languages question no distinction was made between the two forms of Tetum. The number of people who declared they could read, write or speak Tetum therefore includes people who use Tetum Prasa, people who use Tetun-terik, and people who use both.


Map 21
Spatial Variations in the Extent of Language Use
0 10 20 30 40 50 Kilometers
Alor
Kisar
Atauro
West Timor
DILI
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
Liquiçá
LIQUIÇÁ
Maubara
Bazartete
Laulara
Remexio
AILEU
Railaco
Ermera
Aileu Vila
Liquidoe
Laclo
Manatuto
Laleia
MANATUTO
Laclubar
Vemase
Baucau
BAUCAU
Quelicai
Venilale
Laga
Baguia
Lautem
LAUTEM
Luro
Lospalos
Tutuala
Iliomar
Uatucarbau
Ossu
Watulari
VIQUEQUE
Lacluta
Viqueque
Hatolia
ERMERA
Atabae
Cailaco
Letefoho
Maubisse
Turiscai
Soibada
Barique/
Natarbora
Hatu-
Builico
Atsabe
Fatuberliu
BOBONARO
Balibo
Maliana
Bobonaro
AINARO
Ainaro
Same
MANUFAHI
Alas
Hatu-Udo
Lolotoe
Zumalai
Fatumean
Fatuatuic
Suai
Maucatar
Forohem
COVALIMA
Tilomar
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Special Variations in Language Skills
More than 50% Speak, Read or Write Tetum
Less than 20% Speak Read or Write Tetunm
More than 20% Speak, Read or Write Portuguese
More than 10% Speak, Read or Write English
More Female than Males Speak, Read or Write English
More People Speak, Read or Write Indonesia than Tetum
Do not meet any of the above criteria
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Illiteracy is a major problem for Timor-Leste, and it stems from a history of inadequate provision of education and general oppression by occupying powers. More than 400,000 of the 741,530 people older than 6 years of age are illiterate, according to the definition of the term "illiterate" used by the U.N. (see footnote). That means that more than half of the country's population cannot read and write in Tetum, Portuguese, Indonesian or English. The problem of illiteracy is not evenly distributed either geographically or by sex.

Not surprisingly, Dili district has by far the lowest illiteracy rates of any district in Timor-Leste, with only 25.8% of the total population over the age of six years unable to both read and write in at least one of the country's four working languages. More than half the population in each of the other twelve districts is illiterate, with Ermera scoring the highest rate at 71.1%.

Table 19
Illiteracy, by District

District	Population			Number Illiterate			Percent Illiterate		
	Total	Female	Male	Total	Female	Male	Total	Female	Male
Dili	141,783	65,723	76,060	36,522	19,123	17,399	25.8	29.1	22.9
Manufahi	36,121	17,713	18,408	18,757	9,744	9,013	51.9	55.0	49.0
Baucau	81,601	40,803	40,798	43,188	23,032	20,156	52.9	56.4	49.4
Covalima	42,743	21,417	21,326	23,221	12,409	10,812	54.3	57.9	50.7
Manatuto	29,776	14,758	15,018	18,051	9,380	8,671	60.6	63.6	57.7
Aileu	30,507	14,707	15,800	18,593	9,474	9,119	60.9	64.4	57.7
Viqueque	52,309	26,859	25,450	31,932	17,736	14,196	61.0	66.0	55.8
Lautem	44,359	22,956	21,403	27,121	15,133	11,988	61.1	65.9	56.0
Oecusse	46,234	23,347	22,887	28,618	14,969	13,649	61.9	64.1	59.6
Liquiçá	44,839	22,139	22,700	27,770	14,806	12,964	61.9	66.9	57.1
Ainaro	41,536	20,552	20,984	26,149	13,448	12,701	63.0	65.4	60.5
Bobonaro	67,217	34,056	33,161	43,093	23,198	19,895	64.1	68.1	60.0
Ermera	82,505	40,799	41,706	58,640	30,635	28,005	71.1	75.1	67.1
Timor-Leste	**741,530**	**365,829**	**375,701**	**401,655**	**213,087**	**188,568**	**54.2**	**58.2**	**50.2**

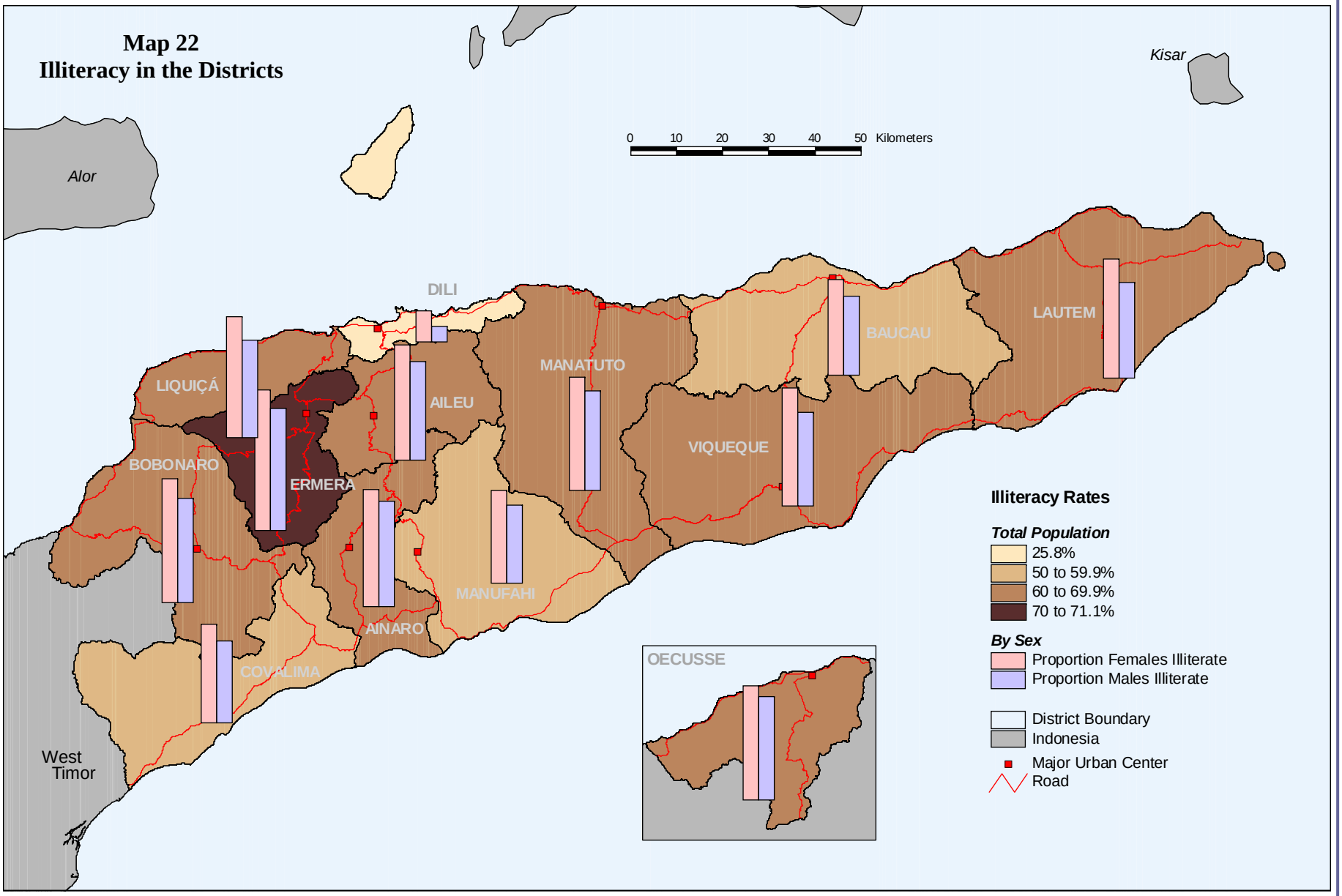
Female illiteracy rates are consistently higher than rates for males. Dili has the lowest rates for both sexes, but the proportion of illiterates is some 6 percentage points higher for females than it is for males. By far the highest illiteracy rates are recorded for Ermera district where 67.1% of males and 75.1% of females cannot both read and write at least one of the working languages. The biggest differences between the sexes are in eastern districts, where female literacy trails male literacy by 10.3 percentage points in Viqueque and 9.9 percentage points in Lautem.

Though illiteracy rates in Oecusse are high for both sexes, females fall only 4.9 percentage points behind males, making the exclave the most equitable district in the country as far as literacy is concerned. The disadvantages faced by females in language proficiency are mirrored in their access to high school education, as discussed in Plate 20.

In Timor-Leste, 27% of people between the ages of 15 and 24 are illiterate; the rate rises to 54% for people aged 6 and older. The generally high level of illiteracy is a serious limitation to the country's prospects for socioeconomic development and increasing literacy is a major challenge. Nevertheless, one of Timor-Leste's Millennium Development Goals is that, by 2015, 100% of 15-24-year-olds will be literate.

Timor-Leste has formally adopted the Millennium Declaration, a United Nations initiative that was passed by 189 other countries in September 2000. The Millennium Declaration aims to "create an environment, at the national and global levels alike, which is conducive to development and the elimination of poverty". There are 16 targets grouped into 8 goals. Goal 2 is related to education (Republica Democratica de Timor-Leste and United Nations Country Team, 2004).

In this atlas we consider anyone 6 years and older who is unable to **both read and write any of Timor-Leste's four working languages** (Tetum, Portuguese, Indonesian or English) to be illiterate. This is based on the standard definition used by the U.N. (United Nations, 1998).


Map 22
Illiteracy in the Districts
Kisar
Alor
0 10 20 30 40 50 Kilometers
DILI
LIQUIÇÁ
AILEU
MANATUTO
BAUCAU
LAUTEM
VIQUEQUE
BOBONARO
ERMERA
MANUFAHI
AINARO
COVALIMA
OECUSSE
West Timor
Illiteracy Rates
Total Population
25.8%
50 to 59.9%
60 to 69.9%
70 to 71.1%
By Sex
Proportion Females Illiterate
Proportion Males Illiterate
District Boundary
Indonesia
Major Urban Center
Road

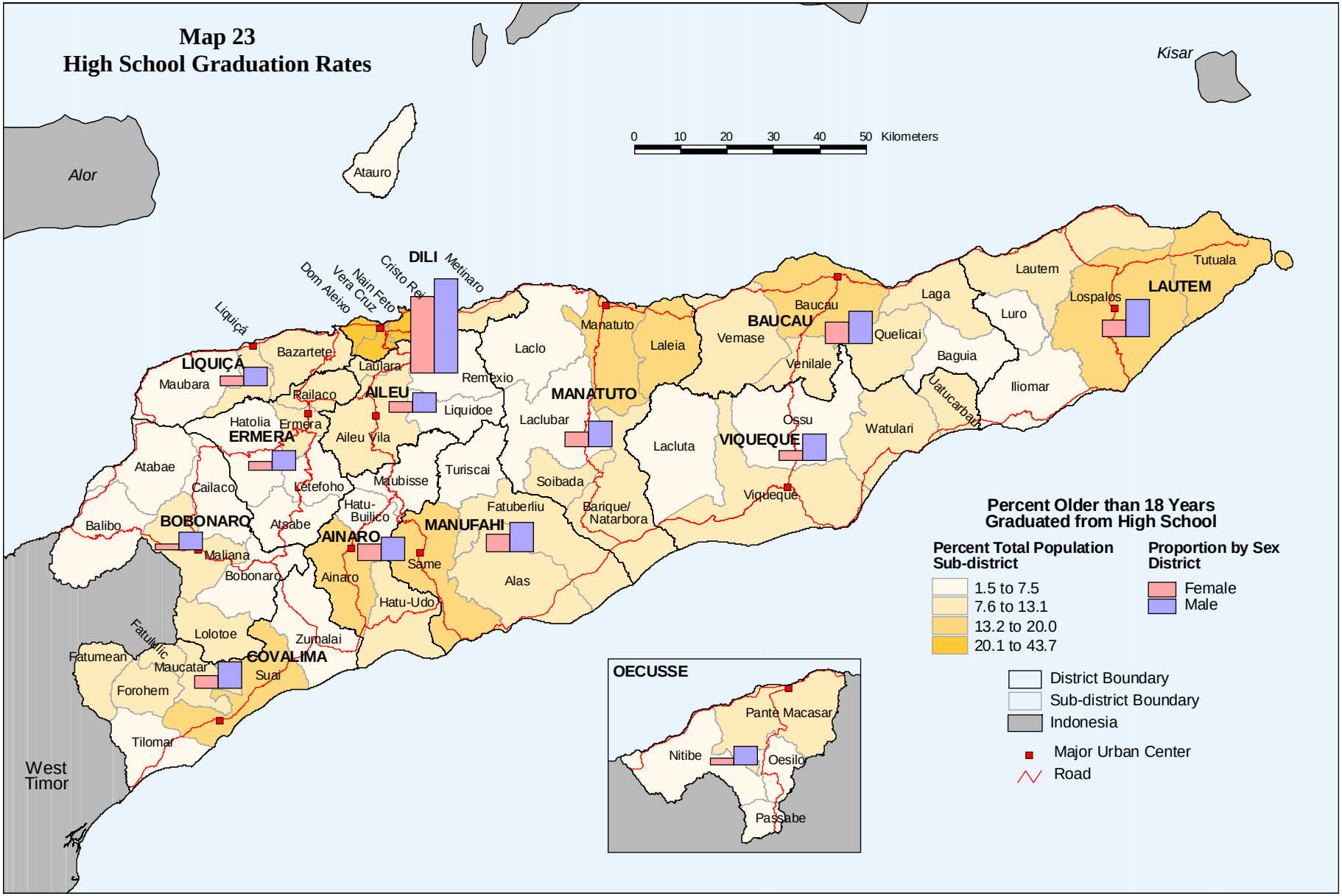
Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

The proportion of a population that has graduated from high school is one measure of the level of education in a country, and by this measure Timor-Leste scores very poorly. The proportion of the population over 18 years of age that has received a high school diploma is less than 50% in every single subdistrict, with the mean for the country as a whole at only 15.3%. Only 10 of Timor-Leste's 65 subdistricts have an above-average percentage of high-school graduates. In terms of graduation among males and females combined, subdistricts in Dili district have the highest graduation rates, with Dom Aleixo topping the list at 43.7%, followed by Nain Feto (42.5%), Vera Cruz (39.2 %) and Cristo Rei (28.8%). At the other end of the scale, high school graduation rates are poorest in Oecusse district, where 3 of the bottom 4 subdistricts are located. Passabe has the lowest percentage of graduates, with only 1.5% of the population older than 18 years of age holding a high school diploma. Nitibe (3.4%) has a slightly better graduation record, as does Bobonaro (3.5%) and Oesilo (3.7%) subdistricts.

Table 20
High School Graduation, by Sex and by District

District	Population Older than 18 Years			Number Graduated from High School			Percent Graduated from High School		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Dili	94,427	51,588	42,839	35,644	21,173	14,471	37.7	41.0	33.8
Baucau	50,819	24,843	25,976	6,517	3,785	2,732	12.8	15.2	10.5
Lautem	26,809	12,363	14,446	3,388	2,122	1,266	12.6	17.2	8.8
Manufahi	22,172	11,245	10,927	2,620	1,588	1,032	11.8	14.1	9.4
Manatuto	18,538	9,124	9,414	1,907	1,141	766	10.3	12.5	8.1
Covalima	25,994	12,761	13,233	2,643	1,666	977	10.2	13.1	7.4
Ainaro	25,151	12,527	12,624	2,509	1,431	1,078	10.0	11.4	8.5
Viqueque	33,683	15,930	17,753	3,208	2,084	1,124	9.5	13.1	6.3
Aileu	17,595	9,133	8,462	1,461	924	537	8.3	10.1	6.3
Ermera	47,910	24,067	23,843	3,787	2,426	1,361	7.9	10.1	5.7
Liquiçá	26,775	13,423	13,352	2,056	1,268	788	7.7	9.4	5.9
Oecusse	29,945	14,486	15,459	2,086	1,378	708	7.0	9.5	4.6
Bobonaro	42,519	20,662	21,857	2,837	1,889	948	6.7	9.1	4.3
Timor-Leste	**462,337**	**232,152**	**230,185**	**70,663**	**42,875**	**27,788**	**15.3**	**18.5**	**12.1**

Comparing high school graduation between males and females, males have better access to high school education throughout the country. Map 23 shows comparisons for the sexes at the district level, clearly showing that a higher proportion of male graduates in all 13 districts. The biggest difference is in Lautem district, where the proportion of male graduates is 8.4 percentage points higher than the proportion of female graduates. In Dili district the graduation rate for males is 7.3 percentage points higher than it is for females, and in Viqueque district it is 6.8 percentage points higher. In relative terms, females have the best chance of graduating from high school in Ainaro district, where the proportion of graduates is only 2.9 percentage points fewer than it is for males. Having said that, with only 11.4% of males and 8.5% of females graduating from high school, educational opportunities in Ainaro are, as they are in most of the rest of the country, extremely limited. Dili, at 41% of males and 33.8% of females, provides far and away the best opportunity for Timor-Leste's teenagers to get a high school education.


Map 23
High School Graduation Rates
Kisar
Alor
Atauro
0 10 20 30 40 50 Kilometers
DILI
Metinaro
Cristo Rei
Nain Feto
Vera Cruz
Dom Aleixo
Liquiçá
LIQUIÇÁ
Maubara
Bazartete
Laulara
Railaco
AILEU
Aileu Vila
Liquidoe
Remexio
Hatolia
Ermera
ERMERA
Atabae
Cailaco
Letefoho
Maubisse
Turiscai
Hatu-Builico
Atsabe
BOBONARO
Balibo
Maliana
Bobonaro
AINARO
Ainaro
Same
MANUFAHI
Alas
Fatuberliu
Hatu-Udo
Laclo
Manatuto
Laleia
MANATUTO
Laclubar
Soibada
Barique/
Natarbora
Lacluta
BAUCAU
Vemase
Baucau
Quelicai
Venilale
Laga
Baguia
Luro
Lautem
Tutuala
LAUTEM
Lospalos
Iliomar
Uatucarbau
VIQUEQUE
Ossu
Watulari
Viqueque
Lolotoe
Zumalai
COVALIMA
Suai
Maucatar
Fatumean
Fatululic
Forohem
Tilomar
West
Timor
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Percent Older than 18 Years
Graduated from High School
Percent Total Population
Sub-district
1.5 to 7.5
7.6 to 13.1
13.2 to 20.0
20.1 to 43.7
Proportion by Sex
District
Female
Male
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Table 21
High School Graduation, by Sex and by Subdistrict

Subdistrict	Population Older than 18 Years			Number Graduated from High School			Percent Graduated from High School		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Dom Aleixo	36,349	20,465	15,884	15,897	9,527	6,370	43.7	46.6	40.1
Nain Feto	16,538	8,958	7,580	7,031	4,083	2,948	42.5	45.6	38.9
Vera Cruz	18,788	10,140	8,648	7,359	4,279	3,080	39.2	42.2	35.6
Cristo Rei	16,976	9,184	7,792	4,891	2,944	1,947	28.8	32.1	25.0
Baucau	18,898	9,427	9,471	3,789	2,120	1,669	20.0	22.5	17.6
Ainaro	6,099	3,037	3,062	1,154	641	513	18.9	21.1	16.8
Lospalos	12,036	5,561	6,475	2,013	1,184	829	16.7	21.3	12.8
Laleia	1,681	812	869	277	161	116	16.5	19.8	13.3
Manatuto	5,448	2,701	2,747	892	505	387	16.4	18.7	14.1
Tutuala	1,808	814	994	285	171	114	15.8	21.0	11.5
Suai	9,180	4,554	4,626	1,397	861	536	15.2	18.9	11.6
Same	13,161	6,643	6,518	1,776	1,052	724	13.5	15.8	11.1
Viqueque	10,640	5,227	5,413	1,393	888	505	13.1	17.0	9.3
Metinaro	1,687	873	814	199	129	70	11.8	14.8	8.6
Maliana	11,189	5,484	5,705	1,316	843	473	11.8	15.4	8.3
Railaco	4,171	2,130	2,041	481	303	178	11.5	14.2	8.7
Ermera	12,823	6,526	6,297	1,460	931	529	11.4	14.3	8.4
Uatucarbau	3,310	1,557	1,753	361	246	115	10.9	15.8	6.6
Barique/Natarbora	2,406	1,205	1,201	261	185	76	10.8	15.4	6.3
Pante Macasar	15,372	7,509	7,863	1,645	1,048	597	10.7	14.0	7.6
Alas	3,183	1,611	1,572	335	216	119	10.5	13.4	7.6
Lautem	6,555	3,029	3,526	686	479	207	10.5	15.8	5.9
Soibada	1,278	623	655	133	80	53	10.4	12.8	8.1
Liquiçá	8,759	4,431	4,328	895	539	356	10.2	12.2	8.2
Fatululic	863	422	441	88	63	25	10.2	14.9	5.7
Fatuberliu	3,060	1,556	1,504	311	199	112	10.2	12.8	7.4
Venilale	7,376	3,631	3,745	744	460	284	10.1	12.7	7.6
Laulara	2,495	1,296	1,199	248	145	103	9.9	11.2	8.6
Lolotoe	3,592	1,736	1,856	346	230	116	9.6	13.2	6.3
Maucatar	2,845	1,392	1,453	274	171	103	9.6	12.3	7.1
Aileu Vila	8,097	4,188	3,909	759	470	289	9.4	11.2	7.4
Fatumean	1,543	741	802	143	95	48	9.3	12.8	6.0
Hatu-Udo	4,367	2,191	2,176	393	223	170	9.0	10.2	7.8

Educational attainment is a key indicator of the general educational level of a population. For a country to develop economically, its workforce must move beyond basic literacy and primary education. One way of determining the extent to which a country is achieving this goal is to monitor changes in the proportion of its population that has graduated from secondary school.

The educational attainment data collected for the 2004 census are suitable for many different studies and applications. Examples include examining the relationship between education and employment and occupational placement, looking at the educational characteristics of the labor force, and calculating the economic returns on education. Other studies might look at the relationship between educational attainment and fertility, mortality, migration, urbanization and other socio-demographic processes.

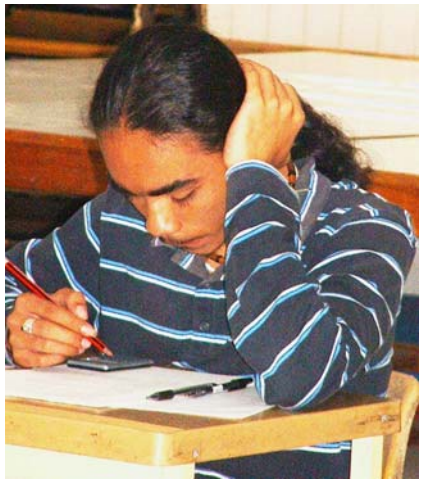


Plate 20 — High School Education

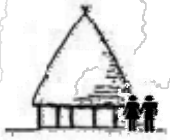
Table 21
High School Graduation, by Sex and by Subdistrict

Subdistrict	Population Older than 18 Years			Number Graduated from High School			Percent Graduated from High School		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Vemase	4,480	2,257	2,223	395	248	147	8.8	11.0	6.6
Bazartete	9,460	4,732	4,728	822	495	327	8.7	10.5	6.9
Fohorem	2,077	1,015	1,062	180	123	57	8.7	12.1	5.4
Laga	7,416	3,587	3,829	621	363	258	8.4	10.1	6.7
Quelicai	8,157	3,839	4,318	671	415	256	8.2	10.8	5.9
Watulari	8,838	4,078	4,760	712	478	234	8.1	11.7	4.9
Remexio	4,327	2,262	2,065	325	213	112	7.5	9.4	5.4
Ossu	8,077	3,644	4,433	603	364	239	7.5	10.0	5.4
Iliomar	3,382	1,503	1,879	246	172	74	7.3	11.4	3.9
Atsabe	7,938	3,845	4,093	577	368	209	7.3	9.6	5.1
Hatu-Builico	5,283	2,607	2,676	383	229	154	7.2	8.8	5.8
Turiscai	2,768	1,435	1,333	198	121	77	7.2	8.4	5.8
Letefoho	9,353	4,739	4,614	634	394	240	6.8	8.3	5.2
Baguia	4,492	2,102	2,390	297	179	118	6.6	8.5	4.9
Atauro	4,089	1,968	2,121	267	211	56	6.5	10.7	2.6
Zumalai	6,374	3,094	3,280	412	262	150	6.5	8.5	4.6
Maubisse	9,402	4,692	4,710	579	338	241	6.2	7.2	5.1
Balibo	7,282	3,582	3,700	412	274	138	5.7	7.6	3.7
Luro	3,028	1,456	1,572	158	116	42	5.2	8.0	2.7
Lacluta	2,818	1,424	1,394	139	108	31	4.9	7.6	2.2
Laclo	3,629	1,836	1,793	177	110	67	4.9	6.0	3.7
Liquidoe	2,676	1,387	1,289	129	96	33	4.8	6.9	2.6
Tilomar	3,112	1,543	1,569	149	91	58	4.8	5.9	3.7
Hatolia	13,625	6,827	6,798	635	430	205	4.7	6.3	3.0
Cailaco	4,275	2,071	2,204	187	137	50	4.4	6.6	2.3
Laclubar	4,096	1,947	2,149	167	100	67	4.1	5.1	3.1
Maubara	8,556	4,260	4,296	339	234	105	4.0	5.5	2.4
Atabae	4,699	2,389	2,310	178	121	57	3.8	5.1	2.5
Oesilo	5,125	2,420	2,705	192	143	49	3.7	5.9	1.8
Bobonaro	11,482	5,400	6,082	398	284	114	3.5	5.3	1.9
Nitibe	5,679	2,768	2,911	194	148	46	3.4	5.3	1.6
Passabe	3,769	1,789	1,980	55	39	16	1.5	2.2	0.8
Timor-Leste	**462,337**	**232,152**	**230,185**	**70,663**	**42,875**	**27,788**	**15.3**	**18.5**	**12.1**

Empowering women can bring about significant changes in societies by expanding womens' life choices and increasing their economic opportunities, thereby enriching society in general (Weeks, 2005). Increasing their access to education is a fundamental requirement for empowering females. Better-educated women have more opportunities for joining the labor force. With paid jobs, women can gain a degree of financial and social independence which can in turn give them some control over the lifestyle they lead.

Currently in Timor-Leste the ratio of girls to boys that have graduated from high school is 64.8%. Though the country does not have a Millennium Development Goal specifically for high school graduation, it does have a Millennium Development Goal for high school attendance. Goal 3 is that, by 2015, 100% of boys and girls will attend high school. If attained this will be a significant step towards empowering the women of Timor-Leste.

Part 6



Fertility and Mortality

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

At seven children per woman, Timor-Leste has the highest total fertility rate of any country in the world. The highest total fertility rates are clustered in subdistricts in the highlands to the south of Dili, and particularly in Aileu and Ermera districts. Moderately high total fertility rates are found in subdistricts surrounding this cluster, and in a group of subdistricts in the east of the country, mostly in Lautem and Baucau districts. Subdistricts close to urban centers such as Dili, Ermera and Baucau have relatively low total fertility rates, as do sparsely populated rural subdistricts in central and western parts of the country.

It should be remembered that fertility rates in Timor-Leste are very high in absolute terms. Rates described as "low" in the discussion above are low only in the context of East-Timor. The lowest total fertility rate is 4.51 for Dom Aleixo subdistrict (Dili district). Compared to most other parts of the world, this is very, very high.

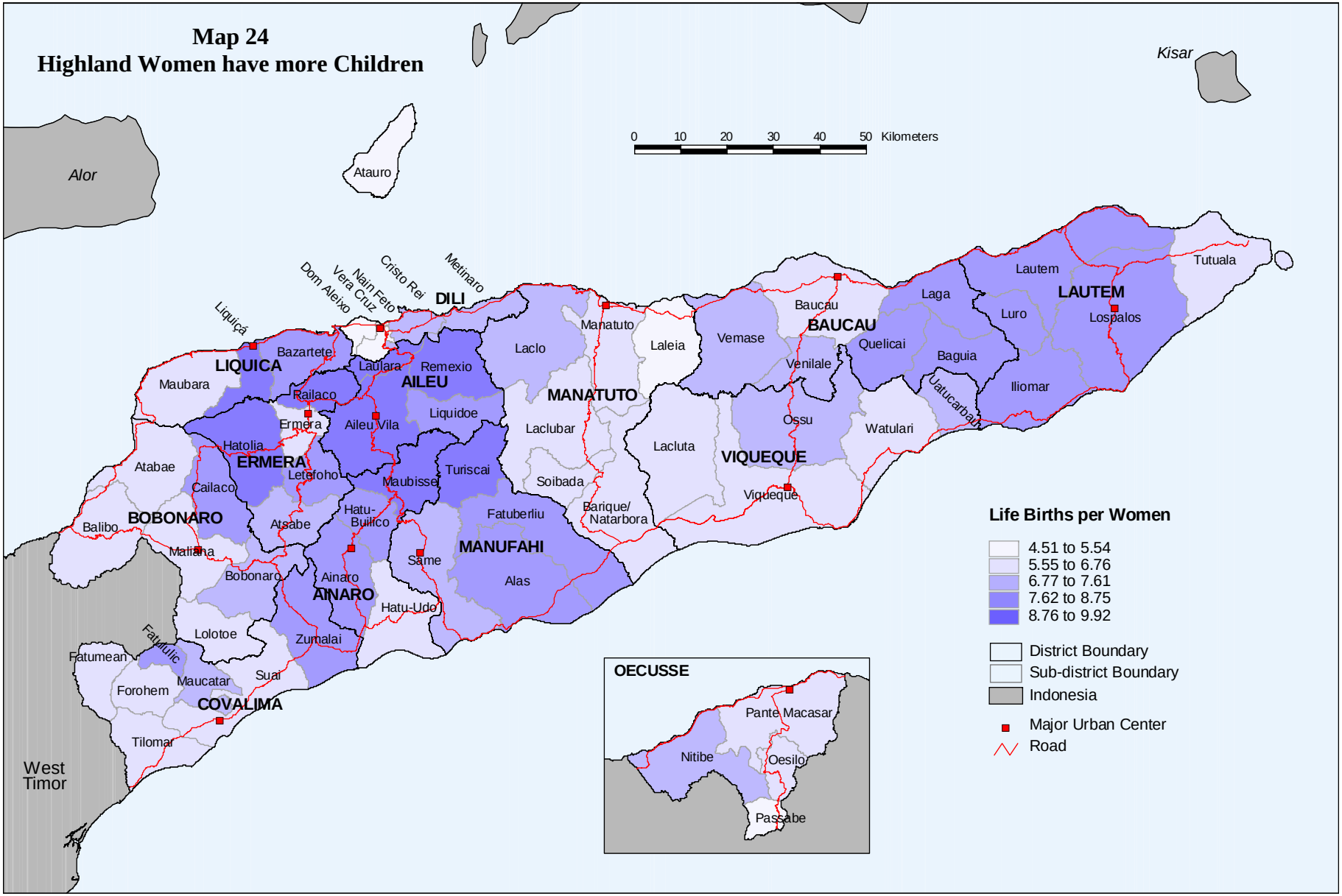
High fertility rates pose serious social and economic problems for the country of Timor-Leste and serious health problems for the people of Timor-Leste. Most social scientists and policy-makers consider rapid declines in fertility rates and low fertility levels to be beneficial to societies. Small families generally enjoy improved family welfare, generate low rates of population growth and promote economic development in a society. Women who have fewer children are healthier and live longer. Their children also tend to be healthier. Birth spacing is a proven method of improving maternal and child health.

Timor-Leste's policy-makers and planners understand that reducing fertility rates is a fundamental requirement for improving the welfare and prosperity of the people who live here. Millennium Development Goal 5 is to improve maternal health; Target 7 of Millennium Development Goal 6 is for an increase in the use of contraceptives. These are worthy objectives, but they will only begin to address the problem. Because of the high proportion of young people in the population, Timor-Leste has an in-built engine for rapid population growth that will keep running for decades, even if fertility rates drop dramatically, right now. Certainly it is very important to reduce fertility rates and improve maternal and child health during the next 10 years, but we must not forget to look beyond 2015 to a time when the population of the country will be two, three or four times the size it is now.

Table 22
Total Fertility Rates, by Subdistrict

Subdistrict	Total Fertility Rate	Subdistrict	Total Fertility Rate
Remexio	9.92	Bobonaro	7.19
Laulara	9.90	Cristo Rei	7.16
Railaco	9.89	Metinaro	7.02
Turiscai	9.50	Nitibe	6.88
Maubisse	9.35	Oesilo	6.76
Hatolia	9.31	Maubara	6.63
Aileu Vila	9.25	Baucau	6.62
Liquiçá	9.04	Fatumean	6.61
Fatululic	8.75	Atabae	6.60
Baguia	8.70	Tilomar	6.58
Letefoho	8.69	Tutuala	6.58
Bazartete	8.45	Watulari	6.54
Fatuberliu	8.43	Maliana	6.53
Hatu-Builico	8.38	Laclubar	6.51
Cailaco	8.32	Manatuto	6.50
Luro	8.32	Lolotoe	6.46
Ainaro	8.09	Barique/Natarbora	6.35
Laga	8.05	Fohorem	6.25
Lautem	7.91	Viqueque	6.20
Liquidoe	7.88	Soibada	6.18
Alas	7.84	Balibo	6.17
Iliomar	7.80	Ermera	6.10
Zumalai	7.79	Hatu-Udo	6.03
Lospalos	7.77	Suai	6.01
Quelicai	7.73	Lacluta	5.92
Vemase	7.61	Pante Macasar	5.92
Venilale	7.38	Passabe	5.54
Atsabe	7.33	Atauro	5.35
Same	7.27	Vera Cruz	5.04
Uatucarbau	7.26	Nain Feto	5.02
Laclo	7.25	Laleia	4.98
Maucatar	7.21	Dom Aleixo	4.51
Ossu	7.20	**Timor-Leste**	**6.99**

Total fertility rate gives the average number of children born per woman during her lifetime. The rates presented in this plate are calculated using indirect methods, and thus give only approximations of true rates. Though absolute values may be approximate, relative values do show regional variations that are both valid and interesting.


Map 24
Highland Women have more Children
Kisar
Alor
Atauro
0 10 20 30 40 50 Kilometers
Liquiçá
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
DILI
LIQUICA
Bazartete
Maubara
Laulara
Remexio
AILEU
Railaco
Ermera
Aileu Vila
Liquidoe
Hatolia
ERMERA
Letefoho
Maubisse
Turiscai
Atabae
Cailaco
Hatu-Builico
Atsabe
BOBONARO
Balibo
Maliana
Bobonaro
Ainaro
AINARO
Hatu-Udo
Same
MANUFAHI
Alas
Fatuberliu
Lolotoe
Zumalai
Fatumean
Fatululic
Maucatar
Suai
Forohem
COVALIMA
Tilomar
West Timor
Laclo
Manatuto
Laleia
MANATUTO
Laclubar
Soibada
Barique/
Natarbora
Lacluta
VIQUEQUE
Viqueque
Vemase
Baucau
BAUCAU
Venilale
Quelicai
Laga
Baguia
Lautem
LAUTEM
Luro
Lospalos
Iliomar
Tutuala
Uatucarbau
Ossu
Watulari
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Life Births per Women
4.51 to 5.54
5.55 to 6.76
6.77 to 7.61
7.62 to 8.75
8.76 to 9.92
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Regional patterns for teenage fertility rates are harder to identify, but rates are notably high in Covalima district, and particularly in a cluster of subdistricts in the extreme west, close to the border with Indonesia. There also appears to be a north/south divide, with teenage fertility rates generally higher in southern subdistricts than in northern subdistricts. High teenage fertility rates are often associated with low education levels for females, and it would be interesting to examine this relationship to see if it holds true for Timor-Leste.

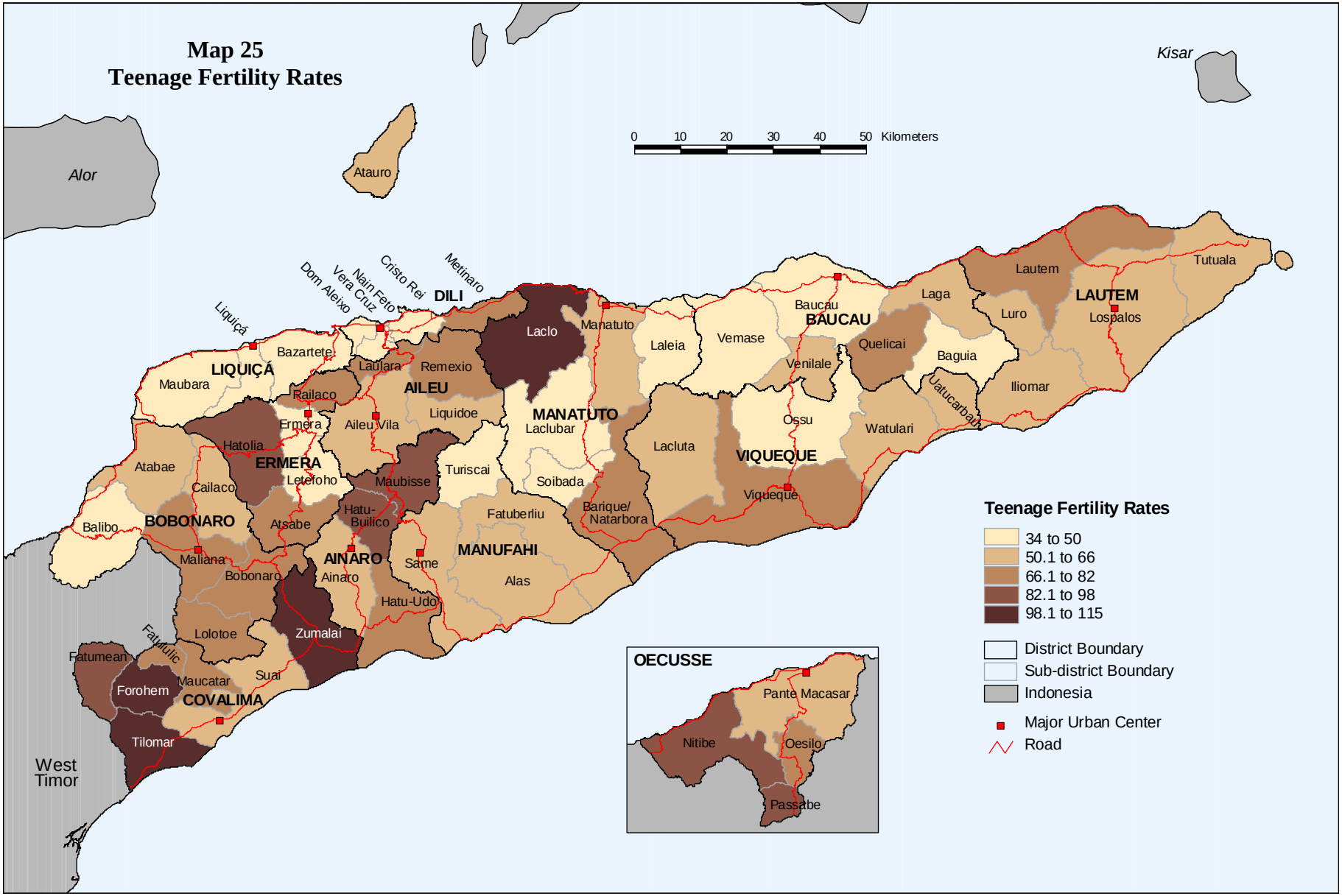
Early motherhood is a leading cause of gender inequality and poor maternal health. When a girl has a baby at an early age she is likely to be drawn into a life of childbearing and family-building that makes it extremely difficult for her to pursue other options in life. This is one of the main reasons why high teenage fertility rates are usually found in countries when women suffer from low status in society.

At 59.2 live births per female in the 15-to 19 years age group, the national teenage fertility rate for Timor-Leste is high, but it is not among the highest in the world. Latin America currently faces the biggest problems associated with high birth rates among young women with El Salvador (108) and Venezuela (88) among the countries with the highest rates (Estee, 2004). Rates do vary regionally within Timor-Leste, and Covalima district has several subdistricts with particularly high rates. Tilomar (114.5), Zumalai (111.3) and Forohem (108.3) all have higher teenage fertility rates than Venezuela.

Table 23
Teenage Fertility Rates, by Subdistrict

Subdistrict	Teenage Fertility Rate	Subdistrict	Teenage Fertility Rate
Tilomar	114.5	Suai	58.0
Zumalai	111.3	Atauro	57.9
Fohorem	108.3	Iliomar	57.7
Laclo	101.5	Manatuto	56.6
Nitibe	96.6	Alas	54.9
Fatumean	96.5	Laga	54.7
Passabe	94.1	Fatuberliu	54.4
Hatu-Builico	93.0	Atabae	54.2
Maubisse	83.7	Ainaro	54.1
Hatolia	83.3	Watulari	53.8
Bobonaro	80.7	Cailaco	52.9
Maucatar	80.7	Lospalos	52.7
Laulara	80.5	Tutuala	52.5
Railaco	79.4	Venilale	51.7
Fatululic	78.1	Bazartete	49.8
Oesilo	78.1	Vemase	48.2
Atsabe	77.6	Vera Cruz	47.9
Metinaro	75.1	Cristo Rei	45.7
Hatu-Udo	73.5	Ermera	44.7
Remexio	71.8	Dom Aleixo	44.5
Maliana	71.2	Baucau	43.3
Lautem	70.2	Maubara	42.9
Barique/Natarbora	69.0	Laleia	41.4
Quelicai	67.5	Soibada	40.4
Lolotoe	66.4	Letefoho	39.4
Viqueque	66.4	Balibo	39.3
Lacluta	65.4	Liquiçá	38.7
Liquidoe	65.2	Laclubar	37.7
Luro	65.1	Ossu	37.5
Uatucarbau	62.2	Nain Feto	36.8
Aileu Vila	62.0	Baguia	35.9
Pante Macasar	59.6	Turiscai	34.4
Same	58.4	**Timor-Leste**	**59.2**

Teenage fertility rate gives the number of live births per 1,000 women between the ages of 15 and 19 during the 12-month period prior to the census in July 2004. It was computed using an indirect method because the vital statistics system in Timor-Leste is not yet fully functional.


Map 25
Teenage Fertility Rates
0 10 20 30 40 50 Kilometers
Alor
Atauro
Kisar
Liquiçá
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
DILI
LIQUIÇÁ
Bazartete
Maubara
Laulara
Remexio
AILEU
Railaco
Ermera
Aileu Vila
Liquidoe
Laclo
Manatuto
MANATUTO
Laclubar
Laleia
Vemase
Baucau
BAUCAU
Venilale
Quelicai
Laga
Baguia
Lautem
Luro
LAUTEM
Lospalos
Tutuala
Iliomar
Uatucarbau
Ossu
Watulari
Lacluta
VIQUEQUE
Viqueque
Hatolia
ERMERA
Letefoho
Atabae
Cailaco
Maubisse
Turiscai
Soibada
Fatuberliu
Barique/
Natarbora
Hatu-
Builico
Balibo
BOBONARO
Atsabe
Maliana
Bobonaro
AINARO
Ainaro
Same
MANUFAHI
Alas
Hatu-Udo
Lolotoe
Zumalai
Fatululic
Fatumean
Maucatar
Suai
Forohem
COVALIMA
Tilomar
West
Timor
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Teenage Fertility Rates
34 to 50
50.1 to 66
66.1 to 82
82.1 to 98
98.1 to 115
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Table 24
Changes in Infant Mortality Rates, 1996 to 2002, by Subdistrict

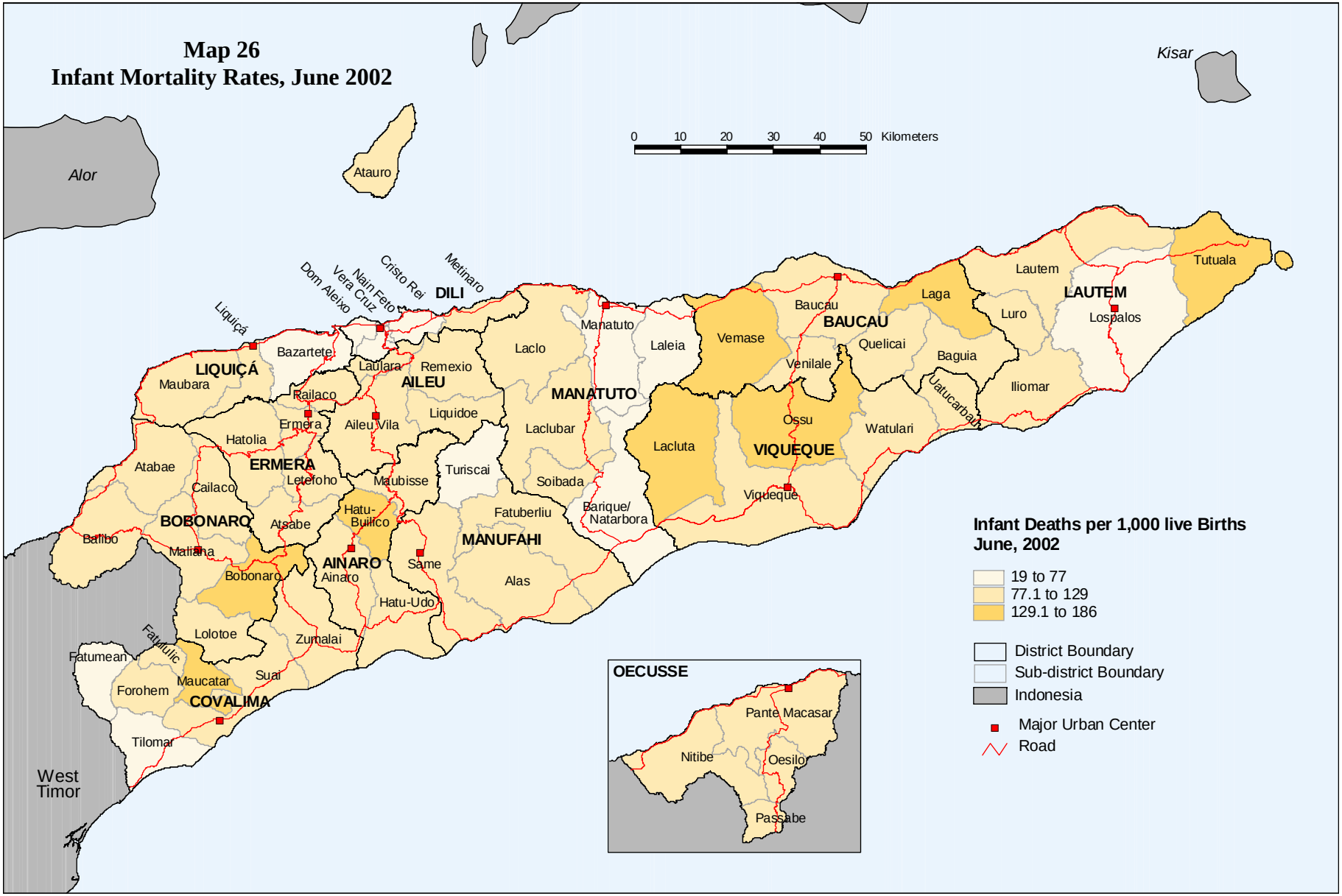
Subdistrict	Infant Mortality Rate		Change 1996 - 2002	
	1996	2002	Rate	Percent
Laleia	79	19	-60	-76
Ainaro	141	79	-62	-44
Uatucarbau	144	85	-59	-41
Tilomar	115	71	-44	-38
Laclubar	148	95	-53	-36
Cristo Rei	107	68	-39	-36
Same	141	92	-49	-35
Liquidoe	148	97	-51	-34
Luro	152	101	-51	-34
Zumalai	189	126	-63	-33
Turiscai	105	70	-35	-33
Bazartete	103	69	-34	-33
Lospalos	102	68	-34	-33
Maubisse	180	122	-58	-32
Remexio	138	94	-44	-32
Aileu Vila	153	105	-48	-31
Lautem	126	89	-37	-29
Fatumean	109	77	-32	-29
Baguia	167	122	-45	-27
Atsabe	164	121	-43	-26
Dom Aleixo	76	56	-20	-26
Letefoho	156	119	-37	-24
Ermera	118	90	-28	-24
Laclo	148	114	-34	-23
Quelicai	141	108	-33	-23
Viqueque	138	108	-30	-22
Watulari	139	110	-29	-21
Suai	123	97	-26	-21
Manatuto	92	73	-19	-21
Baucau	111	89	-22	-20
Vera Cruz	83	66	-17	-20
Lolotoe	145	117	-28	-19
Maubara	114	94	-20	-18
Alas	107	88	-19	-18
Bobonaro	179	149	-30	-17
Venilale	135	114	-21	-16
Hatolia	129	110	-19	-15
Hatu-Udo	115	98	-17	-15
Balibo	110	94	-16	-15
Oesilo	133	115	-18	-14
Metinaro	111	96	-15	-14
Nitibe	137	119	-18	-13
Fohorem	132	115	-17	-13
Laga	155	136	-19	-12
Maliana	121	106	-15	-12
Nain Feto	77	69	-8	-10
Fatululic	136	124	-12	-9
Laulara	134	122	-12	-9
Hatu-Builico	193	186	-7	-4
Ossu	137	131	-6	-4
Barique/Natarbora	72	69	-3	-4
Railaco	107	108	1	1
Passabe	78	80	2	3
Pante Macasar	119	122	3	3
Vemase	139	147	8	6
Maucatar	126	135	9	7
Liquiçá	96	104	8	8
Cailaco	109	118	9	8
Iliomar	119	129	10	8
Atauro	94	103	9	10
Fatuberliu	104	115	11	11
Soibada	78	89	11	14
Lacluta	122	143	21	17
Atabae	87	109	22	25
Tutuala	81	140	59	73

Among all animal species, newborns are fragile, dependent and vulnerable, and this is especially the case for humans. In many societies vulnerability and dependence are translated into high infant mortality rates, which measure the number of deaths during the first year of life per 1,000 births. Timor-Leste's infant mortality rate of 98 is well above the world average, but it is not among the highest in the world. The world average infant mortality rate is 55, and the highest rates are in Sierra Leone (155) and Afghanistan (154). One of the most important of Timor-Leste's Millennium Development Goals is to reduce infant and child mortality rates, with a target infant mortality rate of 53 by 2015. Reaching this target would be a huge achievement for our young country, and it would set Timor-Leste on the path towards attaining rates comparable to those in countries such as Japan (3), Sweden (4) and the United Kingdom (5) (Weeks, 2005).

In June 2002, infant deaths per 1,000 live births ranged from 56 in Dom Aleixo (Dili district) to 186 in Hatu-Builico subdistrict (Ainaro district). Rates were generally lower in subdistricts close to Dili, Lospalos and other towns with relatively good medical facilities. In addition to Dom Aleixo (56), Vera Cruz (66), Cristo Rei (68) and Nain Feto (69) and in Dili district, Lospalos (68) in Lautem district and Bazartete (69) in Liquiçá district all had infant mortality rates below 70. Remote Barique/Natarbora subdistrict in Manatuto district also had a somewhat surprisingly low infant mortality rate of 69. The highest rates were recorded for remote subdistricts in the east of the country and in the western highlands. After Hatu-Builico subdistrict, Bobonaro (Bobonaro district), Lacluta (Viqueque district), Tutuala (Lautem district) and Vemase (Baucau district) all had infant mortality rates of 140 or higher.

The infant mortality rate is the number of deaths of children younger than 1 year of age per 1,000 live births during a specific reference period, in this case, 1st to 30th June, 2002. The rates given here are estimates derived from census records for the number of children ever born. They rely specifically on information provided by women aged between 20 and 24 years and they are based on the East model of the Coale-Demeny Regional Model Life Tables.

Laleia subdistrict has been excluded from this discussion because the 2002 rate of 19 infant deaths per 1,000 live births is so low that we consider it to be inaccurate.

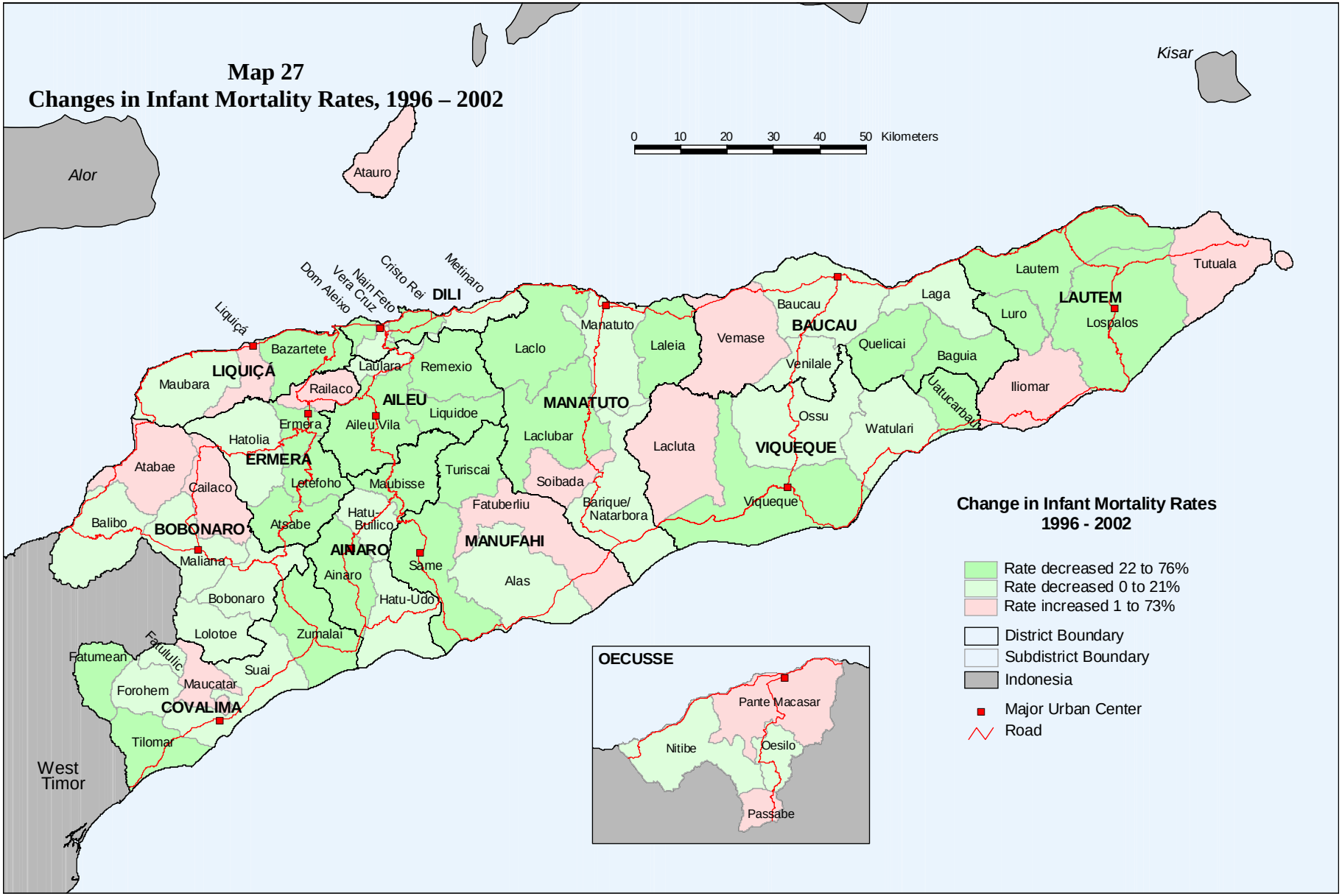

Map 26
Infant Mortality Rates, June 2002
0 10 20 30 40 50 Kilometers
Kisar
Alor
Atauro
Liquiçá
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
DILI
Bazartete
LIQUIÇÁ
Maubara
Laulara
Remexio
AILEU
Railaco
Ermera
Aileu Vila
Liquidoe
Hatolia
ERMERA
Letefoho
Maubisse
Turiscai
Atabae
Cailaco
BOBONARO
Atsabe
Hatu-Builico
Balibo
Maliana
Bobonaro
AINARO
Ainaro
Same
Hatu-Udo
Lolotoe
Zumalai
Fatumean
Fatululic
Maucatar
Suai
Forohem
COVALIMA
Tilomar
West Timor
Laclo
Manatuto
Laleia
MANATUTO
Laclubar
Soibada
Fatuberliu
MANUFAHI
Alas
Barique/ Natarbora
Vemase
Baucau
BAUCAU
Venilale
Quelicai
Laga
Baguia
Luro
Lautem
LAUTEM
Lospalos
Tutuala
Iliomar
Uatucarbau
Lacluta
VIQUEQUE
Ossu
Watulari
Viqueque
OECUSSE
Pante Macasar
Nitibe
Oesilo
Passabe
Infant Deaths per 1,000 live Births
June, 2002
19 to 77
77.1 to 129
129.1 to 186
District Boundary
Sub-district Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

Though infant mortality rates remained high in 2002, there were some encouraging reductions compared with rates for 1996. Rates decreased in 41 of Timor-Leste's 65 subdistricts, with the greatest reductions being found in Ainaro (44% decrease), Uatucarbau (41%), Tilomar (38%), Laclubar (36%) and Cristo Rei (36%) subdistricts. In absolute terms, Zumalai subdistrict showed the greatest improvement with a reduction in the infant mortality rate of 63 points from 189 in 1996 to 126 in 2002. Aileu and Ainaro improved most at the district level with rates decreasing substantially in all eight of their subdistricts.

For the 14 subdistricts where infant mortality rates increased, most increases were relatively small – less than 20% in 13 of the 14 subdistricts. The rate in Tutuala, however, climbed sharply from 81 in 1996 to 140 in 2002, an increase of 73%. There does not appear to be a regional pattern to increases in infant mortality rates – the 14 subdistricts that experienced increases are distributed evenly across the country.

Further research into the causes of high infant mortality rates and regional variations in those rates should be conducted, and best-practice case studies highlighting success stories should be circulated.


Map 27
Changes in Infant Mortality Rates, 1996 – 2002
0 10 20 30 40 50 Kilometers
Kisar
Alor
Atauro
Liquiçá
Dom Aleixo
Vera Cruz
Nain Feto
Cristo Rei
Metinaro
DILI
Tutuala
Lautem
LAUTEM
Lospalos
Luro
Laga
Baucau
BAUCAU
Quelicai
Baguia
Venilale
Vemase
Manatuto
Laclo
Laleia
Iliomar
Uatucarbau
Ossu
Watulari
VIQUEQUE
Viqueque
Lacluta
Laclubar
MANATUTO
Soibada
Barique/
Natarbora
Fatuberliu
MANUFAHI
Alas
Same
AINARO
Ainaro
Hatu-Udo
Hatu-
Builico
Maubisse
Turiscai
AILEU
Aileu Vila
Liquidoe
Remexio
Laulara
Railaco
Ermera
ERMERA
Hatolia
Letefoho
Atsabe
Bazartete
LIQUIÇÁ
Maubara
Atabae
Cailaco
Balibo
BOBONARO
Maliana
Bobonaro
Lolotoe
Zumalai
Suai
Maucatar
COVALIMA
Tilomar
Fatumean
Forohem
Fartulilic
West
Timor
OECUSSE
Pante Macasar
Oesilo
Nitibe
Passabe
Change in Infant Mortality Rates
1996 - 2002
Rate decreased 22 to 76%
Rate decreased 0 to 21%
Rate increased 1 to 73%
District Boundary
Subdistrict Boundary
Indonesia
Major Urban Center
Road

Unless otherwise stated, the 2004 Census of Population and Housing for Timor-Leste is the source of all data presented in this atlas.

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