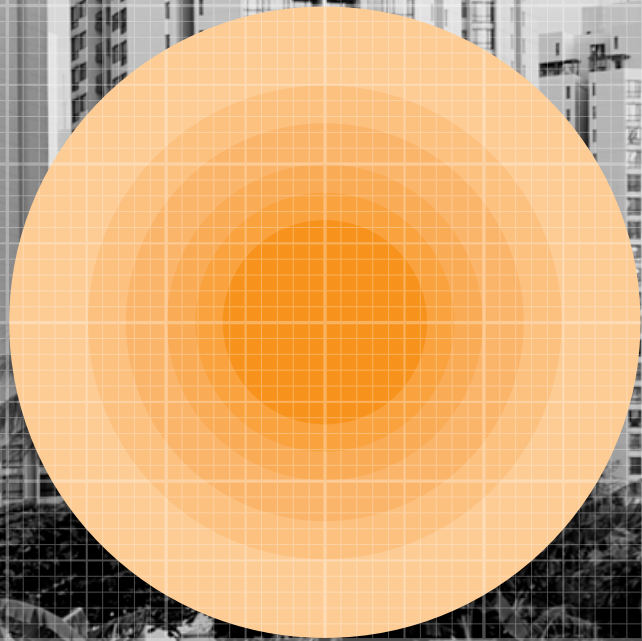


# ASEAN+

## Urbanisation

### 20 Charts

(SEC) SINGAPORE-ETH 新加坡-ETH  
CENTRE 研究中心



# ASEAN+

## Urbanisation

### 20 Charts

#### Imprint

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Author: Manuel Stagars

Project group: Manuel Stagars, Peter Edwards, Remo Burkhard, Stephen Cairns

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World Bank Development Indicators, SingStat, Badan Pusat Statistik Indonesia

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Imprint	3
Introduction	6
<b>1 POPULATION</b>	<b>8</b>
Total urban and rural population	9
Proportion urban population	9
Growth of urban population	10
World share of urban population	10
Urbanisation in the ASEAN+	12
<b>2 ENERGY AND EMISSIONS</b>	<b>16</b>
Electric power consumption in selected countries	17
Growth of electric power consumption	17
Electric power consumption	18
Growth of CO <sub>2</sub> emissions	18
World share of CO <sub>2</sub> emissions	19
<b>3 INCOME AND WEALTH</b>	<b>22</b>
GDP per capita	23
GDP growth	23
World share of GDP	24
<b>Singapore:</b> Average annual household expenditure	26
<b>Singapore:</b> Number of resident households by annual income group	27
<b>Indonesia:</b> Average monthly per capita expenditure in urban areas	28
<b>4 CONNECTIVITY</b>	<b>30</b>
Fixed broadband subscriptions	31
Growth of fixed broadband subscriptions	31
World share of fixed broadband subscriptions	32

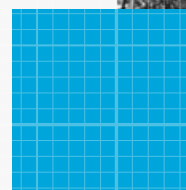
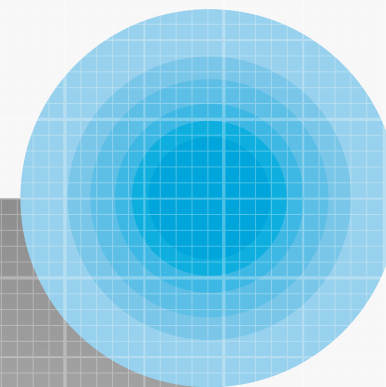
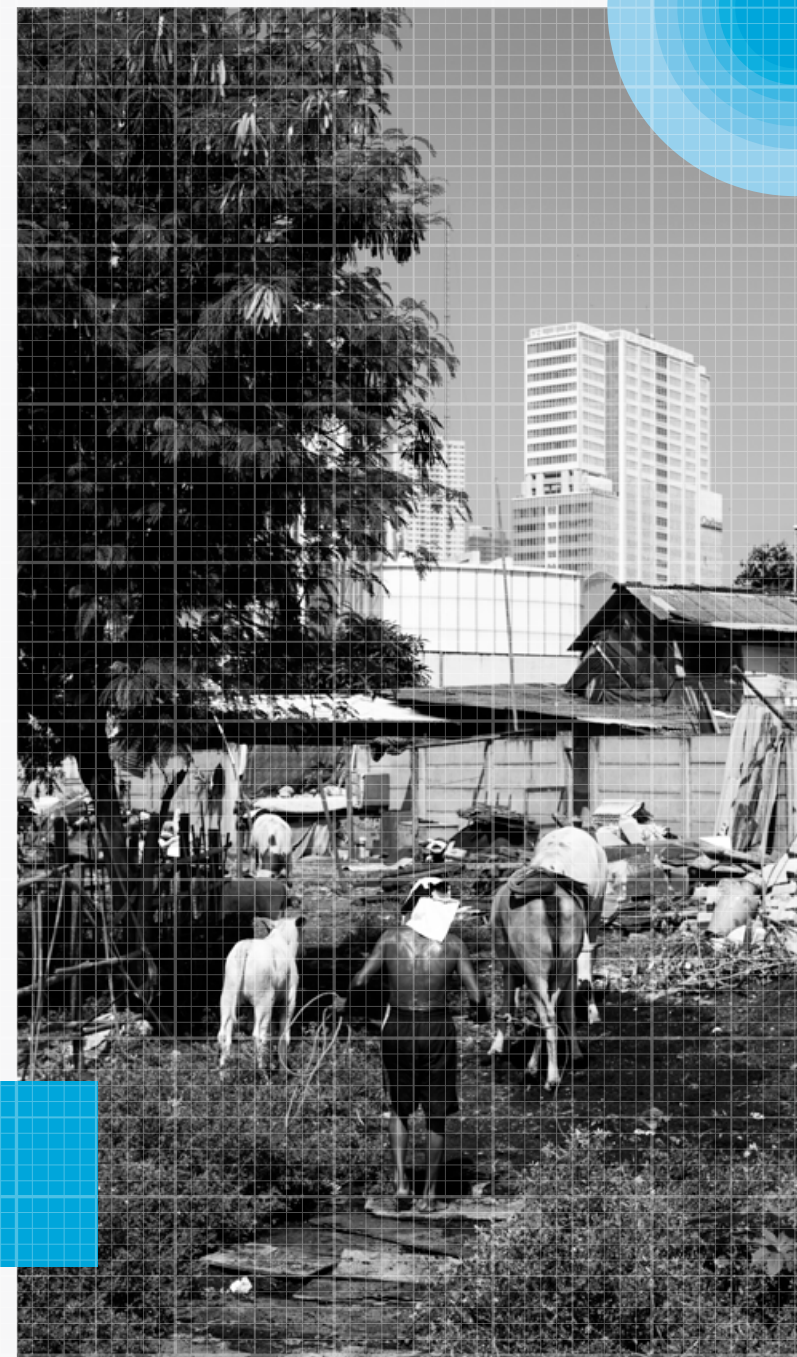
The Association of Southeast Asian Nations (ASEAN) unites Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. The informal term ASEAN+ also includes China and India - a region that makes intuitive sense for historical, political, and economic reasons. The ASEAN+ is one of the fastest changing supranational regions in the world. The region is home to 3.3 billion people in 2015, and the forecasts predict the population will grow by an additional 300 million by 2030. This will represent roughly 43 percent of humanity, with the majority concentrating in cities. The share of world national income in the ASEAN+ has quadrupled since 1990, while their shares of energy consumption and CO<sub>2</sub> emissions have doubled. This change is obvious in photographs and satellite images, and statistical data tell the story just as vividly, highlighting challenges such as rapid urbanisation, resource scarcity, and climate change.

The **ASEAN+ Database**, a pilot project of the **Singapore-ETH Centre (SEC)** between 2015 and 2016, brings together over twenty thousand publicly available statistical datasets with focus on the region, and originating from national governments and intergovernmental organisations. The key motivation for the project was to build a common data platform for researchers that could expand as new datasets became available. With recent developments in processing, visualising and analysing data - relevant for concepts such as Data Fusion, Big Data, Fast Data, Open Data, Semantic Web - there is a growing need for such a common repository of high quality statistical information.

Within the ASEAN+ region, national statistics offices gather abundant data, though differences in data quality and accessibility often complicate telling a coherent story with data from diverse sources. The following charts use reliable datasets from the United Nations, the World Bank, statistics offices of Singapore (SingStat) and Indonesia (Badan Pusat Statistik, BPS). They demonstrate the astonishing economic and demographic growth of the ASEAN+ and also reveal profound implications for sustainability. Scientists and planners need to be aware of the massive changes that are occurring. The statistics here are relevant for anyone with an interest in economic and sustainable development in Asia. Exploring the future needs robust statistics, and together with the **ASEAN+ Database**, this booklet shall be a starting point for a discussion.

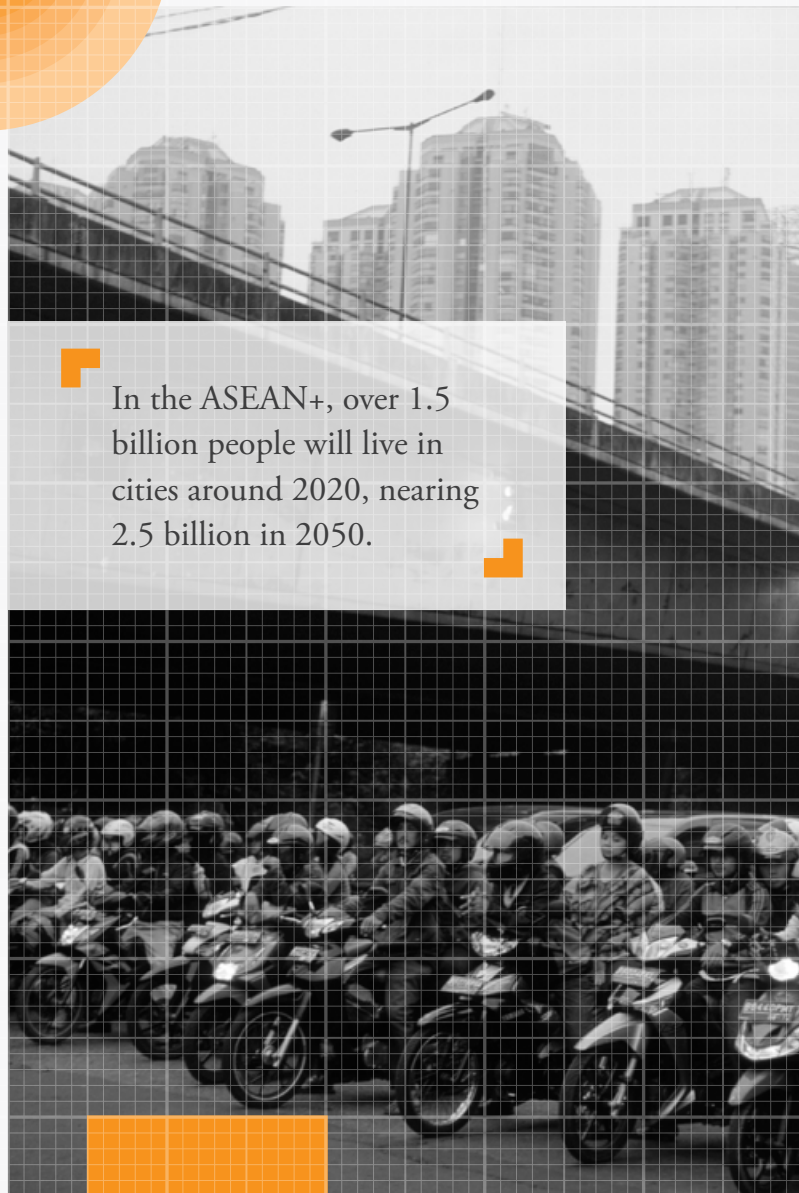
Manuel Stagars  
Singapore, March 2016

More information about the ASEAN+ Database is available at  
[www.fcl.ethz.ch/project/asean-database](http://www.fcl.ethz.ch/project/asean-database)



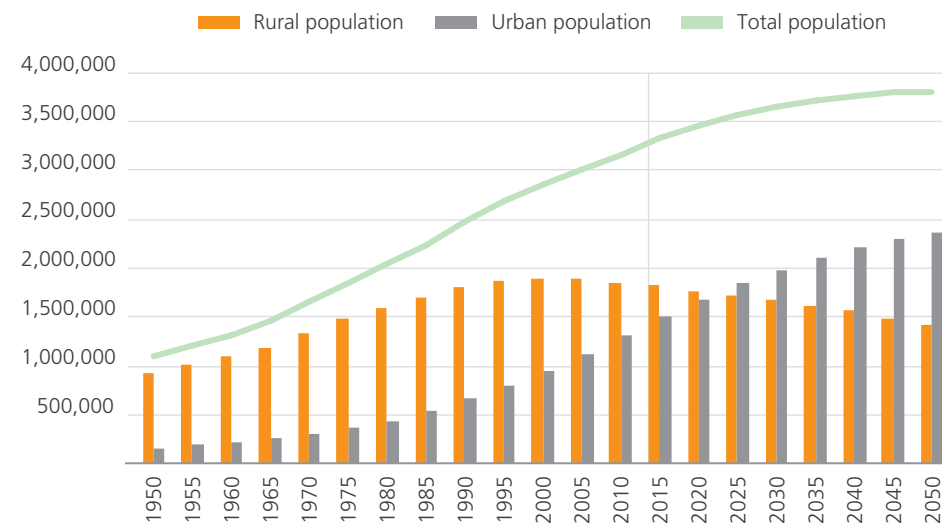


# 1 POPULATION



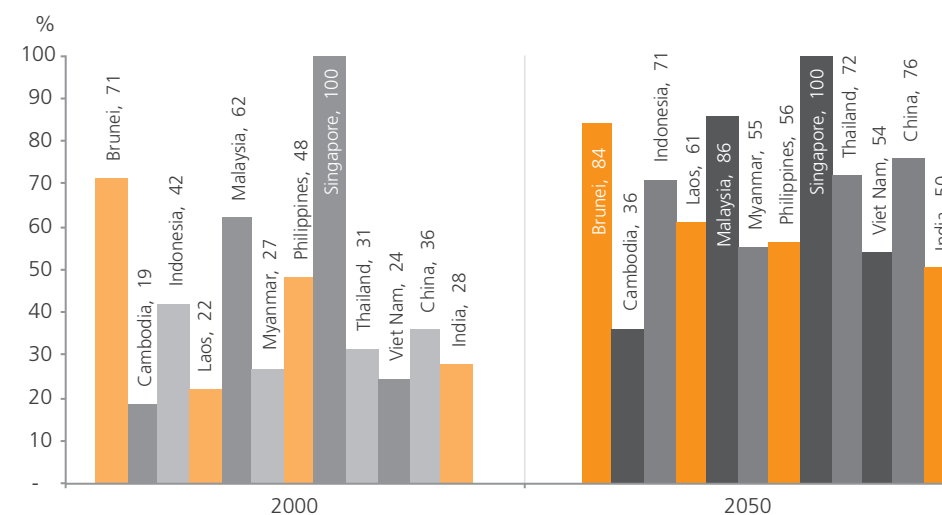
In the ASEAN+, over 1.5 billion people will live in cities around 2020, nearing 2.5 billion in 2050.

## Total urban and rural population



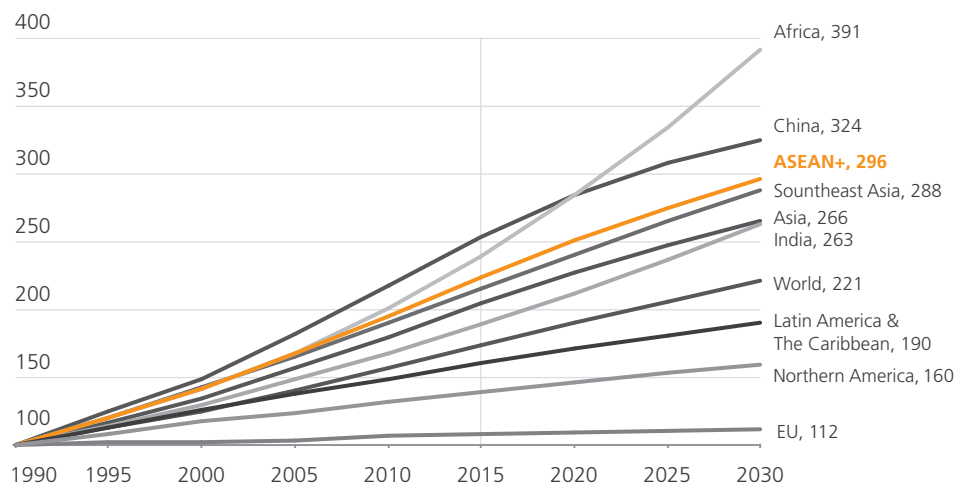
Data source: World Bank (2015), 'World Development Indicators, update 22 December 2015'.

## Proportion urban population



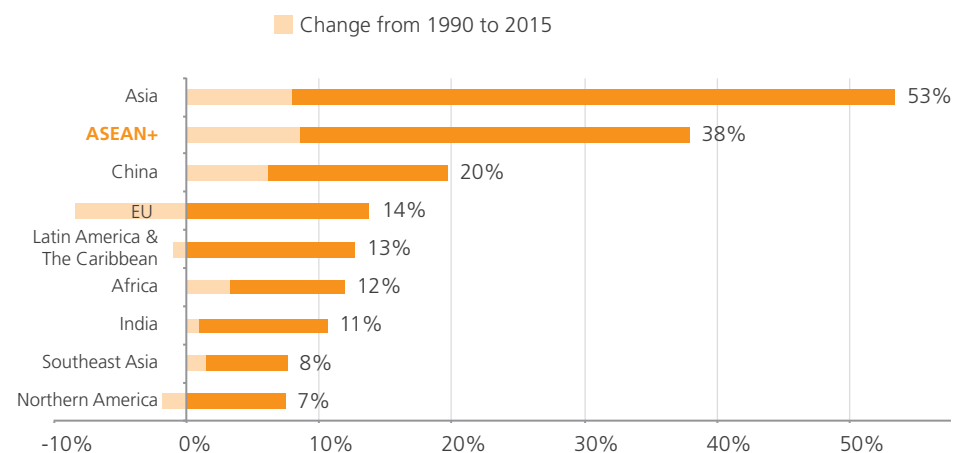
Data sources: United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, CD-ROM Edition. National Statistics Offices for cross-check.

## ■ Growth of urban population (1990 = 100)



Data source: United Nations, Department of Economic and Social Affairs, Population Division (2014), 'World Urbanization Prospects: The 2014 Revision'.

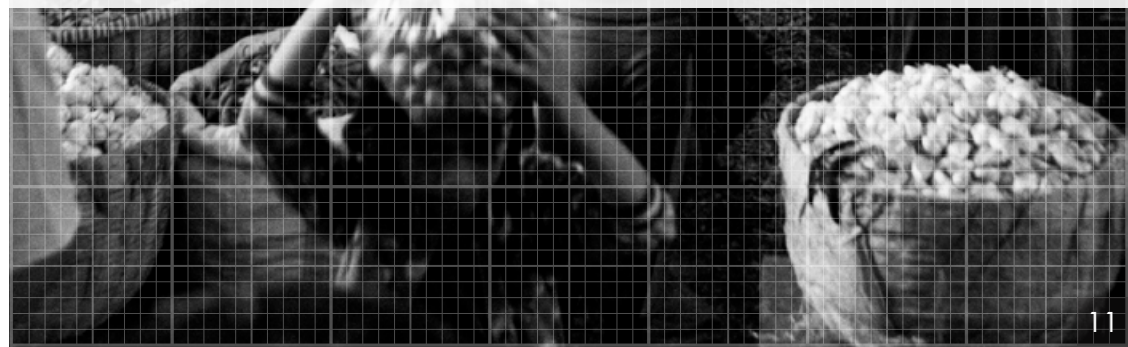
## ■ World share of urban population in 2015



Data source: United Nations, Department of Economic and Social Affairs, Population Division (2014), 'World Urbanization Prospects: The 2014 Revision'.



The urban population in the ASEAN+ will grow almost threefold between 1990 and 2030. The region has the fastest growing urban population in the world of all major regions, except Africa.



## Urbanisation in the ASEAN+

### Data source:

United Nations Population Division, 'World Urbanization Prospects for total population and rural population, 2014 Revision'

and

'World Population Prospects for population densities, 2015 Revision', medium fertility variant 2015 - 2100

ASEAN+ Database, Manuel Stagars (2016), adapted from Paul Scruton (2007)

## 1,5 Billion

Urban population in the ASEAN+ in 2015 from a total of 3,315,835,000

2015	Total population (in thousands)	Urban population (in thousands)	Urban %	Density (per sq.km)
Singapore	5619	5619	100%	8005
North America	361128	294834	82%	19
Brunei	429	331	77%	80
Malaysia	30651	22898	75%	92
Europe	743123	547066	74%	33
Switzerland	8239	6089	74%	210
China	1401587	779479	56%	147
Indonesia	255709	137422	54%	142
Thailand	67401	33952	50%	133
Philippines	101803	45173	44%	338
Laos	7020	2711	39%	29
Vietnam	93387	31372	34%	301
Myanmar	54164	18469	34%	83
India	1282390	419939	33%	441
Cambodia	15677	3249	21%	88
ASEAN+	3315835	1500612	45%	197

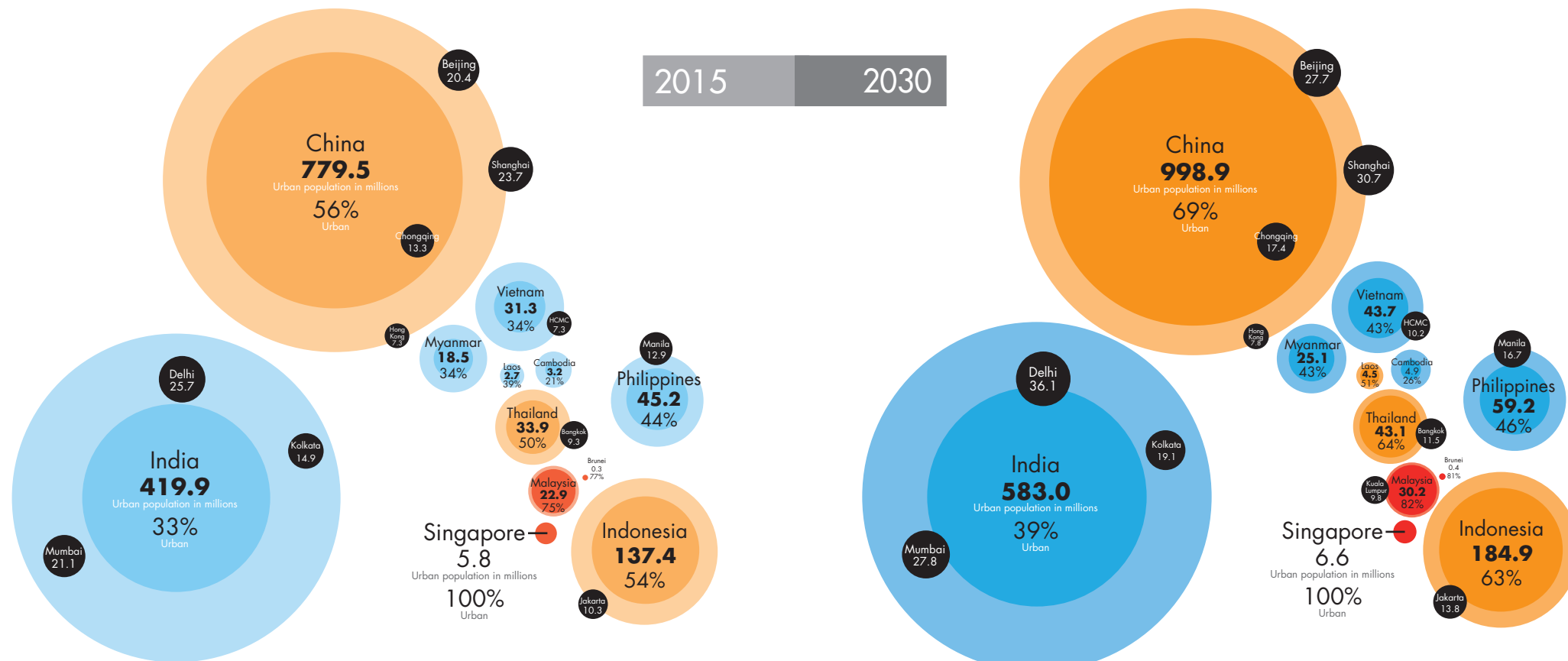
## 2 Billion

Urban population in the ASEAN+ in 2030 from a total of 3,650,910,000

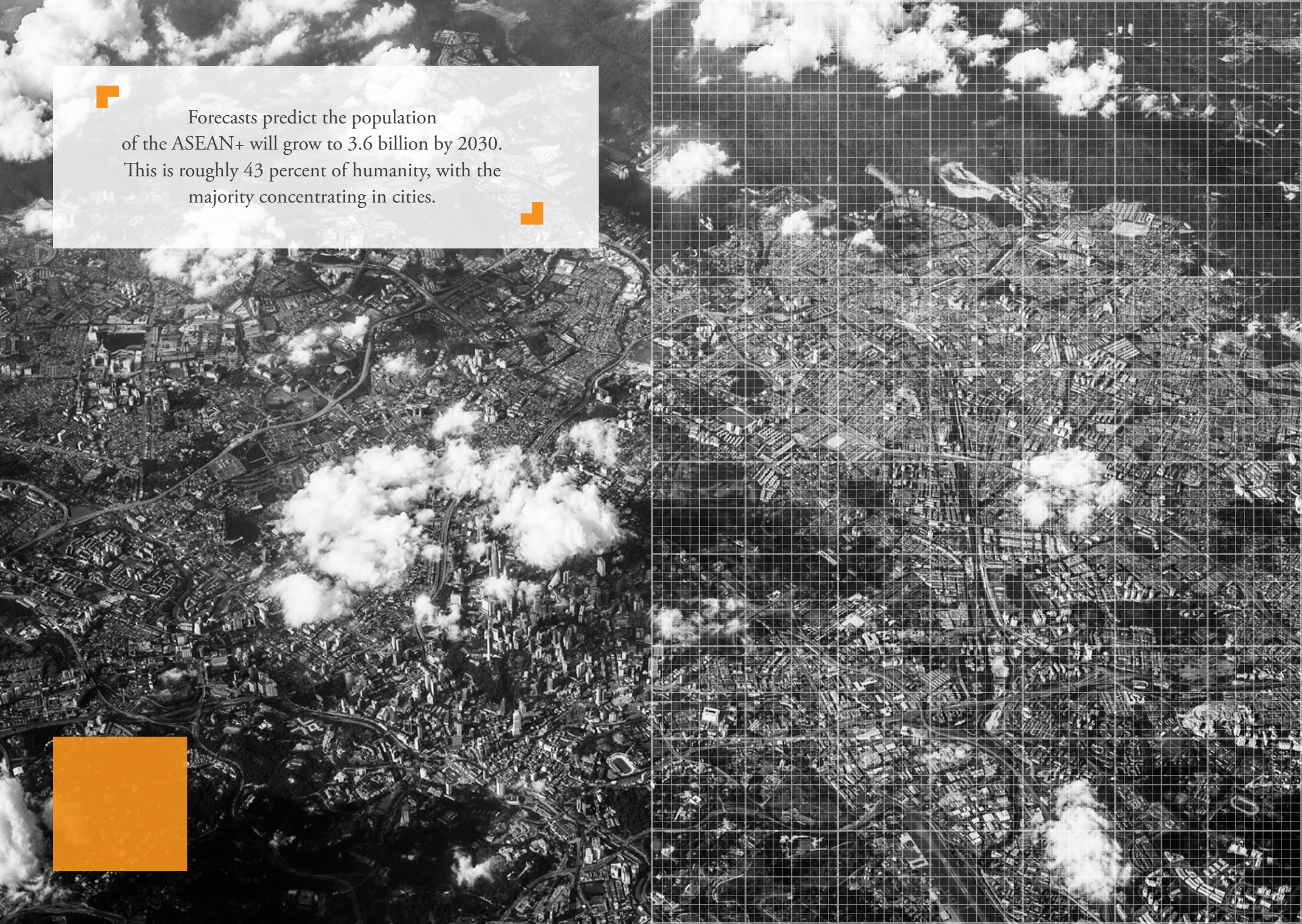
- **HIGHLY URBAN:** At least 75% of the population living in urban areas
- **PREDOMINANTLY URBAN:** 50-74% of the population living in urban areas
- **PREDOMINANTLY RURAL:** 20-49% of the population living in urban areas
- **SELECTED CITIES** of over 7 million people (number in millions)

Classification of countries by degree of urbanisation (urban/rural population)  
The area of a circle reflects the size of the population:  
normal color = urban, light color = rural  
The outer ring around a country represents its total population.

2030	Total population (in thousands)	Urban population (in thousands)	Urban %	Density (per sq.km)
Singapore	6578	6578	100%	9169
North America	403373	339782	84%	21
Malaysia	36846	30182	82%	110
Brunei	499	403	81%	94
Europe	736364	566970	77%	21
Switzerland	9477	43135	76%	233
China	1453297	998925	69%	151
Thailand	67554	43135	64%	134
Indonesia	293482	184912	63%	163
Laos	8806	4479	51%	37
Philippines	127797	59220	46%	414
Myanmar	58698	25095	43%	92
Vietnam	101830	43743	43%	339
India	1476378	583038	39%	514
Cambodia	19144	4900	26%	108
ASEAN+	3650910	1984609	54%	217



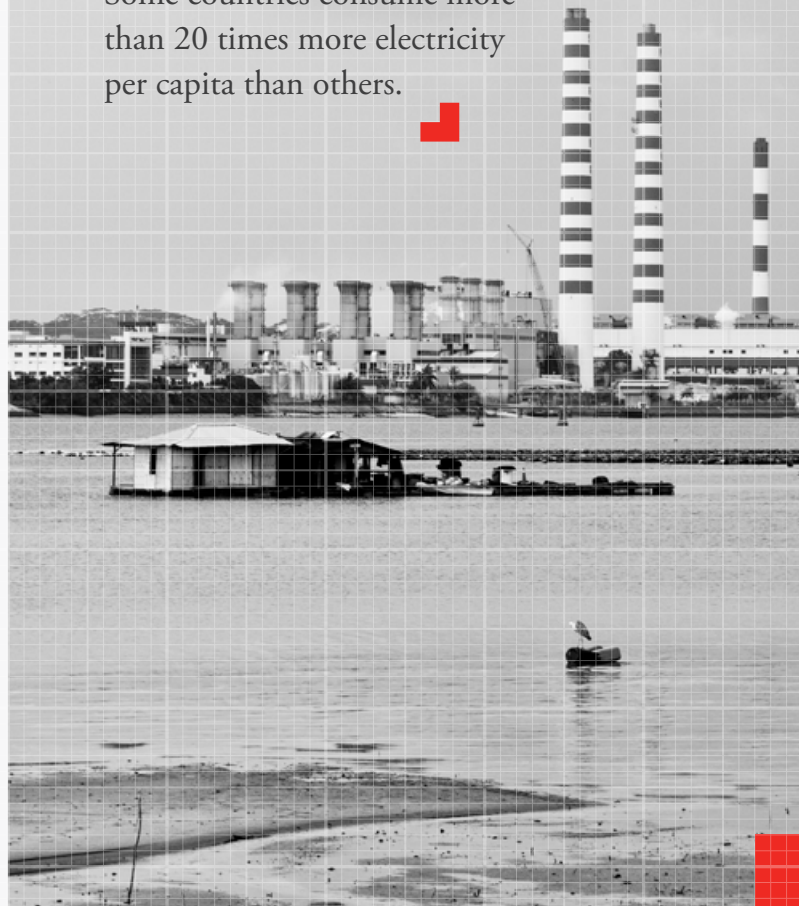


An aerial photograph of a city, likely Singapore, showing a dense urban landscape with a river and a grid overlay. The grid is composed of thin white lines forming a square pattern across the entire image. The city is viewed from a high angle, showing the intricate layout of buildings, roads, and green spaces. The river winds through the city, and the sky is filled with scattered white clouds. The overall tone is black and white, with the grid and clouds providing a stark contrast to the dark urban landscape.

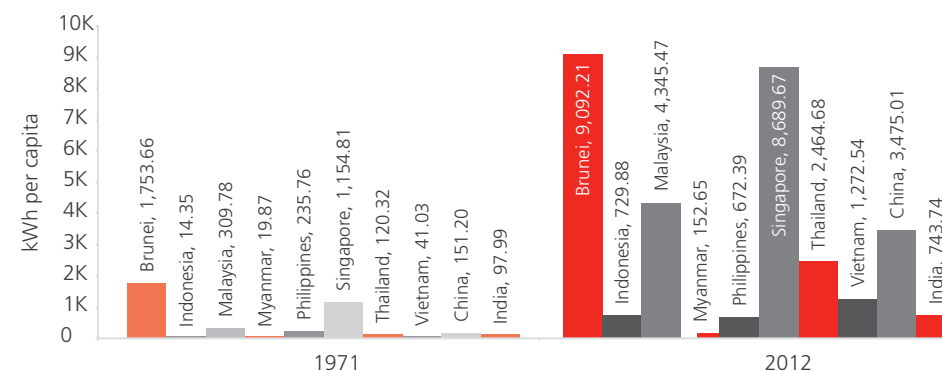
Forecasts predict the population  
of the ASEAN+ will grow to 3.6 billion by 2030.  
This is roughly 43 percent of humanity, with the  
majority concentrating in cities.



Between 1990 and 2012, electric power consumption in the ASEAN+ grew almost sevenfold, the greatest change of all major regions in the world. Energy consumption is diverse: Some countries consume more than 20 times more electricity per capita than others.

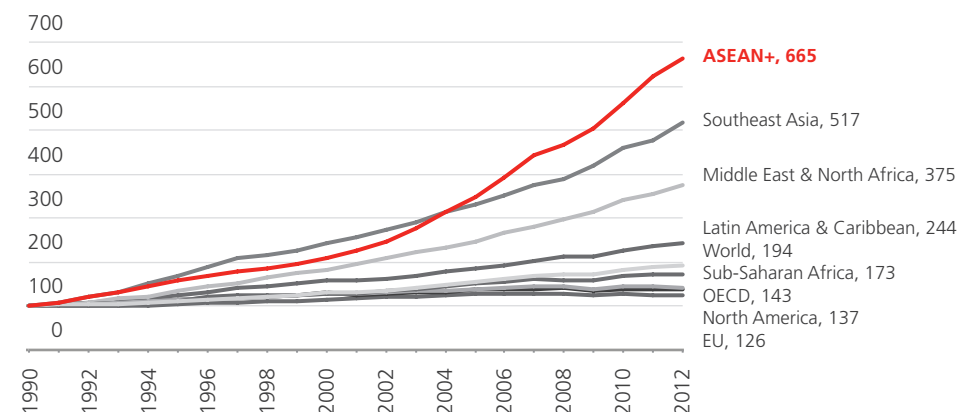


## Electric power consumption in selected countries in the ASEAN+ (kWh per capita)



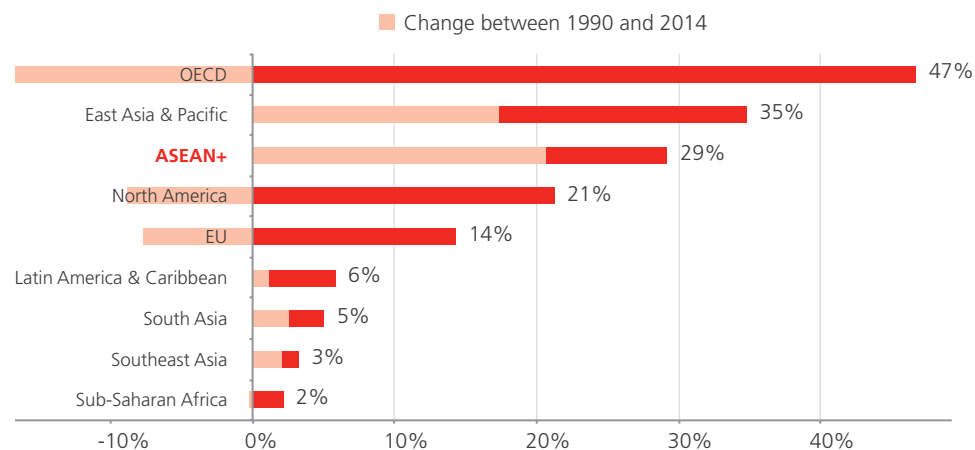
Data source: World Bank (2015) 'World Development Indicators', update 22 December 2015. National Statistics Offices for cross-check.

## Growth of electric power consumption (1990 = 100)



Data source: World Bank (2015), 'World Development Indicators, update 22 December 2015'.

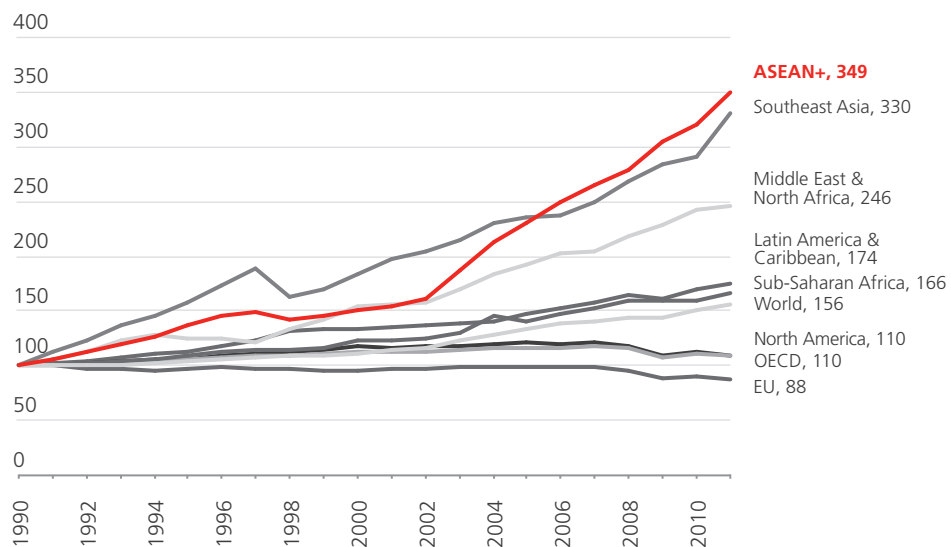
## Electric power consumption in 2014 (kWh per capita)



Data source: World Bank (2015), 'World Development Indicators, update 22 December 2015'.

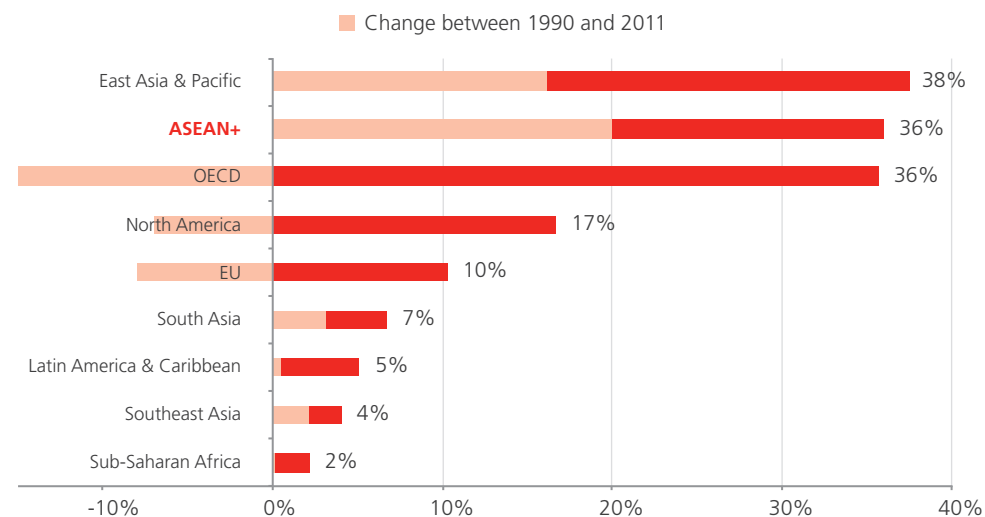
The world share of CO<sub>2</sub> emissions of the ASEAN+ was 36 percent in 2011, up from 16 percent in 1990.

## Growth of CO<sub>2</sub> emissions (kt, 1990 = 100)



Data source: World Bank (2015), 'World Development Indicators, update 22 December 2015'.

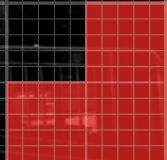
## World share of CO<sub>2</sub> emissions in 2011 (kt)



Data source: World Bank (2015), 'World Development Indicators, update 22 December 2015'.



The ASEAN+ uses almost one third of all electricity in the world in 2014, up from roughly 8 percent in 1990.





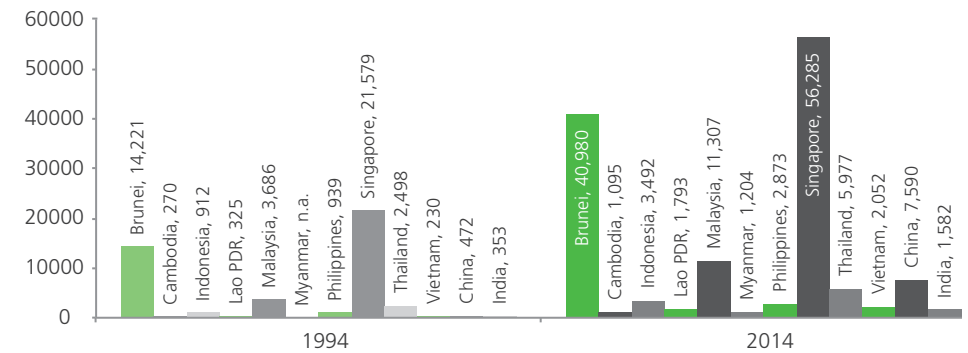
### 3 INCOME & WEALTH



GDP in the ASEAN+ increased almost 15-fold between 1990 and 2014, but wide income gaps still exist.

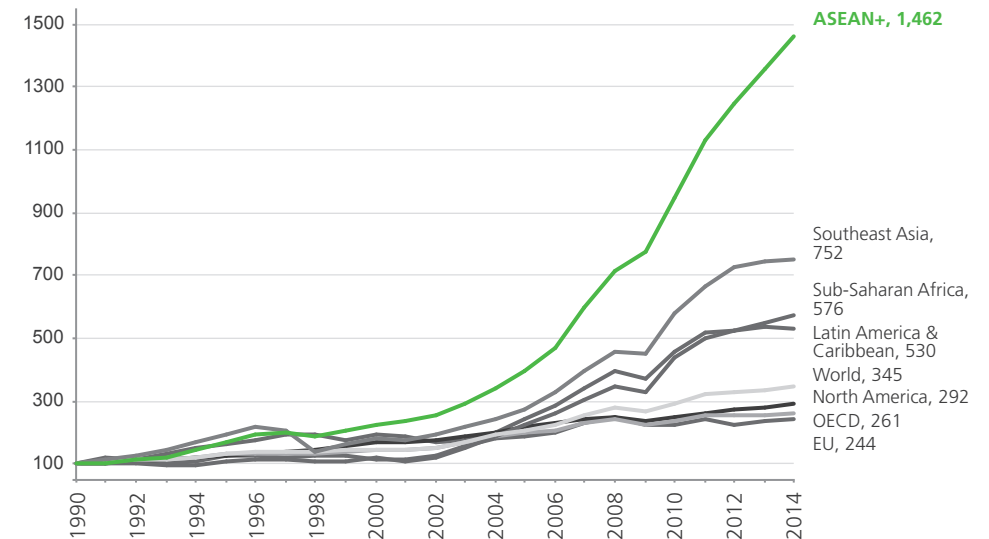


#### GDP per capita in the ASEAN+ (current US\$)



Data source: World Bank (2015) 'World Development Indicators', update 22 December 2015. National Statistics Offices for cross-check.

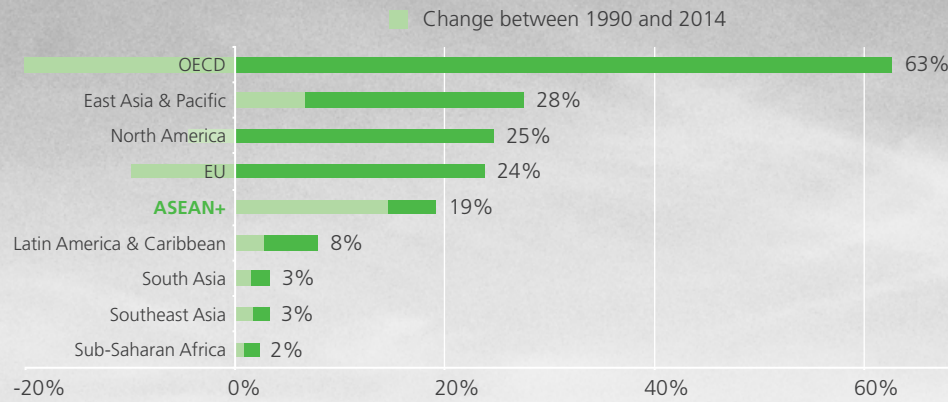
#### GDP growth (1990 = 100) (current US\$)



Data source: World Bank (2015), 'World Development Indicators, update 22 December 2015'.



## World share of GDP in 2014 (current US\$)



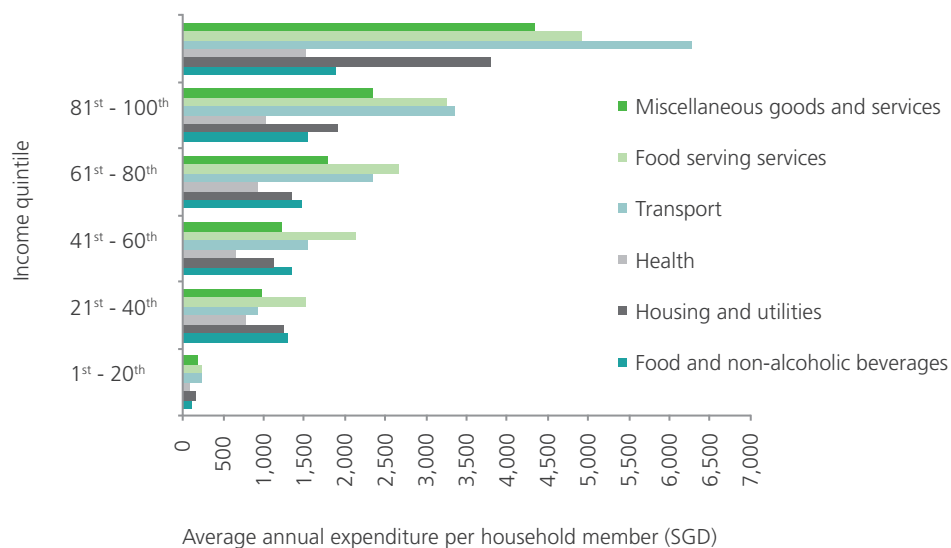
Data source: World Bank (2015), 'World Development Indicators, update 22 December 2015'.

In 2014, the world share of GDP was 19 percent in the ASEAN+, 24 percent in Europe, and 25 percent in North America.

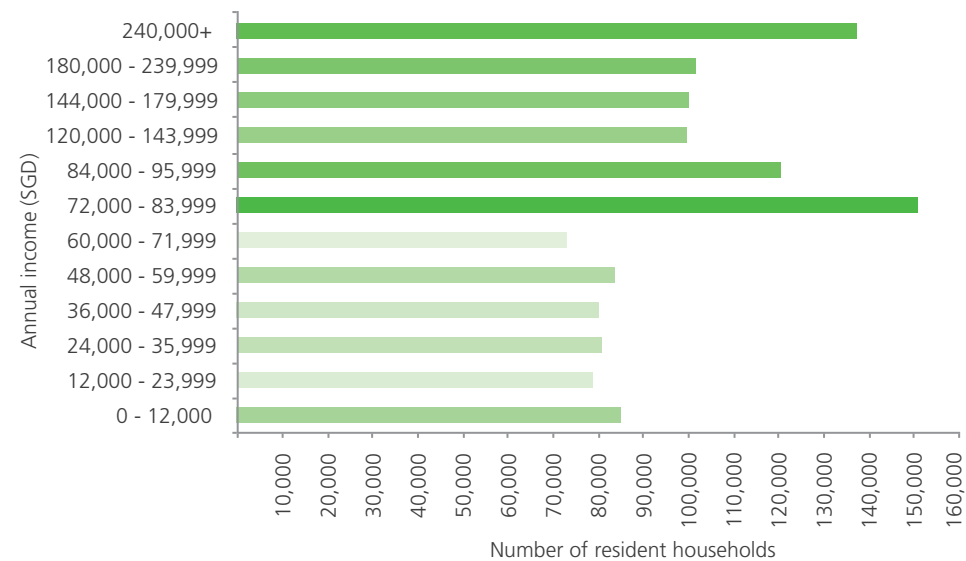


In Singapore, the composition of household expenditure changes depending on the income bracket; the highest quintile spends most on transport, while the lower three quintiles spend most on food services. Most households (151,000) earn between SGD 72,000 and 83,999 per year.

Singapore: Average annual household expenditure per household member by type of goods and services (2013)



Singapore: Number of resident households by annual income group (2013)

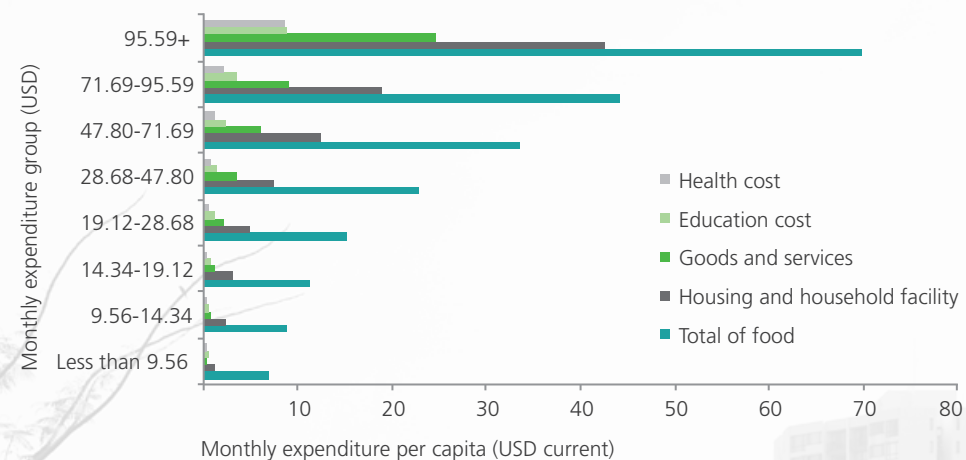


**Data source:** SingStat (Department of Statistics Singapore), 'Household expenditure survey 2013', <http://www.singstat.gov.sg/publications/household-expenditure-survey>, date accessed 19 August 2015. Income includes CPF contribution of employer; expenditure excludes imputed rental of owner-occupied accommodation.

**Data source:** SingStat (Department of Statistics Singapore), 'Household expenditure survey 2013', <http://www.singstat.gov.sg/publications/household-expenditure-survey>, date accessed 19 August 2015. Income includes CPF contribution of employer; expenditure excludes imputed rental of owner-occupied accommodation; min. disposable income based on lower bound of income range including CDP contribution.



## Indonesia: Average monthly per capita expenditure in urban areas by type of goods and services (2013)



**Data source:** Badan Pusat Statistik, 'Average Monthly Expenditure per Capita in Urban Areas by Commodity Group and Monthly Expenditure per Capita Class 2013', [www.bps.go.id/website/tabelExcelInggris/eng\\_05\\_36.xls](http://www.bps.go.id/website/tabelExcelInggris/eng_05_36.xls), date accessed 8 November 2015; World Bank, 'Official exchange rate (LCU per US\$, period average)', <http://data.worldbank.org/indicator/PA.NUS.FCRF>, date accessed 8 November 2015, for conversion from local currency to USA at current prices.

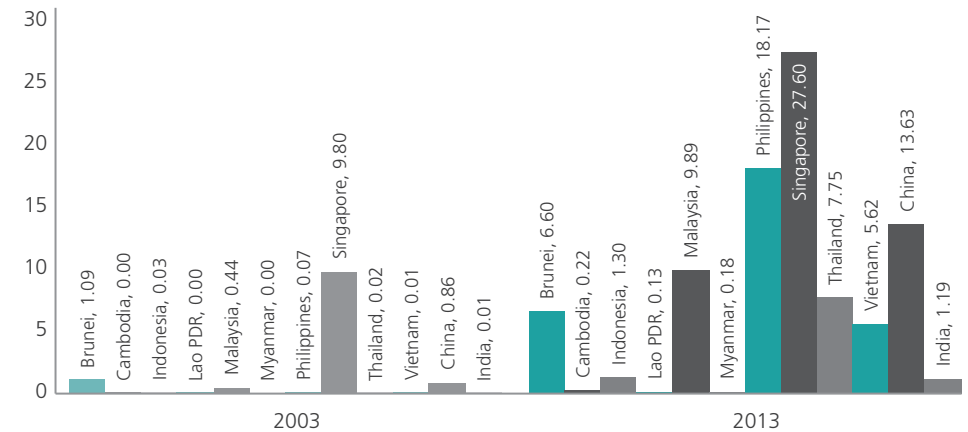
In Indonesia, the composition of household expenditure is consistent; all expenditure groups spend most on food, and second most on housing.

## 4 CONNECTIVITY

The number of fixed broadband subscriptions has increased 450-fold in the ASEAN+ since 2001, while it increased 25-fold in Europe and 7-fold in North America.

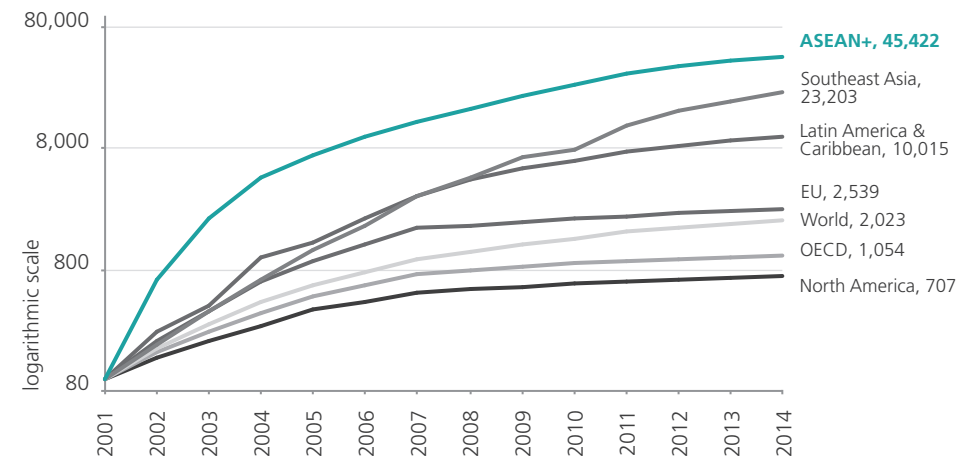
Many countries in the ASEAN+ still have fewer fixed broadband subscriptions per capita today than Singapore 10 years ago.

### Fixed broadband subscriptions in the ASEAN+ (per 100 people)



Data source: World Bank (2015) 'World Development Indicators', update 22 December 2015.

### Growth of fixed broadband subscriptions (2001 = 100)

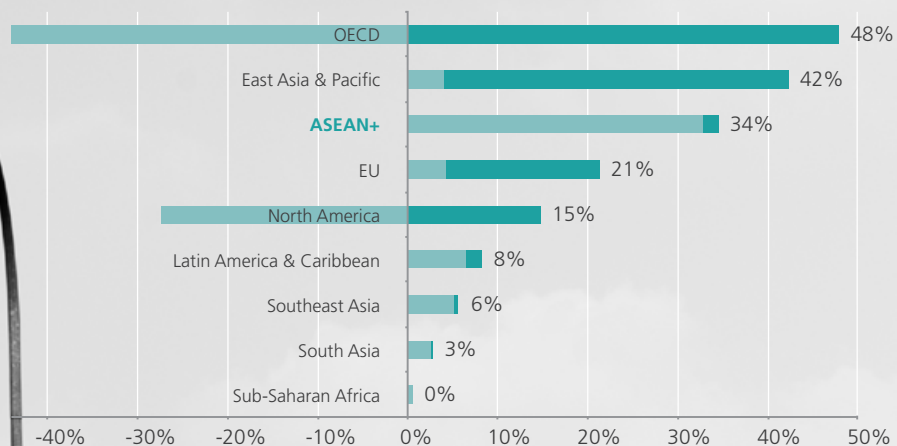


Data source: World Bank (2015), 'World Development Indicators', update 22 December 2015'.



## World share of fixed broadband subscriptions in 2014

Change between 2001 and 2014



Data source: World Bank (2015) 'World Development Indicators', update 22 December 2015, <http://data.worldbank.org/data-catalog/world-development-indicators>, date accessed 11 February 2016.

▲  
In 2014, 34 percent of all fixed broadband subscriptions in the world were in the ASEAN+, up from just 1.5 percent in 2001. This is the greatest positive change of all major regions in the world.  
▼



