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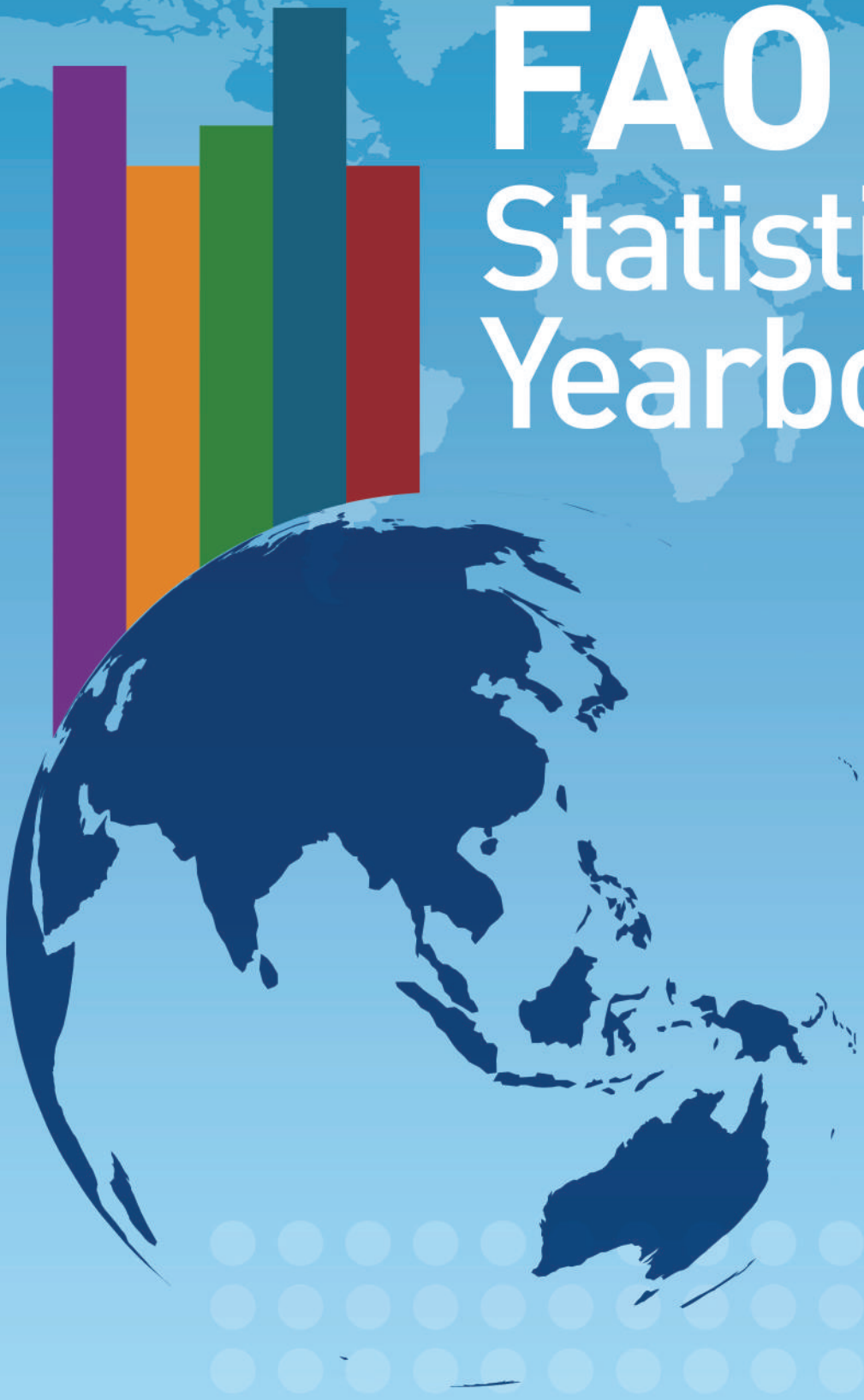

Asia and the Pacific food and agriculture

FAO STATISTICAL YEARBOOK
2014
Asia and the Pacific
Food and Agriculture

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Foreword

Timely and reliable statistics are of fundamental importance in economic development and in the fight against hunger and poverty.

Not only can good data help to keep track of development progress and the impact of measures implemented, they can also serve to help in designing appropriate policies and interventions to improve past performance and ensure continuing progress.

Employing data from a variety of global statistical sources, including data gathered by FAO itself, this publication provides a detailed view of the latest trends and factors governing the performance of the food and agriculture sector in the Asia and Pacific Region (APR), the world's largest and most populous region.

Being the largest user of natural resources such as land and water, agriculture is the human activity that has the greatest impact on the environment. A significant part of the data contained in this publication thus relates not only to agriculture, livestock raising, forestry and fisheries but also to these sectors' interplay with the natural environment and the resulting social outcomes.

We have come to recognize that in order to feed more than 9 billion people in 2050 – and 5 billion of them in the APR alone – we must not only produce more food, but produce, process, distribute and consume it more sustainably while reducing food waste for meeting the Zero Hunger Challenge.

This publication strives to serve as a reference point on the social, economic and environmental dimensions of agriculture for policy-makers, donor agencies, researchers and analysts as well as the general public. The data presented here can be accessed electronically through the FAOSTAT data platform.

FAO is deeply committed to helping countries strengthen their statistical systems. Together with international partners, FAO is implementing a Global Strategy to Improve Agricultural and Rural Statistics to address emerging statistical needs as well as existing weaknesses in basic data in many developing countries.

This long-term project builds on three pillars: producing a minimum set of core data and determining national priorities; integrating agricultural statistics into national statistical systems; and fostering the sustainability of agricultural statistics through governance and capacity development.

In this context, FAO and its partners have prepared a Regional Action Plan (2013-2017) for the APR. This represents a groundbreaking effort to halt the decline in the content and quality of agricultural statistics production by restoring sustainable systems to produce them by making use of new methods and technologies. It is also designed to meet emerging data requirements not only to support decision-making regarding the linkage of agriculture to the environment but also to monitor how a decision in one area affects others.

The plan establishes a regional governance structure that will support statistical capacity-building efforts at the country level by providing technical assistance, training and research.

In order to fight hunger and poverty more effectively, FAO, in Asia and the Pacific as in the rest of the world, will continue to support the collection and dissemination of reliable data on agriculture and rural sectors, and to assist member countries in building capacity to improve the quality of data related to agriculture, food security and the environment.

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and Regional Representative
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Acknowledgements

The Food and Agriculture Organization of the United Nations' Regional Office for Asia and the Pacific (FAORAP) and the FAO Statistics Division (ESS) would like to acknowledge the collective effort of statisticians and other staff in national statistical offices, ministries of agriculture and other ministries and government departments in this region that constantly provide data to FAO. In addition we would like to acknowledge the ongoing cooperation with regional and international institutions and non-government organizations whose efforts have made this publication possible.

This publication was jointly prepared by FAORAP and the ESS. The work was carried out under the guidance of Hiroyuki Konuma (Assistant Director-General and Regional Representative, FAORAP) and Pietro Gennari (Chief Statistician, FAO, and Director, ESS). The publication is based on data published in FAOSTAT and in other international publications. Production of this book was managed by Mukesh Srivastava (FAORAP) and Amy Heyman (ESS). A number of technical officers at FAORAP, including Purushottam Mudbhary, David Dawe, Sumiter Broca, Patrick Durst, Seevalingum Ramasawmy, Rosa Rolle, Thierry Facon, Simmathiri Appanah, Subash Dasgupta, Vinod Ahuja and Yurdi Yasmi provided valuable comments and contributions during the preparation of this book, particularly on the highlights presented in the text. The publication was edited by Robin Leslie. Yohei Kunikane and Anthony Burgard provided valuable support in finalizing and printing of the publication. The team at FAO headquarters in Rome included Filippo Gheri and Shira Fano (ESS) who were responsible for data extraction, layout design and graphics. The other contributors were Nienke Beintema (the International Food Policy Research Institute – IFPRI), Riccardo Biancalani (NRC), Andrea Borlizzi (ESS), Chiara Brunelli (ESS), Carlo Cafiero (ESS), Cinzia Cerri (ESS), Rocio Condor-Golec (Climate, Energy and Tenure Division – NRC), Piero Conforti (ESS), Elisenda Estruch (Gender, Equity and Rural Employment Division – ESW), Alessandro Ferrara (NRC), Karen Frenken (Land and Water Division – NRL), Nandini Gunewardena (FAOLOW), Gary Jones (International Monetary Fund – IMF), Arvydas Lebedys (Forest Economics, Policy and Products Division – FOE), Erdgin Mane (ESS), Robert Mayo (ESS), Verena Nowak (Nutrition Division – ESN), Michael Rahija (IFPRI), Simone Rossi (NRC), Mirella Salvatore (NRC), Nadia Scialabba (NRC), Gert-Jan Stads (IFPRI), Nathalie Troubat (ESS), Sachiko Tsuji (Statistics and Information Service – FIPS), Francesco Tubiello (NRC), Stefania Vannuccini (FIPS), Nathan Wanner (ESS) and Firas Yassin (ESS). Special thanks go to other staff from ESS: Andrea Alcibiade, Guido Barbaglia, Giorgia DeSantis, James Edge, Carola Fabi, Amanda Gordon, Nicola Graziani, Fabio Grita, Francesca Pittueo, Adam Prakash, Gordon Ramsay, Nicholas Sakoff, Nicola Selleri, Sylvaine Thomas as well as Michelle Kendrick (ESA) and Boris Veytsman for their inputs.

How to use this book

The structure

The FAO Statistical Yearbook products build on the process that began with the 2012 edition. The book has been created from beginning to end with the statistical software R and the typesetting language LaTeX: from data retrieval, to data processing, indicator construction, and blueprint-ready pdf file for distribution. This technique has circumvented the traditional route of manual production, involving costly software licences, significant labour costs and inefficiencies associated with a lack of integration.

Using data from global statistical providers, including FAO, the publication presents a visual synthesis of major trends and factors shaping the global food and agricultural landscape, and their interplay with broader environmental, social and economic dimensions. In doing so, it serves as a unique reference point of world food and agriculture for policy-makers, donor agencies, researchers, analysts and the general public.

The book is divided into four thematic parts, in an attempt to present the full spectrum of issues relevant to the subject matter:

Part 1 **The setting** measures the state of the agricultural resource base by assessing the supply of land, labour, capital and inputs, and examining the pressure on the world food system stemming from demographic and macroeconomic change.

Part 2 **Hunger dimensions** gauges the state of food insecurity and malnutrition, measuring the multitude of dimensions that give rise to hunger and shape undernourishment.

Part 3 **Feeding the world** evaluates the past and present productive capacity of world agriculture, together with the role of trade in meeting changing food, feed and other demands.

Part 4 **Sustainability dimensions** examines the sustainability of agriculture in the context of the pressure it exerts on the environment, including the interaction of agriculture with climate change, and how it can provide ecosystem services through the bio-based economy.

Several page spreads are used to present each thematic issue. Each spread contains visualizations of the data in maps and charts, along with text providing background to the salient issues and an assessment of current trends. Tables are provided at the end of each part. A list of indicators used throughout the book and a section on concepts and methods can be found in Part 5.

Country definitions and classification

The publication follows the FAO Regional Office for Asia and the Pacific composition (see "Table: Country list" or http://www.fao.org/world/regional/rap/).

The reader is advised to carefully note the aggregation underlying the numbers reported in the text. Occasionally the numbers may not be apparently comparable to those reported in other publications merely on account use of a different criteria for grouping of countries.

Aggregations

Two types of aggregations are used in the book: sum and weighted mean. Two restrictions are imposed when computing the aggregation: i) the sufficiency condition – the aggregation is computed only when sufficient countries have reported data, and the current threshold is set at 50 percent of the variable and the weighting variable, if present; and ii) the comparability condition – as aggregations are usually computed over time, this condition is designed to ensure that the number of countries is comparable over several years; under the current restriction the number of countries may not vary by more than 15 over time.

Data presentation conventions

The cutoff date for the data is 30 September 2013.

- When country data have not been reported for the reference year, an asterisk (*) on the year label indicates that the value for the most recent year available is shown. For example, 2008–2010* means that the most recent value for the period from 2008 to 2010 is shown. When a growth rate is computed, the specified interval always refers to available data.
- A billion is 1 000 million.
- A trillion is 1 000 billion.
- A blank means that data are not available or that aggregates cannot be calculated because of missing data for the years shown.
- In tables, 0 or 0.0 means zero or a number that is small enough to round to zero at the displayed number of decimal places.
- A ~ in the maps refers to the range specified in the class intervals.

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PART

1

The setting

The Asia and Pacific Region (APR) has registered faster economic growth in past decades than any other FAO region. At the same time the proportion of undernourished people fell from 20 percent of the population in 1990-1992 to 11.8 percent in 2011-2013.

This performance – a 43 percent reduction in the number of undernourished – puts the APR on track to achieve MDG 1 of eradicating extreme poverty and hunger. However, the APR is still home to more undernourished persons than any other region. As of 2012, FAO estimated that 529 million hungry people or 63 percent of the world's hungry, live there. Now an additional push is needed to secure the objective by the 2015 deadline.

But there is good reason for optimism. For one thing the region recovered quickly from the economic crisis of 2008-2009 and has since then generally grown more rapidly than the rest of the world. Provided this growth continues to reach the poor, as it has in the past, the food security situation is expected to continue to improve.

Growth originating in agriculture has a stronger impact on poverty and hunger than growth originating in other sectors. As the following sections and chapters show, the APR has the right economies of scale to support continued expansion. This vast region holds 40 percent of the world's agricultural land and 25 percent of its agricultural population. These figures, however, must be set against the region's equally vast population – 4 billion in 2012, or more than half of the world's population.

Already the APR generates about one-third[1] of the world's GDP. It is the planet's biggest producer of cereals, vegetables, fruit, meat and fish, with strong growth in all areas. The expansion in production in this region has not been achieved by bringing significantly more land into production. China, for example, manages to feed 20 percent of the world's population with only 9 percent of its arable land and has increased its cereal production every year for the past ten years. It is also the world's leading net exporter of fish and fish products, with 20 percent of the global market share.

FAO Director-General, José Graziano da Silva, has called the success of Chinese agriculture 'phenomenal'. But some other countries in the region are not lagging far behind.

[1] 30 percent in current dollars and 34 percent in Purchasing Power Parity (PPP) terms; (World Development Indicators updated 18-Dec-2013)

Continued growth will, however, require appropriate levels of investment, especially given increasing constraints on labour and natural resources. By 2050, for example, 63 percent of the region's population will live in urban areas. The size of the agricultural labour force has already begun to decline in several countries in absolute terms.

More knowledge and capital-intensive techniques will be needed to maintain production and provide food at affordable prices as labour moves out of the agriculture sector. This will require more investment, primarily by the private sector in areas such as machinery. More private and public sector investment in training to upgrade farmers' skills shall be needed. Research on crop varieties that are tolerant of stresses such as drought, submergence and salinity will be critical.

Given its enormous size, achieving prosperity and food security across the region will be nothing less than a gigantic undertaking. But given the APR's track record of success, it can be accomplished.

Overview

In 2012, the total population of the APR covered by FAO was 4.1 billion, making it by far the most populous of the organization's five regions and representing almost 60 percent of the world's total population. The region is home to two of the world's most populous countries, China and India, with 1.35[2] and 1.26 billion inhabitants respectively. Together, the two countries account for almost a third of the human race. Of the world's ten most populous countries, six are in Asia (Table 1).

Although China has more inhabitants, India's population is growing more than twice as fast, at some 1.3 percent per annum. Indeed, with the exception of East and Central Asia, population growth rates across the region generally exceed the global rate of 1.2 percent. So while population growth remains sustained in the APR, it is also true that the pace of growth is declining in most countries and subregions while in the Russian Federation and in the Pacific island of Niue populations appear to be shrinking.

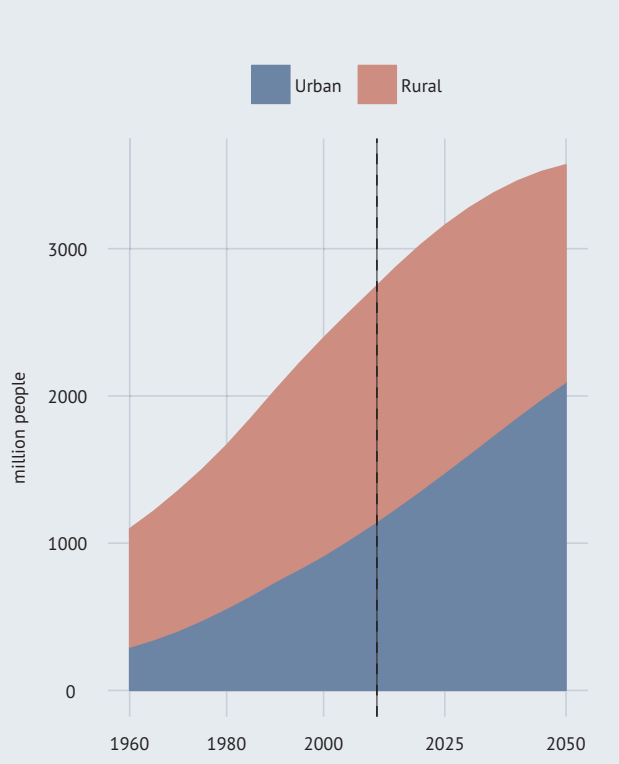
Population growth is being accompanied by increasing urbanization. For the region as a whole, the number of people living in urban areas rose from 50 to 52.7 percent of the total population between 2000 and 2011. It is projected that by the middle of this century, 63 percent of those living in the region will be urban dwellers.

Of the subregions, East Asia is the most urbanized, with more than 75 percent of people living in towns and cities. The Pacific Islands, the most rurally populated of all the subregions, witnessed minor changes in its rural-urban population composition between 2000 and 2011. On the whole the subregion saw the share of its rural population increase slightly– from 81.1 to 81.6 percent. Rural population share in Central Asia also increased marginally from 32.8 percent to 33.5 percent during the same period. In South Asia, the rural population declined from 71 percent to about 67 percent. Extraneous to the Pacific Islands, Table 1 shows that Sri Lanka has the highest percentage of rural population (84.9 percent), followed by Nepal (83 percent) and Cambodia (80 percent).

Along with population growth and generally increased urbanization, the APR has witnessed spectacular economic growth. Between 2000 and 2012, the region's GDP increased from US$8.5 trillion to US$23.7 trillion at current prices, which was considerably higher than the global increase. According to the World Bank, many of these countries doubled their GDP in real terms over the same period. China tripled the size of its economy, (in constant 2005 US dollars) and India more than doubled the figure. The Republic of Korea (ROK) and Indonesia also performed strongly. In contrast Japan, one of the three developed economies in the region, managed to grow only moderately from US$4.7 trillion to US$6.0 trillion (Table 3).

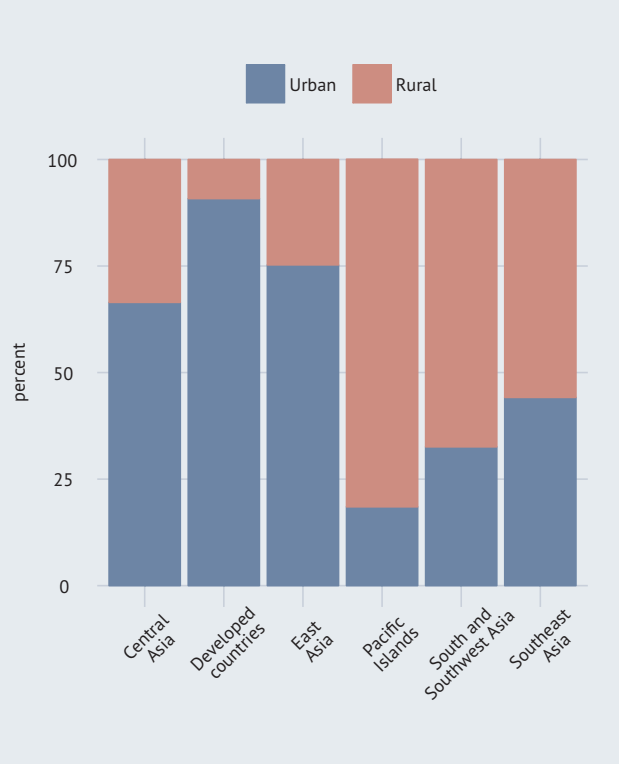
[2] UNDP's World Population Prospects 2010 gives China's population as 1.35 billion.

CHART 1: **Asia and Pacific rural and urban population (1960-2050)**



Source: United Nations Population Division.

CHART 2: **Rural and urban population, share of total population (2011)**

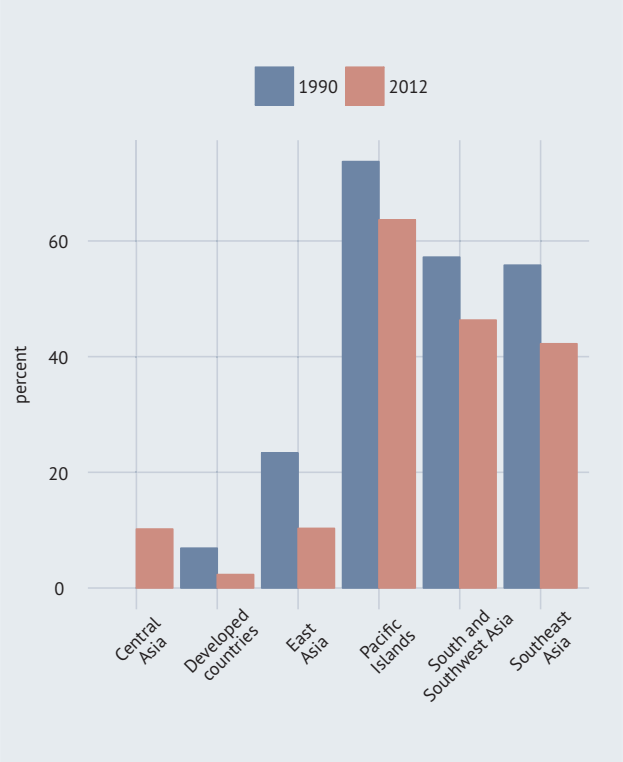


Source: United Nations Population Division.

MAP 1: **Population annual growth (percent, 2000-2012)**

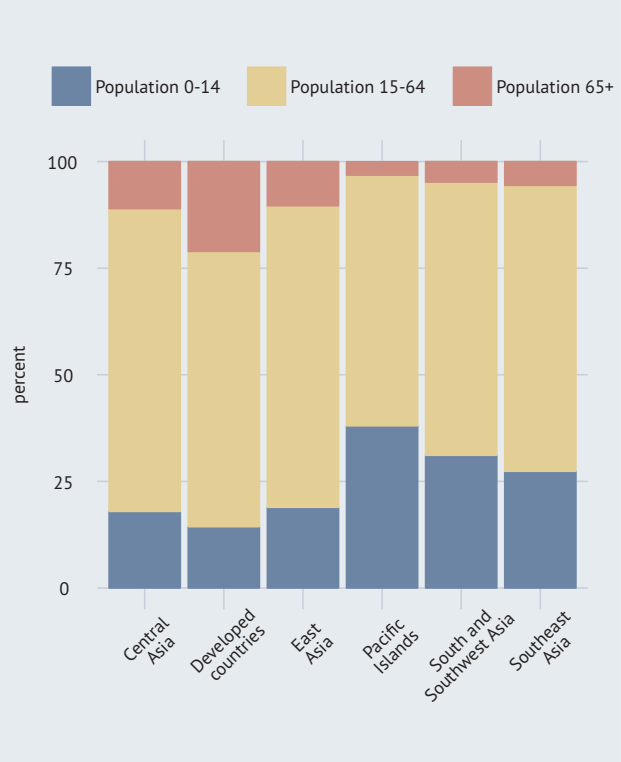
Source: United Nations Population Division.

CHART 3: **Agricultural population, share of total population (1990 and 2012)**



Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

CHART 4: **Population ages 0-14, 15-64 and 65+, share of total (2010)**



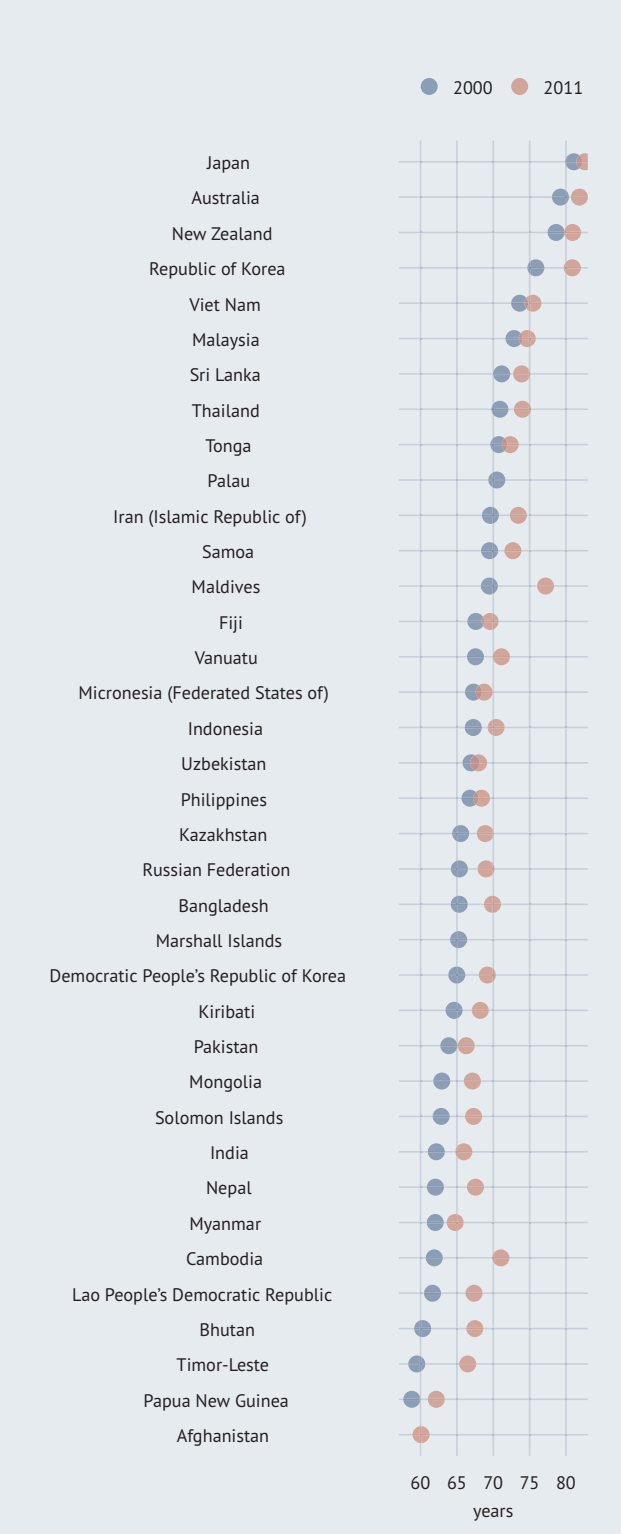
Source: United Nations Population Division.

As a result, individual incomes have been rising substantially throughout the region, although considerable differences remain between one country and another. Gross National Income (GNI) per capita in current US dollars in 2012 stood at US$5 612 for the region as a whole. Excluding the region's developed countries, people were by far the richest in ROK that year, with US$22 670 per capita GNI. The Russian Federation followed with per capita GNI of US$12 700 while Palau and Malaysia respectively had US$9 860 and US$9 800. Despite making significant strides over the last decade, Nepal's per capita GNI remained the lowest in the region (US$700), followed by Bangladesh (US$840) and Cambodia (US$880). China's per capita GNI was US$5 680 in 2012 while India stood at US$1 530 (Table 2).

Economic progress is juxtaposed by key health-related indicators that will affect the region's future demographics. Between 2000 and 2011, life expectancy in the developing countries and transition economies in the region increased from 66.0 years to 68.1 years. The regional average, however, remains well below the world average of 74.3 years. There are also wide variations within the region, with Japan having the highest life expectancy at 82.6 years and Afghanistan the lowest at 60.1 years. Timor-Leste has made the greatest strides in this area, adding more than six years to average life expectancy between 2000 and 2011 (60.3 years to 66.5 years).

In line with the global trend, between 2000 and 2011, mortality among children under five years of age declined from 58.7 deaths per 1 000 live births to 38.0. The figure is well below the global average of 55.4. Within the region – excluding developed countries – under-five mortality is lowest in East Asia with 22.4 deaths per 1 000 live births, followed by Central Asia with 25.7. Under-five deaths are lowest in ROK, with just 4.0 per 1 000, followed by Malaysia with 8.5 and Sri Lanka with 10. China reported reduction in its under-five mortality rate during the period from 34.3 to 14.9. Under-five mortality is highest in South and Southwest Asia, with Afghanistan standing out at 101.2 under-five deaths per 1 000 live births. Pakistan is next at 87.9.

CHART 5: **Life expectancy at birth (2000-2011)**



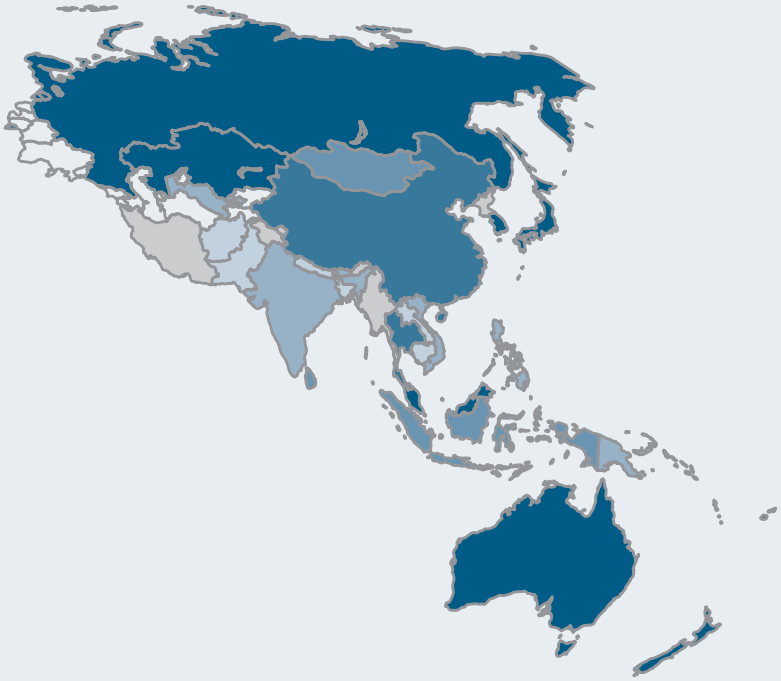
Source: World Bank (WDI).

Further reading

- Asian Development Bank Annual Report, Asian Development Bank (2013a)
- World Population Prospects: the 2011 revision (www.un.org/esa/population/)
- UN Population Fund (www.unfpa.org/)
- FAO Food and Nutrition Security in Urban Environments (www.fao.org/ag/agn/nutrition/urban_security_en.stm)

MAP 2: **GNI per capita (current US$, 2011-2012*)**

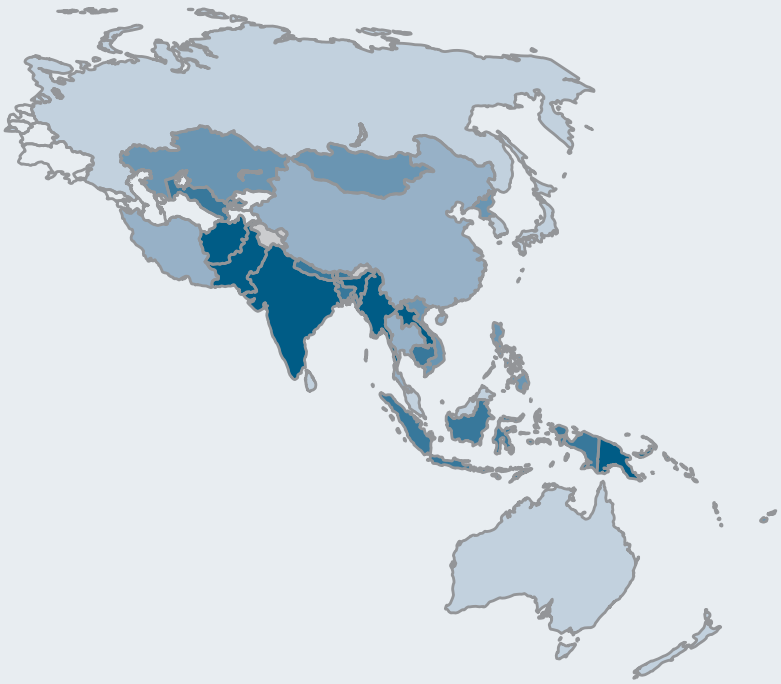
No data available | 570 ~ < 1 400 | 1 400 ~ < 2 920 | 2 920 ~ < 4 140 | 4 140 ~ < 9 750 | 9 750 ~ 59 570



Source: World Bank (WDI).

MAP 3: **Under-5 mortality rate (per 1000 live births, 2010-2011*)**

No data available | 3.4 ~ < 12 | 12 ~ < 20 | 20 ~ < 32 | 32 ~ < 54 | 54 ~ 101.2



Source: World Bank (WDI).

Economy

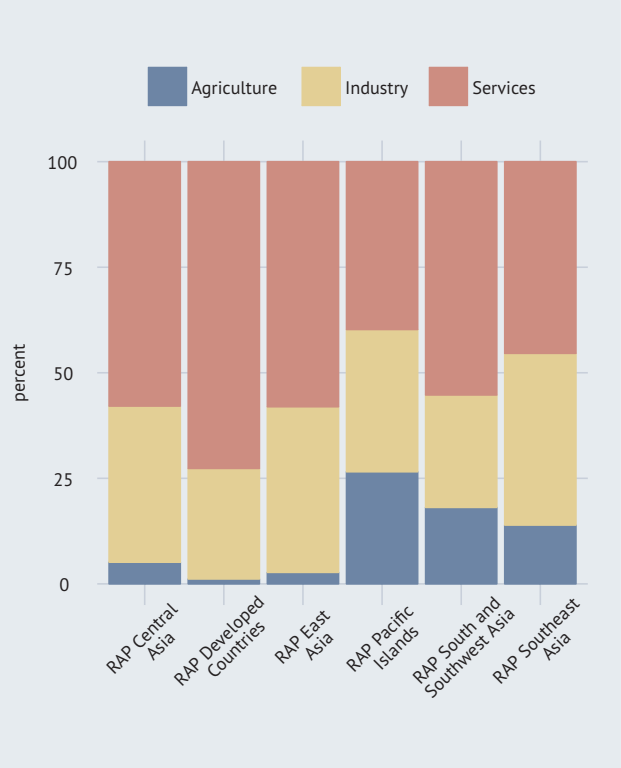
The APR achieved greater economic growth between 2000 and 2012 than any other region, and individual incomes improved substantially too. The region recovered quickly from the economic crisis of 2008-2009 and has generally grown faster over the past few years than the rest of the world. The APR's GDP in constant 2005 US dollars totalled US$15.0 trillion in 2012, up from US$9.1 trillion in constant 2005 US dollars in 2000 . The average annual growth rate of real GDP over this period was therefore 4.5 percent.

As the regional economy has boomed, agriculture's share of GDP in the APR's developing and transition countries declined 14.4 percent in 2000 to 10.6 percent in 2011. In China, it fell from 15 to 10 percent between 2000 and 2011; in India it shrank from 23 to 18 percent over the same period. Bucking the trend, Malaysian agriculture's share of the economy remained virtually constant, showing an insignificant change from 9 to 10 percent between 2000 and 2012. Cambodia had the highest share of agricultural GDP (36.7 percent), followed by Nepal (36.4 percent).

Agricultural productivity in the region, as measured by value added per worker, has generally been rising, especially in East Asia and, more slowly in South Asia. But, with the exception of ROK, it remains a fraction of what is achieved in developed countries. Among the subregions, the Pacific Islands achieve the highest levels of value added per agricultural worker.

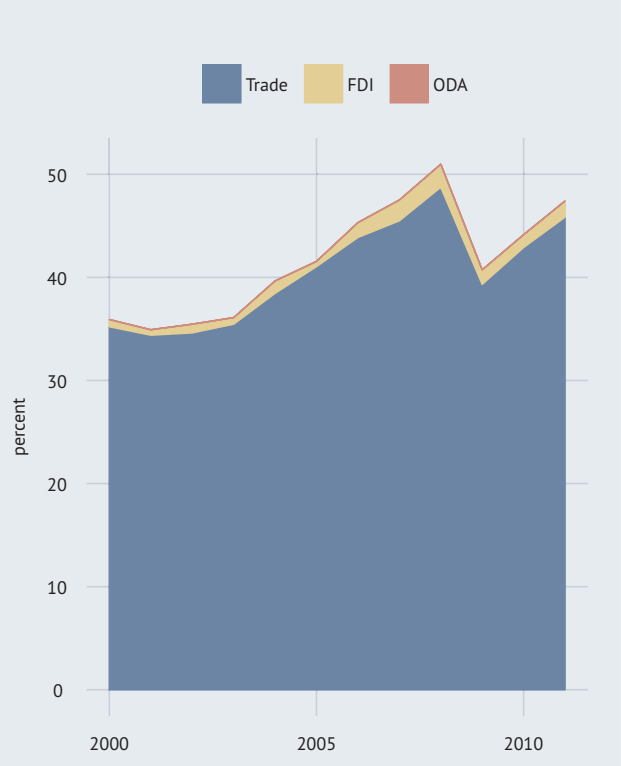
Agriculture's shrinking share of GDP has been accompanied by a corresponding increase in the importance of the services sector, and, to a lesser extent, of industry. Services' share of GDP in China grew from 39 to 43.3 percent between 2000 and 2011 and in Malaysia from 43 to 49.2 percent while the Philippines grew from 52 to 55.7 percent. India saw its services sector increase from 51 to 56.9 percent over the period, while Pakistan climbed from 51 to 54.4 percent. Growth in industry's share of GDP was generally more modest and in some cases negative, largely because of the global economic downturn. The share of industry in the Mongolian economy doubled from 25 to 50 percent in 11 years, followed by Lao PDR, which saw an 18-point rise from 17 to 34.7 percent. Bangladesh grew by 3.5 points to 28.5 percent and Viet Nam by 2.9 points to 39.9 percent.

CHART 6: **Value added in agriculture, industry, and services as shares of GDP (2011)**



Source: World Bank (WDI).

CHART 7: **Asia and Pacific trade, FDI, and ODA as shares of GDP (2000-2012)**

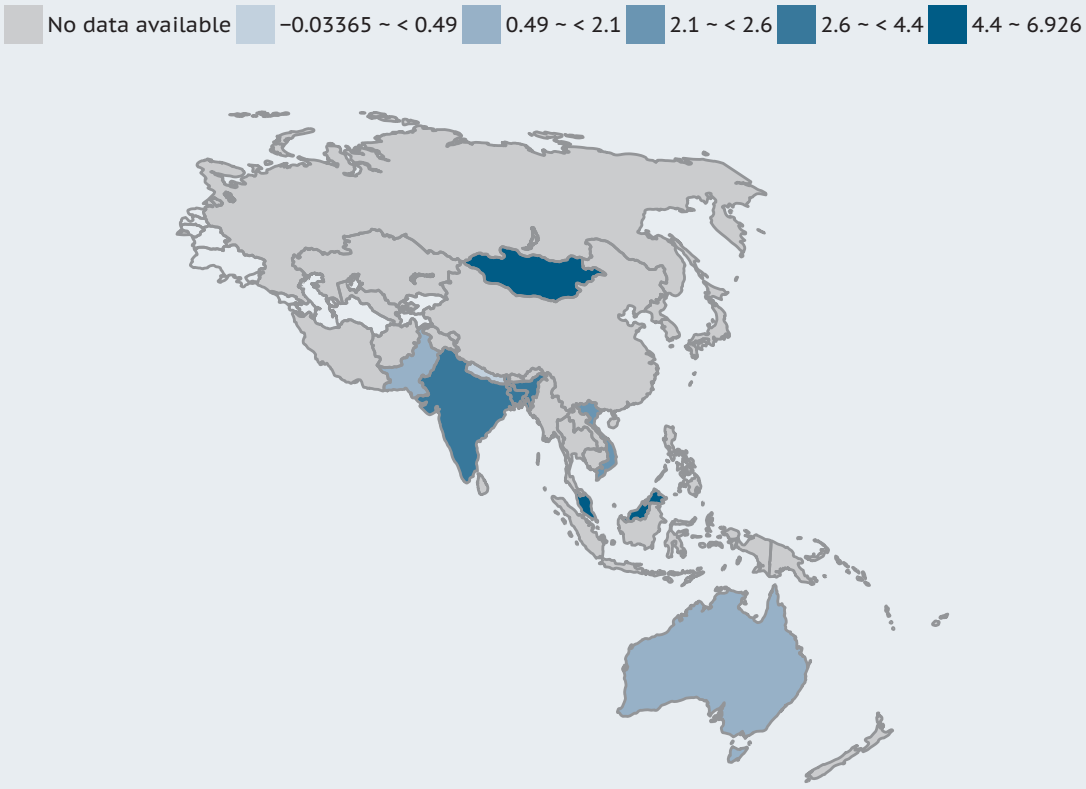


Source: World Bank (WDI).

Further reading

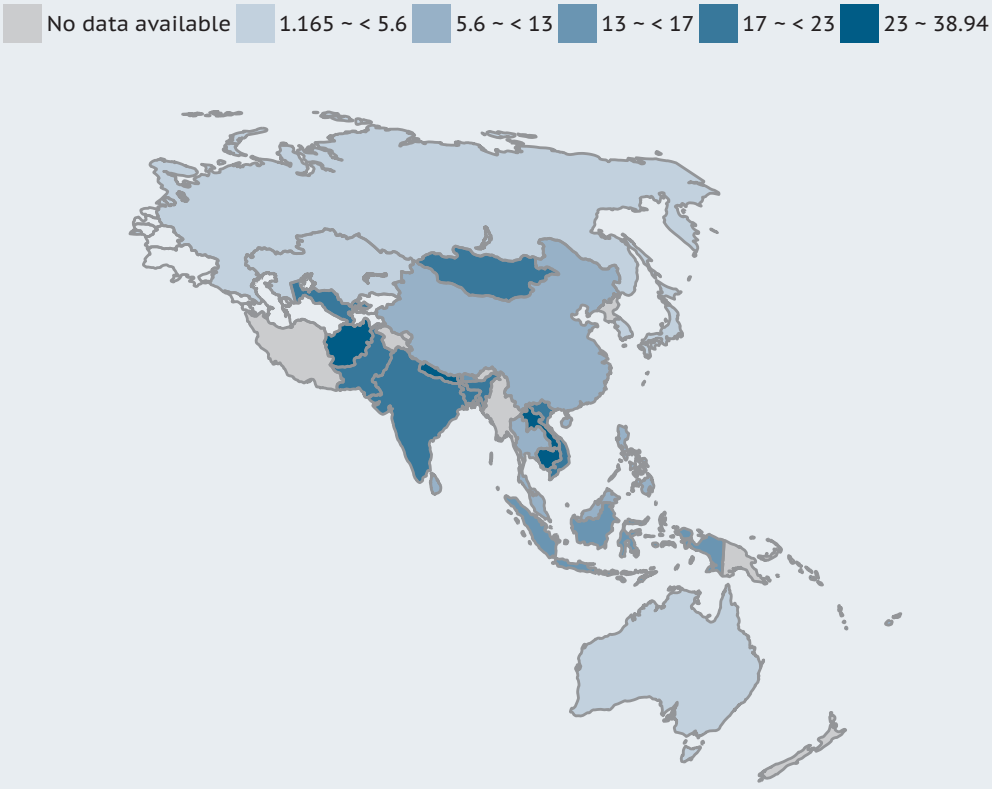
- Asian Development Bank (2013d)
- World Bank: Global Economic Prospects (wwwr.worldbank.org/prospects/)
- International Monetary Fund: World Economic Outlook (www.imf.org/external/index.htm)

MAP 4: **Agriculture, value added per worker annual growth (percent, 2011-2012)**



Source: World Bank.

MAP 5: **Agriculture, value added as share of GDP (percent, 2008-2012*)**



Source: World Bank (WDI).

Land and water

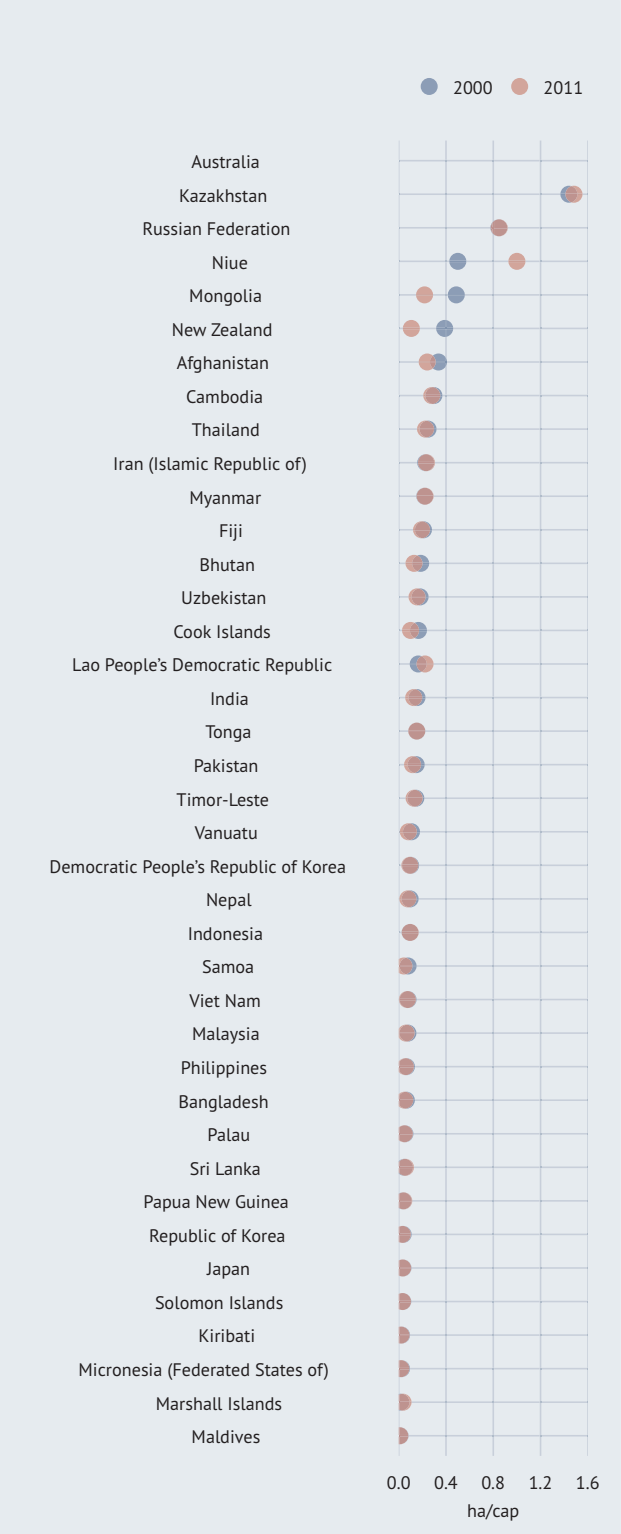
In the region as a whole, about 40 percent of the land is used for agriculture and another 30 percent is forested. But the share of agricultural land in the total geographical area of the country varies widely. In 2011, among the subregions, it was highest in East Asia (57.5 percent) and lowest in the heavily-forested Pacific Islands (4 percent). Comparing countries, Kazakhstan tops the list with 77.5 percent. Mongolia and Bangladesh follow, with 73.1 and 70.1 percent respectively. China has 55.8 percent, India 60.5 percent and Pakistan much less – 34.4 percent. The Russian Federation and Japan must feed their populations with scant farmland – 13.1 and 12.5 percent respectively. Outside the Pacific Islands, Lao PDR has the least agricultural land (10.3 percent).

Although agricultural production has increased in the region, the area used for agriculture has expanded insignificantly over the last decade (1999-2009).

Of the total agricultural land in the region, 30.8 percent is arable, 4 percent is used for permanent crops and 65.4 percent consists of permanent meadows and pastures. Within the East Asia region, almost all of Mongolia's agricultural land is used for pasture (99.5 percent), while China's pastures account for 75.8 percent of its agricultural land. South and Southwest Asia have the highest share of arable land (69.3 percent), largely on the basis of India's 87.5 percent and of Pakistan's 78 percent coverage. East Asia, where most agricultural land is devoted to pastures, has only 18.1 percent of arable land. Japan has the highest proportion of arable farmland (93.3 percent).

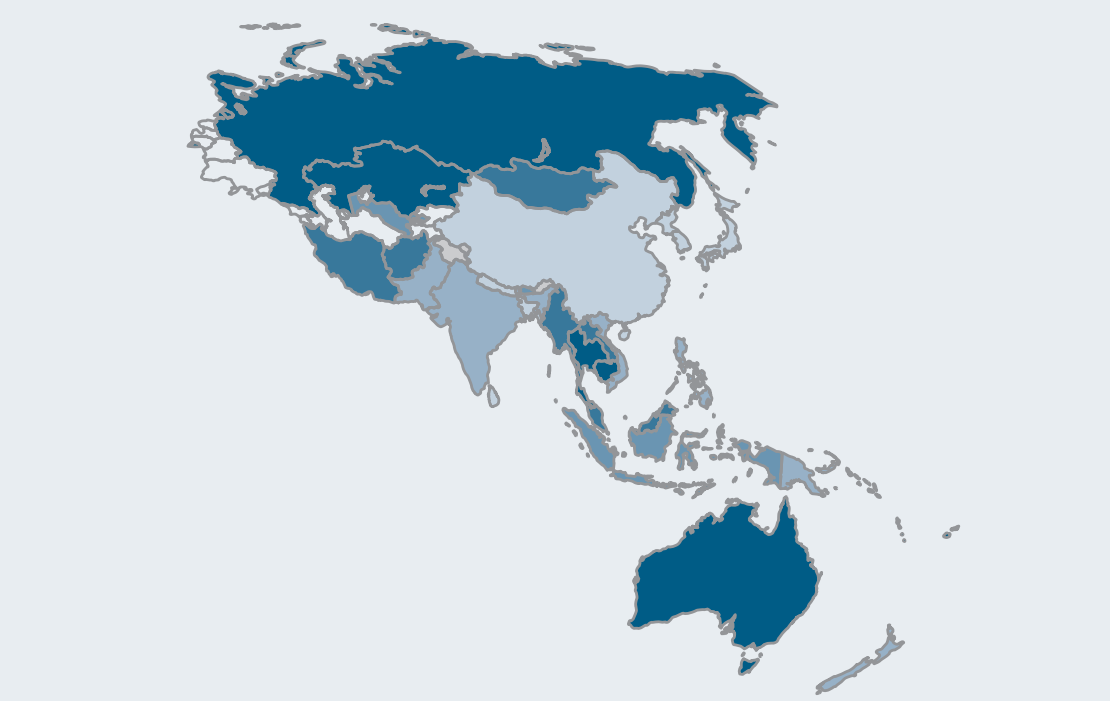
The area of arable land available per capita in the region is 0.17 hectare – very little compared to the 0.40 hectare available to Europeans and North Americans. Most countries in the region have less than 0.4 hectare per capita except the Russian Federation (0.85 hectare), Niue (1.0 hectare) Kazakhstan (1.45 hectares) and Australia (2.14 hectares).

CHART 8: **Arable land per capita (2000 and 2011)**



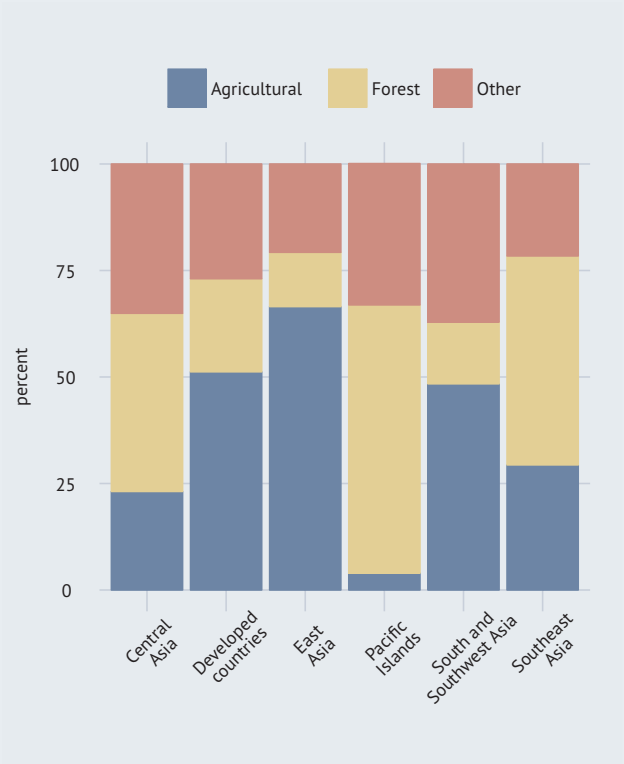
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

MAP 6: **Cropland per capita (ha/cap, 2011)**



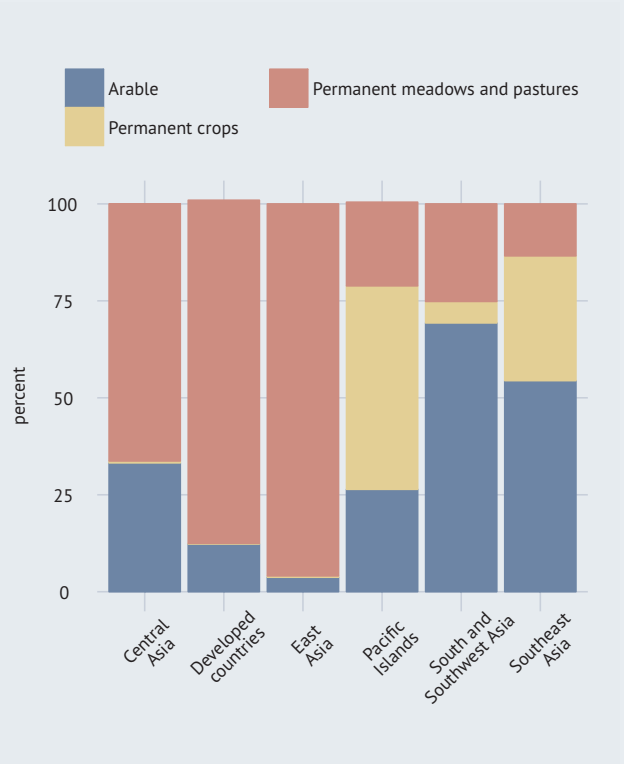
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

CHART 9: **Land area (2011)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 10: **Agricultural area (2011)**



Source: FAO, Statistics Division (FAOSTAT).

Overall, the APR is relatively well endowed with water resources. According to AQUASTAT, FAO's global water information system, the region's total area represents 16 percent of the world's land surface, but it receives 22 percent of its precipitation and has 25 percent of its water resources. However, because of the region's high population, the amount of water available per person is 2 970 cubic metres per year, which is less than half the world's per capita average of 6 236 cubic metres per year.

Water resources are distributed very unevenly in the region. AQUASTAT uses the figure of 2 000 cubic metres per person per year as a threshold for water scarcity. Based on this, the Maldives is facing an exceptionally critical shortage of water with only 95 cubic metres per person per year. India, the Islamic Republic of Iran, Pakistan, ROK and Uzbekistan are all water-scarce countries, as defined by the threshold given above.

Growing populations and economic development are putting increasing pressure on water resources virtually everywhere. Between 1990 and 2010 per capita water availability dropped by 42 percent in the Solomon Islands, 36 percent in Malaysia, Pakistan and Nepal, 29 percent in India and Bangladesh and 23 percent in Viet Nam, to cite only a few examples.

Intensifying agricultural production depends on the availability of water resources for irrigation. India has by far the largest area equipped for irrigation at over 66 million hectares and the largest irrigation potential. Pakistan has the second-largest area with 20 million hectares while most of the other APR countries have much less.

Unfortunately, data from China for these irrigation indicators are not available. However, AQUASTAT cautions that different countries use different methods to estimate their irrigation potential, with some countries only considering renewable water resources, while others, especially arid countries, include the availability of non-conventional sources of water. For this reason, comparison between countries should be made with care. For transboundary rivers, individual countries' calculations of their irrigation potential from the same river basin may lead to double-counting of water resources. For this reason, national figures cannot be simply be added together to obtain regional estimates of irrigation potential.

Further reading

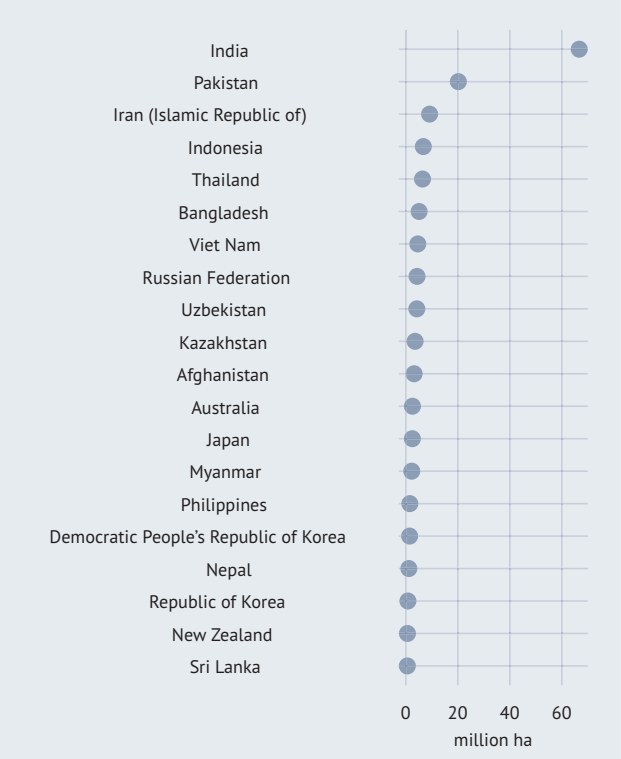
- AQUASTAT, FAO's global information system on water and agriculture (http://www.fao.org/nr/water/aquastat/main/index.stm)
- FAO The State of the World's Land and Water Resources for Food and Agriculture (SOLAW) - Managing Systems at Risk 2011 (www.fao.org/nr/solaw/solaw-home/en/)
- Bruinsma (2011)
- FAO Natural Resources and Environment Department (www.fao.org/nr/)

CHART 11: **Irrigation potential, selected countries (2012)**

Source: Land and Water Division (AQUASTAT).

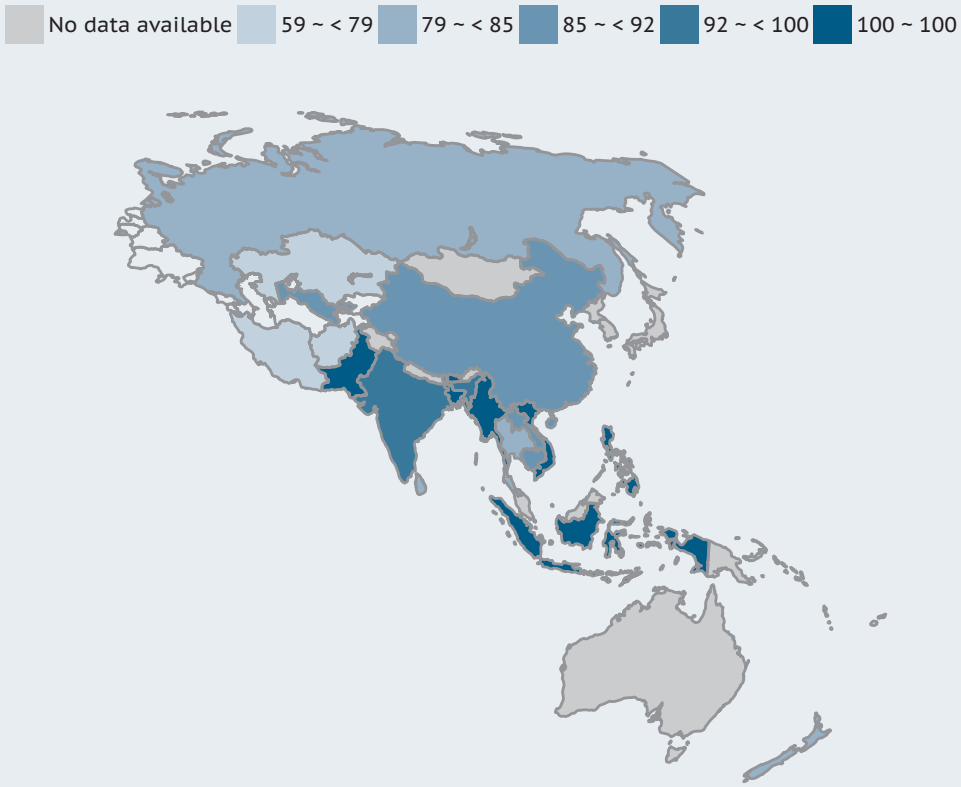
The irrigation potential area includes the area already equipped for irrigation.

CHART 12: **Total equipped area (2009)**



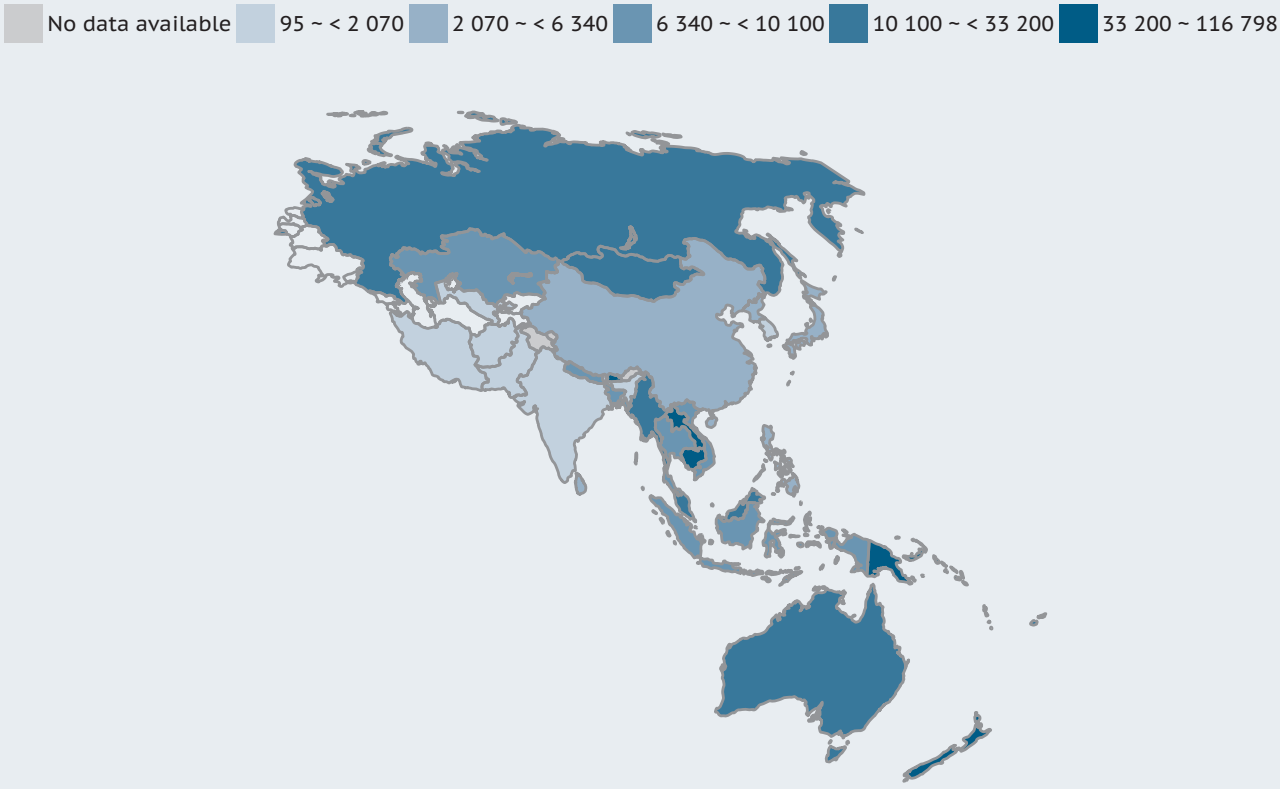
Source: Land and Water Division (AQUASTAT).

MAP 7: **Share of equipped area actually irrigated (percent, 2000-2012*)**



Source: Land and Water Division (AQUASTAT).

MAP 8: **Water resources per capita (m^3/yr/cap, 2010)**



Source: Land and Water Division (AQUASTAT).

Labour

Labour is a key factor in agricultural production. Although regional totals are unavailable, there are clear indications that the agricultural labour force has already begun to decline in several countries in absolute terms. Many subregions are experiencing labour scarcity. More knowledge- and capital-intensive techniques will be needed to increase production and provide food at affordable prices.

In four countries of the region – Bhutan, Cambodia, Viet Nam and India – over 50 percent of the labour force is still employed in agriculture as their main activity. In many Asian countries, agricultural labourers account for more than 30 percent of all workers, including China, where the share is 36.7 percent. In contrast, the agriculture sector of Organisation for Economic Co-operation and Development (OECD) countries in the region employs only between 3.3 percent (Australia) and 6.6 percent (New Zealand and ROK) of its workers in agriculture.

At the regional level, almost one women in two is employed outside the home but there are wide differences between subregions, ranging from South and Southwestern Asia, where only 30.9 percent works outside the home, to Southeast Asia where the figure is 79.3 percent. Nepal has the highest rate of women employed at 80.3 percent while Afghanistan has the lowest – 15.5 percent.

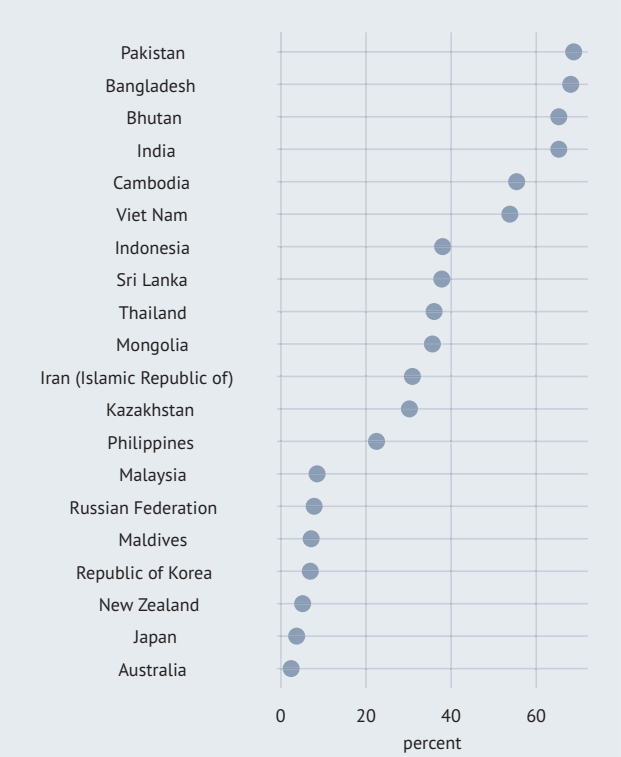
Agriculture employs a greater share of women than men in many of the countries of the subregion. In Pakistan, farming employs 75 percent of the female labour force. In Bangladesh, Bhutan and India the figure is above 65 percent while Cambodia and Viet Nam are both over 50 percent.

Women farmers generally have less access to productive resources compared to men and fewer opportunities. Narrowing this gender gap would deliver significant gains in terms of food security. According to FAO's 2010-2011 *State of Food and Agriculture* report, "If women had the same access to productive resources as men, they could increase yields on their farms by 20–30 percent." When developing policies to promote rural and agricultural development, policy-makers will need to keep this in mind.

Further reading

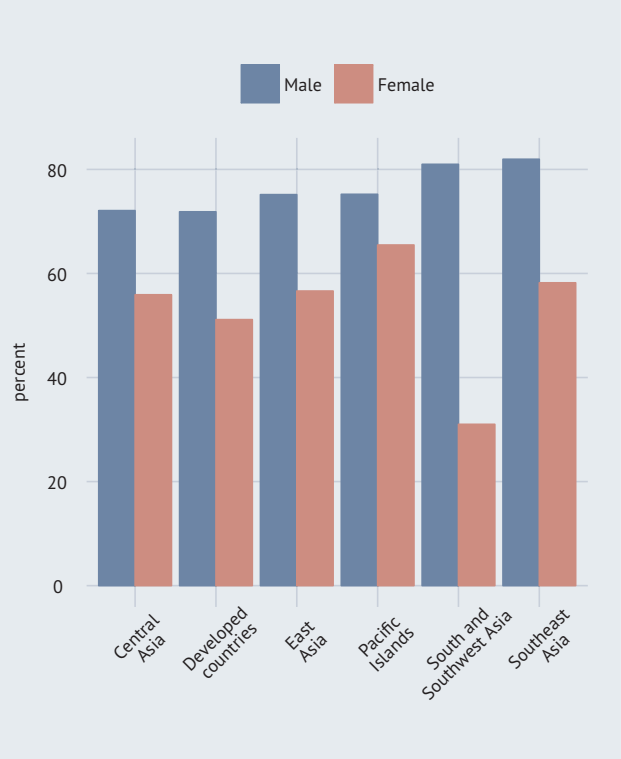
- Asian Development Outlook: Supplement: Softening Growth Prospects for Developing Asia; Asian Development Bank (2013b)
- FAO (2012b)
- FAO Gender, Equity and Rural Employment Division (www.fao.org/economic/esw/)

CHART 13: **Female employment in agriculture, share of female employment, selected countries (2005-2010*)**



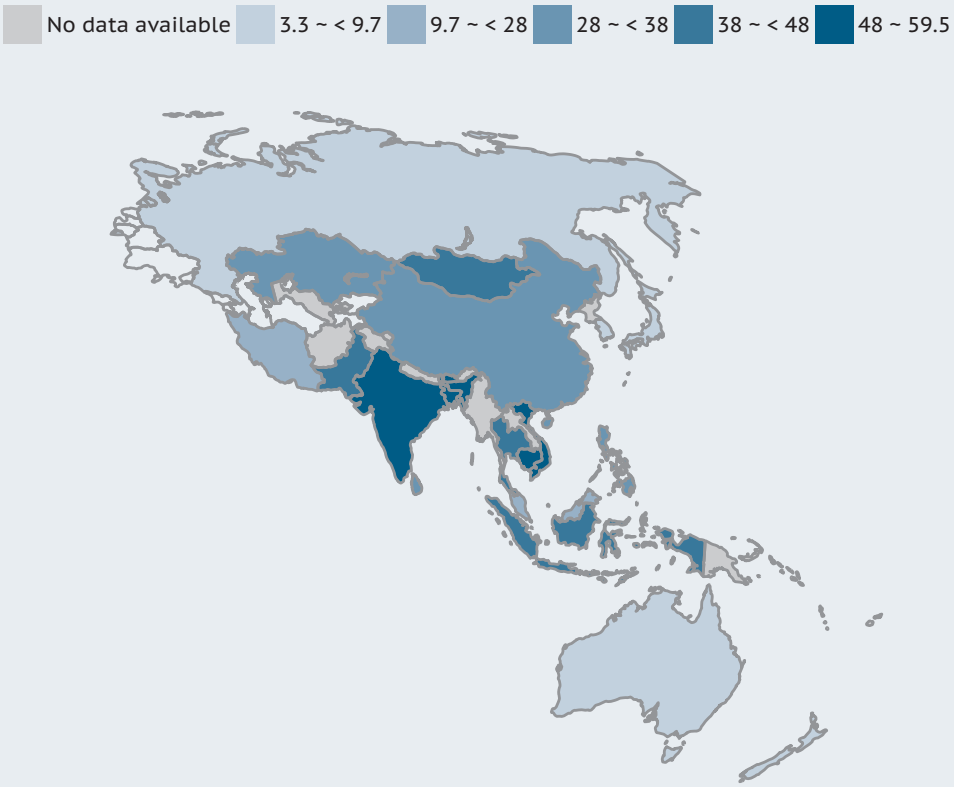
Source: World Bank (WDI).

CHART 14: **Labour force participation rate by gender, ages 15+ (2011)**



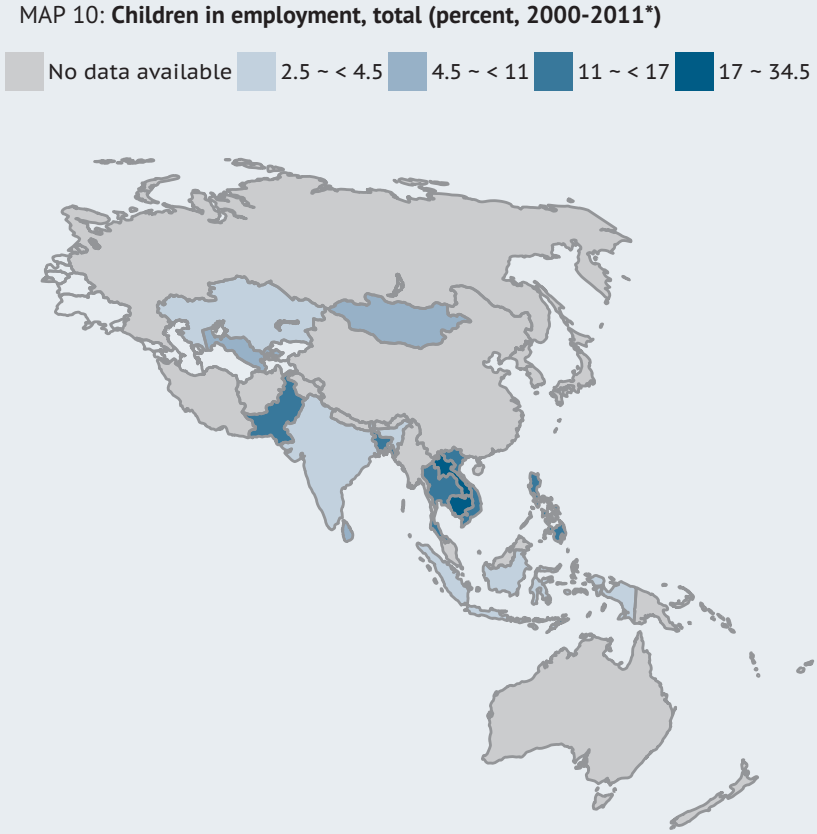
Source: World Bank (WDI).

MAP 9: **Employment in agriculture, share of total employment (percent, 2005-2010*)**



Source: World Bank (WDI).

MAP 10: **Children in employment, total (percent, 2000-2011*)**



Source: World Bank (WDI).

Inputs

Judicious use of fertilizers is crucial in order to grow enough food to ensure food security. Given that in the APR a generally limited amount of cropland is available to feed a large population, the region has the world's highest rates of mineral fertilizer use. In 2011, the APR as a whole applied almost 165 kilograms of mineral fertilizer per hectare of agricultural land per year, more than twice as much as FAO's Europe and Central Asia region and well above the world average of 120 kilograms.

Within the region, East Asia is by far the heaviest user of mineral fertilizers, applying 445 kilograms per hectare per year followed well behind by South and Southwest Asia with 150.38 kilograms.

New Zealand is leading the region in fertilizer application rates with almost 1.4 tonnes per hectare, followed by China with 450 kilograms per hectare. Other top users are Republic of Korea (ROK), with 293 kilograms, Malaysia, with 282 kilograms, Bangladesh with 227 kilograms, Japan with 243 kilograms, Pakistan with 194 kilograms and India with 164 kilograms per hectare.

New forms of agricultural management such as Sustainable Intensification of Crop Production and *Save and Grow* farming are seeking to minimize the amount of chemical inputs entering the soil.

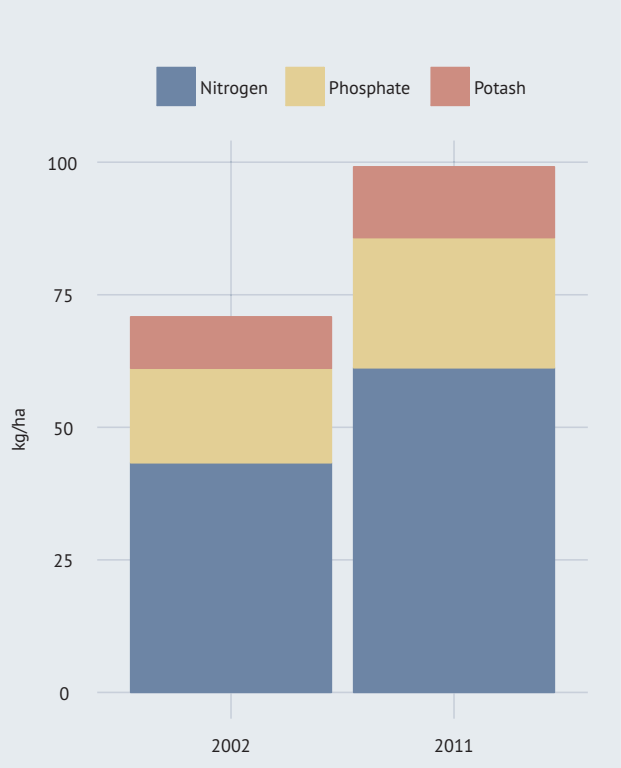
Chemical pesticide use has decreased among the top two of the reporting countries (no data are available for China or the Russian Federation). Japan sprayed 11.24 kilograms per hectare in 2008-2012 compared with 16.53 kilograms in 2000 and ROK used 10.89 kilograms compared with 14.42 in 2000.

Farm mechanization is increasingly used in crop production, harvest and post-harvest operations. India and Japan have by far the largest number of tractors in the region (over 2 million each), followed by Thailand with 439 000. Mechanization is, in general, still quite limited, with only 4 000 tractors in the whole of Indonesia, 58 800 in the Philippines and just one in Tuvalu. Current data on the number of tractors in China are not available.

Further reading

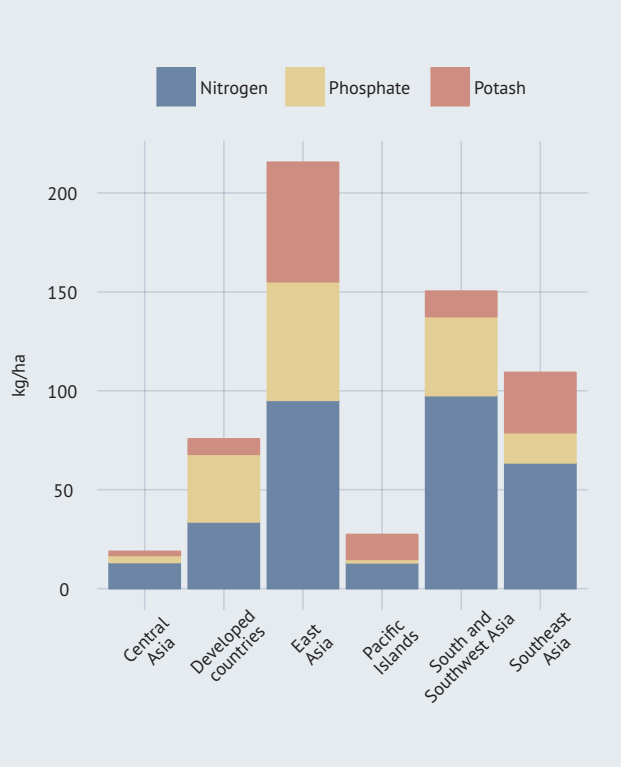
- Schmidhuber, J. and Bruinsma, J. (2011)
- FAO Agriculture Department (www.fao.org/ag/portal/index_en/en/)

CHART 15: **Asia and Pacific fertilizer consumption per ha of arable area and permanent crops (2002-2011)**



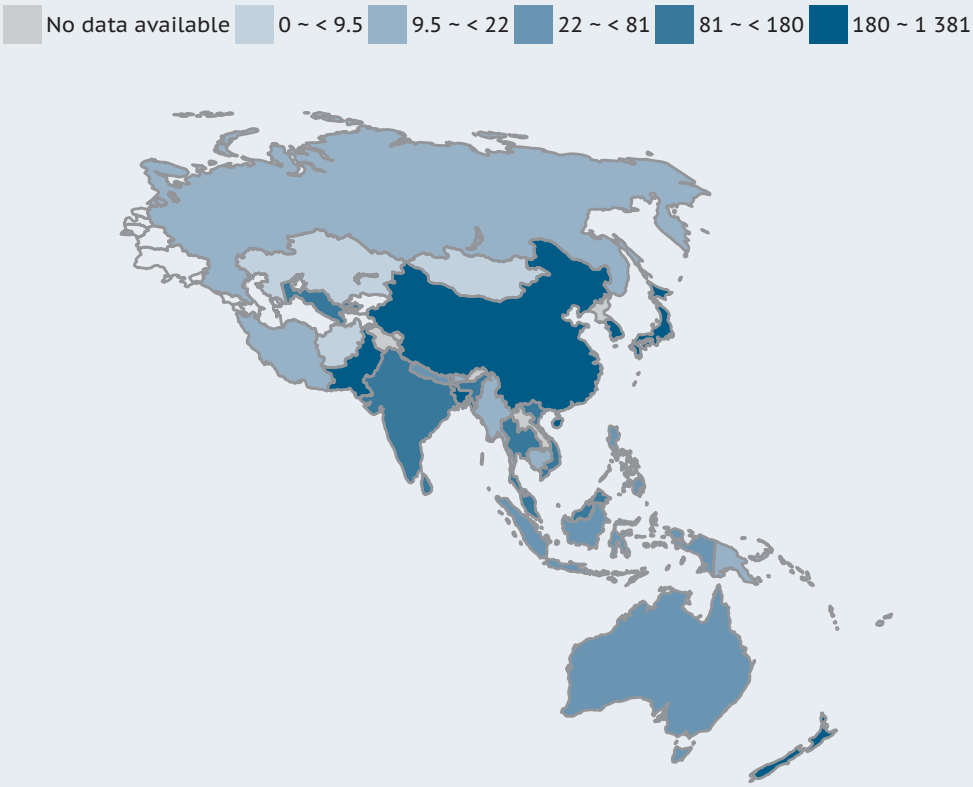
Source: FAO, Statistics Division (FAOSTAT).

CHART 16: **Fertilizer consumption per ha of arable land and permanent crops (2011)**



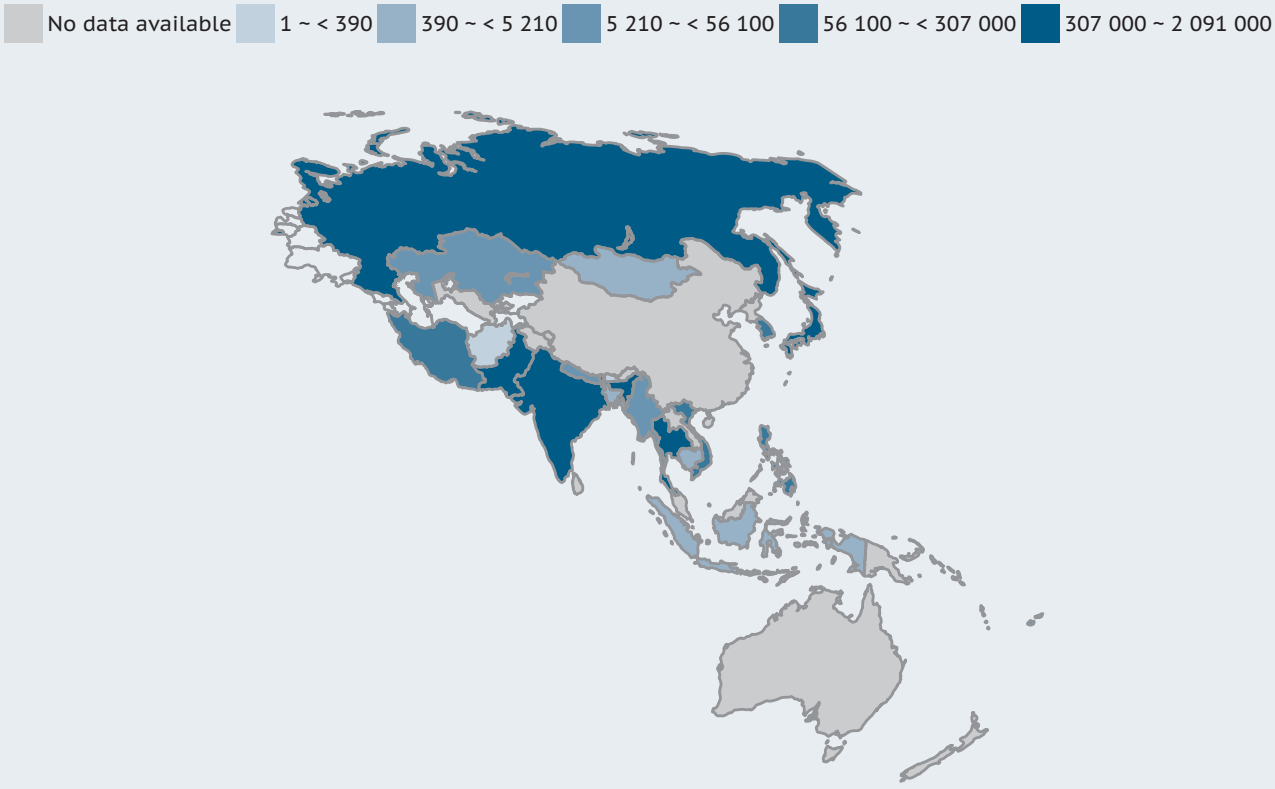
Source: FAO, Statistics Division (FAOSTAT).

MAP 11: **Nitrogen and phosphate fertilizers consumption per ha of arable area and permanent crops (tonne/ha, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 12: **Agricultural tractors, total (tractors, 2000-2010*)**



Source: FAO, Statistics Division (FAOSTAT).

Capital and investment

Increased investment in agriculture is needed to feed a world population of 9.6 billion, including more than 5 billion in Asia, in 2050. In the APR, as everywhere, farmers are the largest investors in agriculture. The growth in their agricultural capital stock (ACS) – their physical working capital including livestock, land under crops, machinery and farm buildings – shows the extent to which they are investing in their (and human kind's) future.

Total ACS in the APR was over US$1 719 billion in 2007 excluding China – almost 30 percent more than in FAO's Europe and Central Asia region. But annual growth in ACS has slowed during the last decade, falling from 0.9 percent in 1990-2000 to 0.7 percent in 2000-2007 in the region as a whole. The fall was even more pronounced in the region's developing and transition countries, where ACS growth fell from 1.7 percent *per annum* to 1.1 percent over the same period. Only in South and Southwest Asia, did it remain unchanged. Viet Nam registered the highest ACS annual growth (3.5 percent), followed by Myanmar (3.2 percent) and Lao PDR (2.4 percent).

Economic progress in the APR has generally attracted a growing level of foreign direct investment (FDI) but figures on such investments in agriculture are scarce. Investment in agriculture is clearly only a fraction of total FDI, however. In China for example, foreign investment in agriculture, hunting, forestry and fishing increased from US$899 million in 2000 to more than US$2 billion in 2011, a period when total FDI to the country grew from US$38 billion to US$280 billion. FDI to the above sectors also grew considerably in the Russian Federation, Cambodia, Indonesia, Malaysia and Bangladesh.

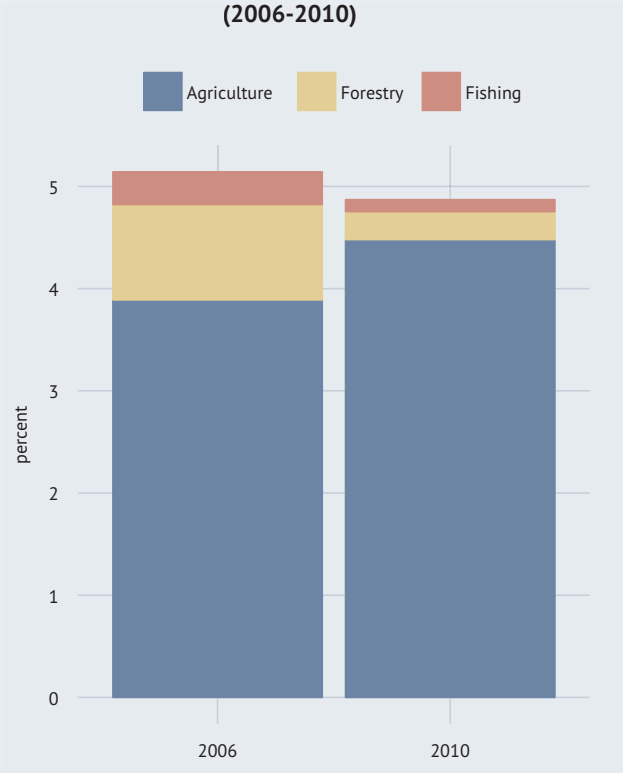
Between 2000 and 2012, total Official Development Assistance (ODA) to the APR increased from nearly US$22 billion to US$44 billion. South and Southwest Asia received the largest share of ODA, 26 billion in 2010, with more than half that sum going to India, Pakistan and Bangladesh. But out of total ODA to the APR, less than 5 percent went to agriculture.

Government expenditures on agriculture, hunting, forestry and fishing ranged between 11.2 percent of total public spending in Bhutan and 0.9 percent in Indonesia. Bangladesh and Nepal spent nearly 9 percent of their budget on these sectors, while India spent 6.8 percent and China 1.7 percent.

Further reading

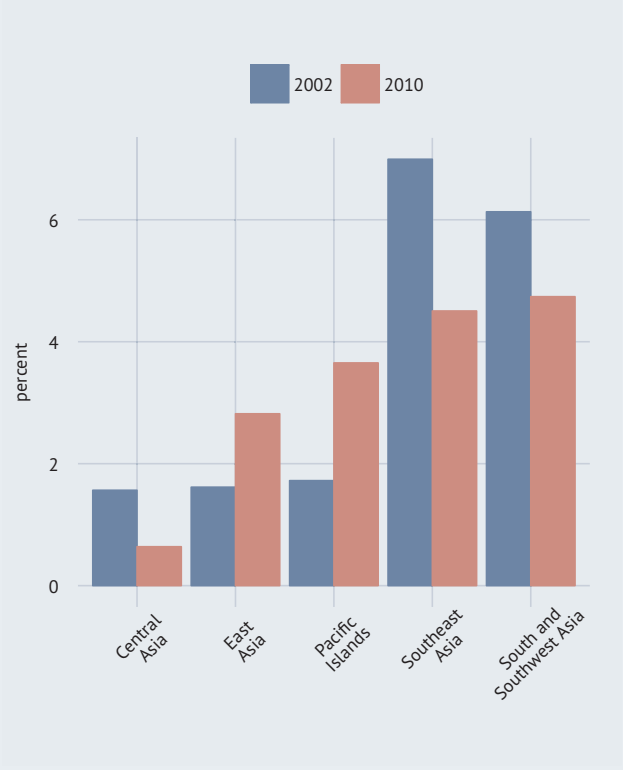
- Asian Development Bank (2013e)
- FAO How to Feed the World in 2050: Investment Brief (www.fao.org/wsfs/forum2050/)
- FAO Foreign Investment in Agriculture (www.fao.org/economic/est/investments/)
- Principles for Responsible Agricultural Investment that Respects Rights, Livelihoods and Resources (www.unctad.org/en/Pages/Home.aspx)
- Foreign Agriculture Investment Database (www.fao.org/tc/policy-support/investment-policy/fdi/en/)

CHART 17: **Asia and Pacific ODA received in agriculture, forestry and fishing sectors, share of total ODA (2006-2010)**



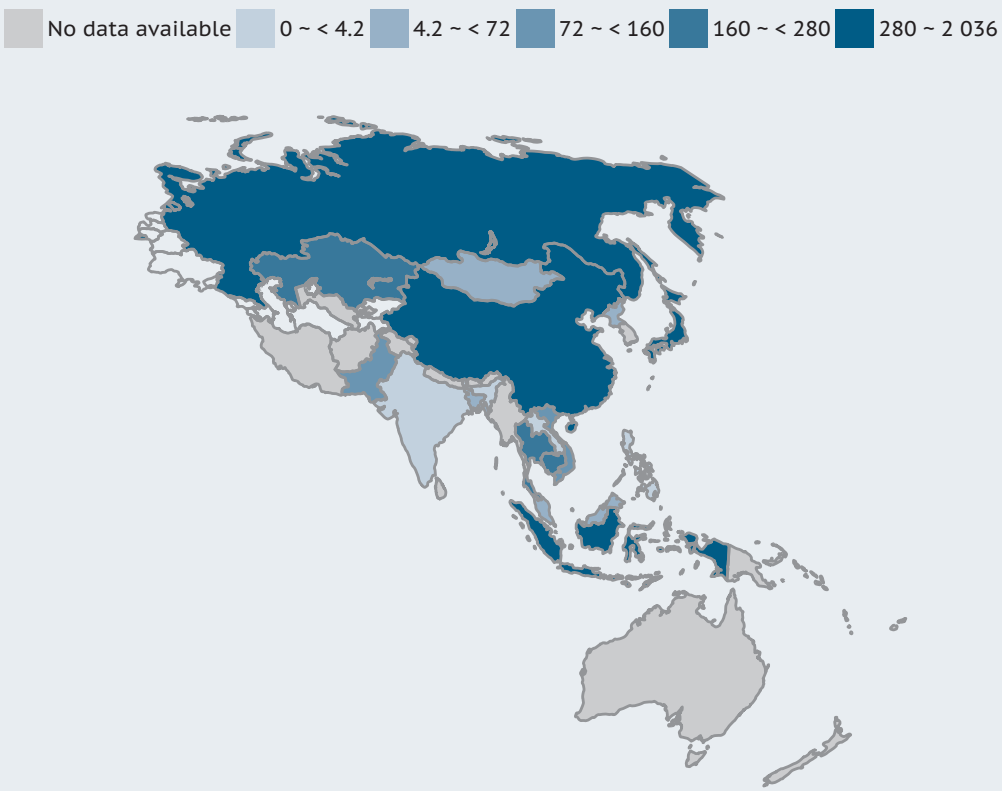
Source: FAO, Statistics Division.

CHART 18: **ODA received in agriculture, share of total ODA (2002 and 2010)**



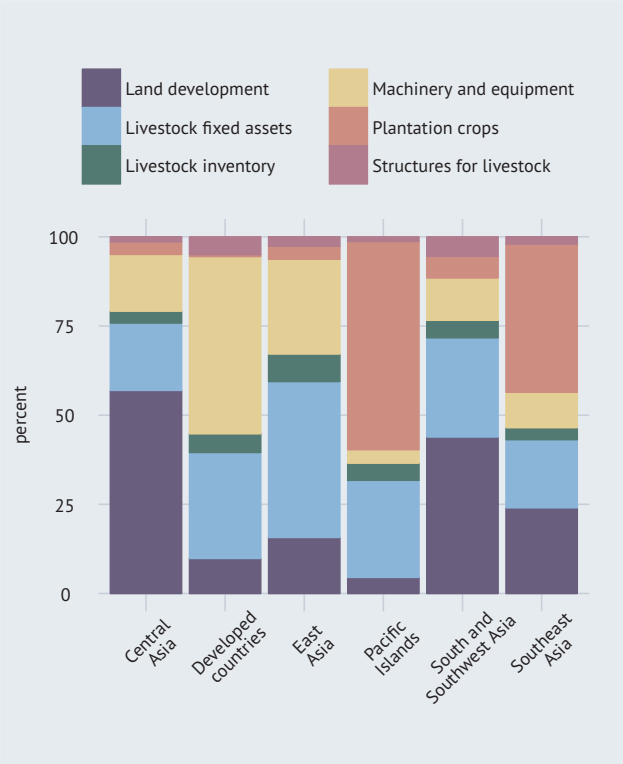
Source: FAO, Statistics Division.

MAP 13: **FDI (inward flows) to agriculture (million US$, 2010-2011*)**



Source: Foreign agriculture investment database.

CHART 19: **Share of components in capital stock (2007)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 20: **Government expenditures in agriculture, forestry, fishing, and hunting, selected Asia and Pacific countries (2010)**

Source: FAO, Statistics Division (FAOSTAT).

Innovation

Increasing agricultural yields and adapting crops to climate change depends crucially on research and development (R&D) in agriculture. In the APR, public R&D spending grew from US$6.1 billion to US$ 9.6 billion between 2000 and 2008.

China more than doubled its agriculture research outlay, from US$1.9 billion to US$4.0 billion and by 2008 the country accounted for 30 percent of agricultural R&D in the region. Other big spenders were Japan with US$3.1 billion in 2008, and India with 2.1 billion. About half of the countries in the region registered some growth in R&D but nine cut their research spending.

The capacity to innovate depends heavily on access to information and communications technology. Mobile telephones and the Internet have become essential tools in development and mobiles are especially important for farmers and rural people.

Between 2005 and 2010, developing countries' share of worldwide mobile telephone subscriptions increased from approximately 50 to 75 percent. But at 81 mobile phones in use per 100 people, the APR has fewer than the global average (85), and the lowest number of any of FAO's regions, except Africa.

However China has more mobile phones in use than any other country in the world and, in terms of numbers, eight out of the world's top 20 countries are in the APR. And in percentage terms, the Russian Federation is second only to Saudi Arabia in world rankings, with 179.3 mobiles per 100 inhabitants.

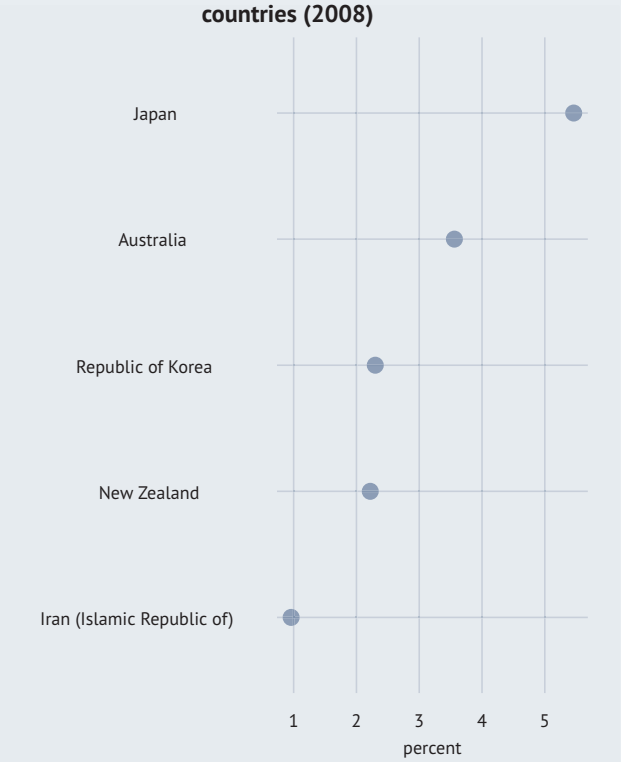
Central Asia stands out for its very high number of mobile phones in use (164 per 100 people). After the Russian Federation, the Maldives has the highest percentage, 166. Myanmar has the lowest percentage at just 2.6, preceded by the People's Democratic Republic of Korea (4.1).

In the APR, the number of fixed Internet broadband subscribers per 100 people is 6.5, well below the world average of 8.5. ROK tops the regional ranking with 36.9, followed by Australia, Japan and New Zealand. Elsewhere, however, Internet broadband connections are still relatively limited, with 12.2 percent in the Russian Federation and 11.6 in China. Only 1.1 percent of Indian citizens have broadband and 12 other countries in the region have less than 1 percent.

Further reading

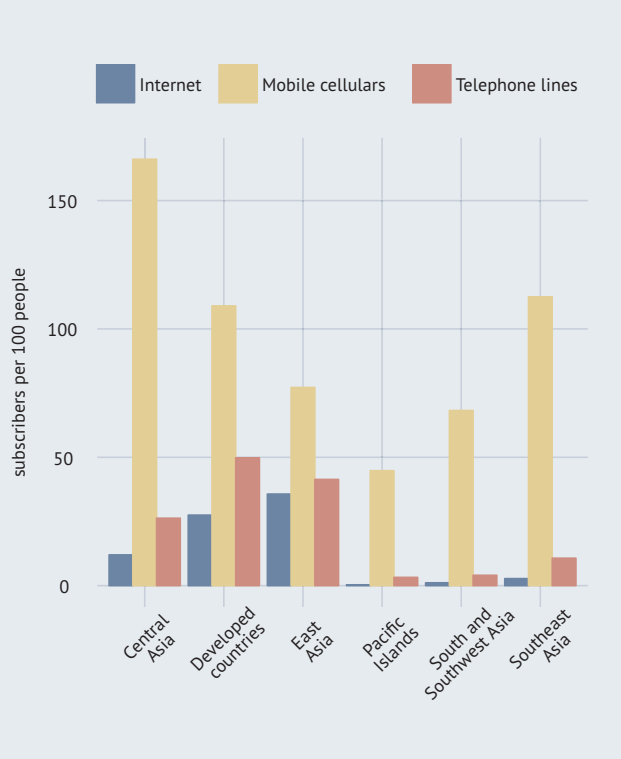
- Asian Development Bank (2013c)
- Agricultural Science and Technology Indicators (www.asti.cgiar.org/)
- ASTI Global Assessment of Agricultural R & D Spending (www.ifpri.org/sites/default/files/publications/astiglobalassessment.pdf)

CHART 21: **Total public agricultural research expenditure, share of agricultural GDP, selected countries (2008)**



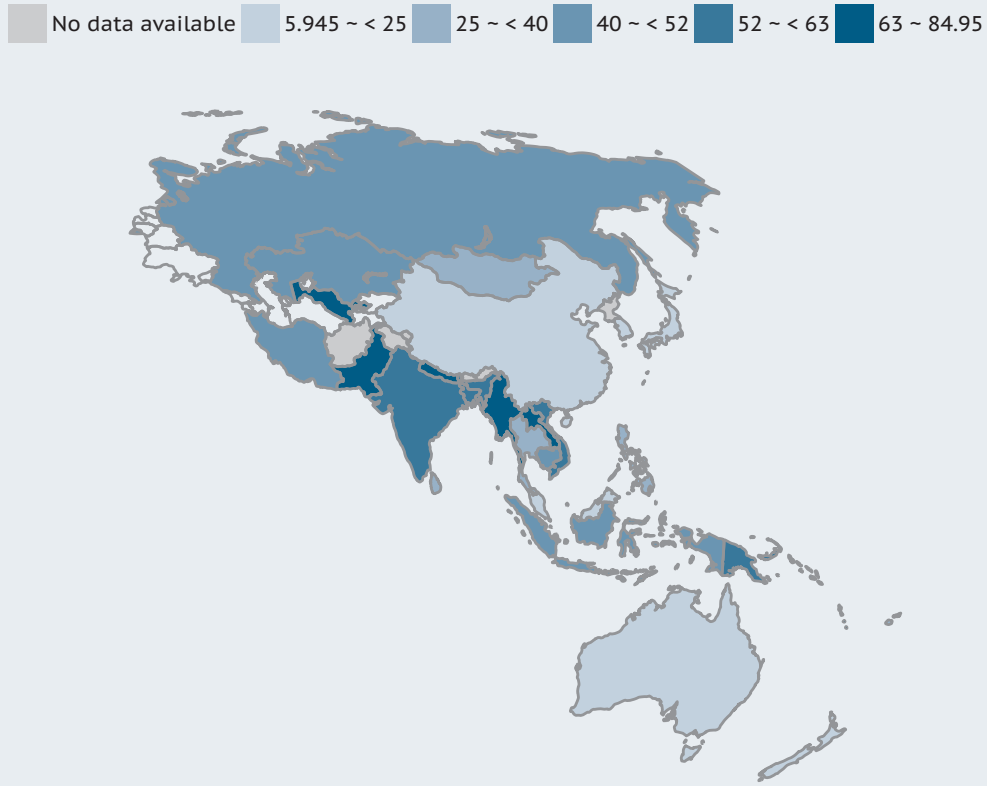
Source: ASTI.

CHART 22: **Mobile cellular, broadband Internet, and telephone lines subscribers (2012)**



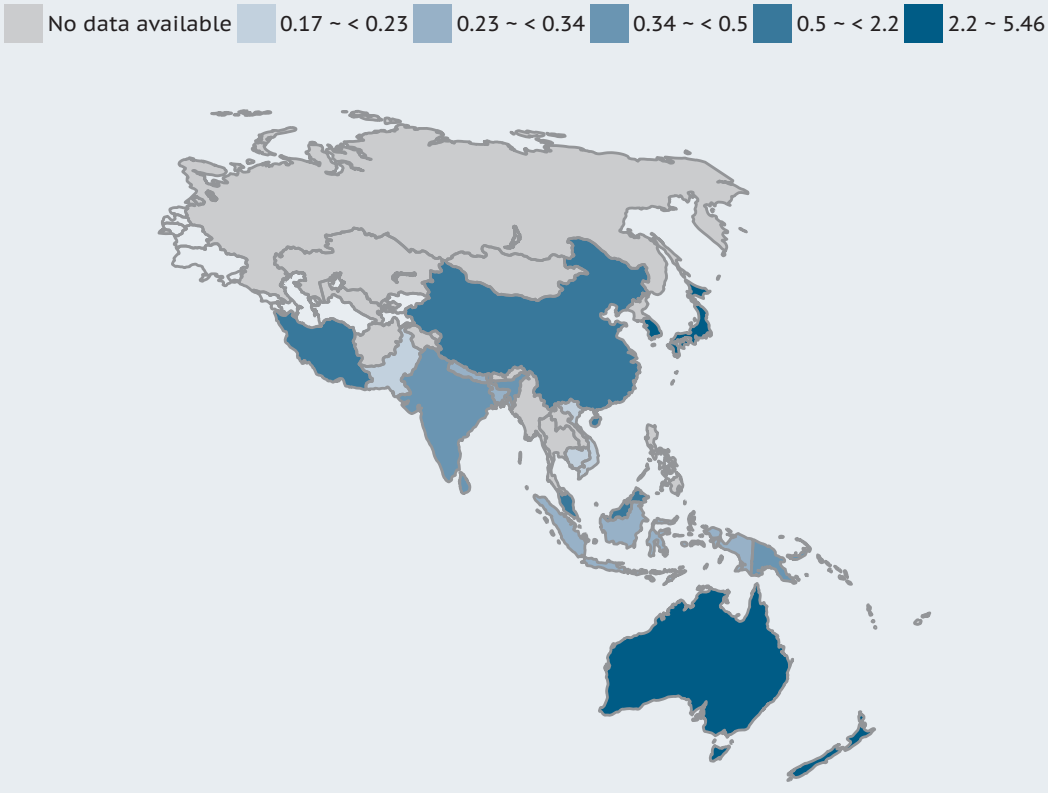
Source: World Bank (WDI).

MAP 14: **Access to mobile cellular phone subscriptions annual growth (percent, 2000-2012)**



Source: World Bank (WDI).

MAP 15: **Total public agricultural research expenditure, share of agricultural GDP (percent, 2006-2010*)**



Source: ASTI.

TABLE 1: **Population and structure**

	Population									Age composition	
	total		rural		urban		density	agricultural share of total		between 0-14	over 65+
	thousand people	thousand people	percent	percent	percent	percent	people/km²	percent	percent	percent	percent
	2000	2012	2000	2011	2000	2011	2011	2000	2012	2010	2010
Regional Office for Asia and the Pacific	3 640 853	4 110 736	50.0	47.3	50.0	52.7	81.2	34.9	30.2	25.1	7.7
Developing countries and transition economies	3 492 111	3 956 921	64.5	61.1	35.5	38.9	93.7	47.3	41.8	29.0	5.6
Central Asia	186 491	187 161	32.8	33.5	67.2	66.5	9.7	13.5	10.2	18.0	11.0
Kazakhstan	14 957	16 381	44.3	46.4	55.7	53.6	6.1	19.5	15.0	24.5	6.8
Russian Federation	146 758	142 703	26.6	26.2	73.4	73.8	8.7	10.5	7.7	15.0	12.8
Uzbekistan	24 776	28 077	62.6	63.8	37.4	36.2	69.0	27.7	20.3	29.4	4.3
East Asia	1 318 474	1 406 296	27.6	24.7	72.4	75.3	128.1	16.1	10.3	18.9	10.4
China	1 247 181	1 330 310					144.1				
Democratic People's Republic of Korea	22 894	24 554	40.6	39.7	59.4	60.3	204.6	30.1	22.1	22.9	9.5
Mongolia	2 411	2 844	42.9	31.5	57.2	68.5	1.8	24.3	16.8	27.6	4.1
Republic of Korea	45 988	48 588	20.4	16.8	79.6	83.2	512.7	8.8	4.0	16.4	11.1
Pacific Islands	7 361	9 488	81.1	81.6	19.0	18.5	17.8	68.8	63.6	38.0	3.1
Cook Islands	18	21	33.3	25.0	66.7	75.0		33.3	23.8		
Fiji	812	876	52.1	47.8	47.9	52.3	47.5	39.5	35.4	28.9	4.8
Kiribati	84	103	57.1	56.4	42.9	43.6	122.5	26.2	22.3		
Marshall Islands	52	56	30.8	27.3	69.2	70.9	291.6	26.9	21.4		
Micronesia (Federated States of)	107	112	77.6	76.8	22.4	22.3	32.6	27.1	22.3	36.9	3.6
Nauru	10	10			100.0	100.0		30.0	20.0		
Niue	2	1	50.0		50.0			50.0	0.0		
Palau	19	21	31.6	14.3	68.4	81.0	44.8	26.3	23.8		
Papua New Guinea	5 379	7 170	86.8	87.5	13.2	12.5	15.5	78.2	71.5	39.0	2.8
Samoa	177	185	78.0	79.9	22.0	20.1	66.2	34.5	25.9	38.3	4.9
Solomon Islands	409	566	84.1	79.5	15.9	20.5	19.2	71.6	67.0	39.8	3.2
Tonga	98	105	76.5	76.2	23.5	23.8	145.2	34.7	25.7	37.5	6.7
Tuvalu	9	10	55.6	50.0	44.4	50.0	328.1	33.3	30.0		
Vanuatu	185	252	78.4	74.8	21.6	24.8	19.8	36.8	29.4	38.3	4.2
Southeast Asia	519 585	600 947	62.3	55.8	37.7	44.2	137.7	49.6	42.2	27.4	5.6
Cambodia	12 447	14 478	81.4	80.0	18.6	20.0	82.7	69.9	65.0	31.9	3.8
Indonesia	213 395	244 769	58.0	49.3	42.0	50.7	134.6	44.0	36.1	27.0	5.6
Lao People's Democratic Republic	5 317	6 374	78.0	65.7	22.0	34.3	28.3	76.7	74.6	34.5	3.9
Malaysia	23 415	29 322	38.0	27.2	62.0	72.8	87.5	17.9	11.1	30.3	4.8
Myanmar	44 958	48 724	72.8	67.4	27.2	32.6	80.1	70.3	66.4	25.6	5.1
Philippines	77 310	96 471	52.0	51.2	48.0	48.8	318.8	39.5	32.4	35.4	3.6
Thailand	63 155	69 892	68.9	65.9	31.1	34.1	130.3	49.0	39.6	20.5	8.9
Timor-Leste	830	1 187	75.8	71.7	24.2	28.3	79.1	81.2	79.2	46.3	2.9
Viet Nam	78 758	89 730	75.6	69.0	24.4	31.0	283.3	67.4	62.3	23.6	6.0
South and Southwest Asia	1 460 200	1 753 029	71.0	67.4	29.0	32.6	266.2	52.2	46.3	31.1	4.8
Afghanistan	22 856	33 397	79.4	76.5	20.6	23.5	44.6	63.7	59.0	46.4	2.2
Bangladesh	129 592	152 409	76.4	71.6	23.6	28.4	1 174.3	54.8	43.5	31.3	4.6
Bhutan	571	750	74.6	64.5	25.4	35.6	19.0	92.6	92.8	29.3	4.7
India	1 053 898	1 258 351	72.3	68.7	27.7	31.3	410.7	53.1	47.4	30.6	4.9
Iran (Islamic Republic of)	65 342	75 612	36.0	30.9	64.0	69.1	46.3	26.6	20.7	22.9	5.2
Maldives	273	324	72.5	58.8	27.8	41.2	1 106.5	27.8	17.0	26.6	5.1
Nepal	24 401	31 011	86.6	83.0	13.4	17.0	189.4	93.2	92.9	36.2	4.2
Pakistan	144 522	179 951	66.9	63.8	33.1	36.2	228.5	47.4	41.8	35.4	4.3
Sri Lanka	18 745	21 224	84.3	84.9	15.7	15.1	332.8	46.3	42.7	24.9	8.2
Developed Countries	148 742	153 815	20.1	9.2	79.9	90.8	18.6	4.1	2.3	14.4	21.1
Australia	19 164	22 919	12.8	10.8	87.2	89.2	2.9	4.6	3.8	19.0	13.4
Japan	125 720	126 435	21.4	8.7	78.6	91.3	350.7	3.9	1.9	13.4	22.7
New Zealand	3 858	4 461	14.3	13.8	85.7	86.2	16.7	8.8	7.5	20.5	13.0
Regional Office for Africa	668 229	898 226	68.5	63.9	31.5	36.1	37.6	60.4	54.2	42.4	3.2
Regional Office for Europe and Central Asia	866 961	900 803	31.7	29.6	68.3	70.4	33.5	11.1	7.8	17.4	14.4
Regional Office for Latin America and the Caribbean	516 162	597 748	24.7	21.0	75.3	79.0	29.7	20.6	15.2	27.9	6.8
Regional Office for the Near East	338 485	432 218	42.6	38.8	57.4	61.2	29.2	29.8	22.7	31.5	4.3
World	6 100 688	7 028 688	50.5	47.5	49.7	52.6	53.5	35.7	31.7	28.5	7.5

TABLE 2: **Income and demographic indicators**

	GNI per capita current US$		Infant mortality per 1,000 live births		Under-5 mortality per 1,000 live births		Life expectancy at birth total	
	US$ 2000	US$ 2012	rate 2000-01*	rate 2010-12*	rate 2000-01*	rate 2010-12*	years 2000-01*	years 2010-12*
Regional Office for Asia and the Pacific	2 202	5 612	44.8	30.4	58.7	38.0	68.3	70.9
Developing countries and transition economies	903	3 961	46.6	31.7	61.1	39.7	67.7	70.4
Central Asia	1 530	10 795	38.6	22.5	45.5	25.7	65.7	68.8
Kazakhstan	1 260	9 750	36.3	18.1	42.0	20.2	65.8	68.9
Russian Federation	1 710	12 700	18.8	9.4	22.0	10.9	65.5	69.0
Uzbekistan	630	1 720	49.7	35.5	59.1	41.0	67.0	68.0
East Asia	1 248	6 272	32.4	18.4	41.8	22.4	72.6	75.1
China	930	5 680	28.3	12.9	34.3	14.9	72.6	75.0
Democratic People's Republic of Korea			39.1	23.8	52.2	30.2	65.8	69.2
Mongolia	470	3 160	45.4	24.0	58.6	28.7	63.4	67.1
Republic of Korea	9 910	22 670	5.4	3.4	6.4	4.0	76.3	80.9
Pacific Islands	940	2 123	32.3	27.2	40.9	33.9	61.2	63.9
Cook Islands								
Fiji	2 230	4 200	20.1	19.2	23.8	22.6	67.8	69.6
Kiribati	1 400	2 260	52.6	47.3	69.5	61.4	65.0	68.2
Marshall Islands	2 850	4 140					65.2	
Micronesia (Federated States of)	2 210	3 310	41.3	32.1	52.6	39.6	67.4	68.7
Nauru								
Niue								
Palau	5 490	9 860					70.5	
Papua New Guinea	620	1 790	58.0	49.5	78.0	64.8	59.1	62.2
Samoa	1 420	3 220	17.8	15.4	20.8	18.0	69.8	72.7
Solomon Islands	1 010	1 130	28.7	26.5	34.9	32.0	63.5	67.3
Tonga	2 030	4 240	15.1	11.4	17.6	13.3	70.9	72.3
Tuvalu		6 070						
Vanuatu	1 430	3 080	20.2	15.8	23.9	18.5	67.9	71.1
Southeast Asia	934	3 400	51.8	34.0	68.2	42.2	68.5	71.0
Cambodia	300	880	75.9	35.5	100.7	41.6	62.9	71.1
Indonesia	570	3 420	39.5	26.7	50.0	32.3	67.6	70.4
Lao rate's Democratic Republic	280	1 260	81.9	56.0	115.7	74.9	62.3	67.4
Malaysia	3 420	9 800	8.1	7.3	9.5	8.5	73.0	74.7
Myanmar			56.9	42.4	76.3	54.2	62.3	64.8
Philippines	1 050	2 470	29.9	24.1	39.5	30.7	66.9	68.4
Thailand	1 960	5 210	18.3	11.8	21.5	13.7	71.1	74.0
Timor-Leste		3 670	79.5	49.6	100.5	59.1	60.3	66.5
Viet Nam	390	1 400	23.8	18.6	30.3	23.2	73.9	75.5
South and Southwest Asia	501	1 440	60.8	40.4	82.0	52.2	63.3	66.7
Afghanistan			91.6	72.7	131.0	101.2	55.3	60.1
Bangladesh	380	840	61.5	35.2	83.6	43.8	65.8	69.9
Bhutan	780	2 420	56.9	36.9	76.3	46.3	61.0	67.5
India	450	1 530	64.4	45.4	88.1	58.6	62.6	66.0
Iran (Islamic Republic of)	1 620		27.0	15.7	32.6	18.4	70.0	73.4
Maldives		5 750	32.5	10.0	40.0	11.6	70.5	77.2
Nepal	230	700	57.4	34.9	77.2	43.5	62.6	67.5
Pakistan	470	1 260	85.8	70.7	109.6	87.9	64.2	66.3
Sri Lanka	860	2 920	14.1	8.6	16.4	10.0	71.9	73.9
Developed Countries	32 698	49 665	4.9	4.0	6.1	4.9	81.1	82.4
Australia	21 150	59 570	5.0	4.1	6.1	4.9	79.6	81.8
Japan	35 040	47 870	3.1	2.3	4.3	3.4	81.4	82.6
New Zealand	13 730		5.9	4.9	7.2	5.9	78.7	80.9
Regional Office for Africa	496	1 383	86.1	63.2	140.6	96.1	50.5	55.9
Regional Office for Europe and Central Asia	11 912	24 003	19.1	12.8	22.8	14.9	73.4	76.3
Regional Office for Latin America and the Caribbean	3 847	9 145	26.4	19.4	32.7	23.3	71.8	74.4
Regional Office for the Near East	1 966		34.6	25.6	46.1	32.7	68.5	70.6
World	5 323	10 116	53.8	38.8	81.5	55.4	67.9	70.5

TABLE 3: **Economy**

	Gross domestic product		Value added, share of GDP			Share of GDP	
	total current US$		agriculture	industry	services	trade	FDI
	billion US$ 2000	billion US$ 2012	percent 2010-12*	percent 2010-12*	percent 2010-12*	percent 2011-12	percent 2010-12*
Regional Office for Asia and the Pacific	8 450	23 671	4.9	31.4	63.7		2.3
Developing countries and transition economies	3 251	16 024	10.6	39.5	49.9		2.9
Central Asia	292	2 266	4.9	35.8	59.4		3.3
Kazakhstan	18	200	5.5	40.1	54.3	78.5	7.1
Russian Federation	260	2 015	4.3	37.0	58.7	51.6	2.6
Uzbekistan	14	51	19.1	32.6	48.3		3.1
East Asia	1 733	9 498	7.8	44.2	48.0		3.4
China	1 198	8 358	10.0	46.6	43.3		3.0
Democratic People's Republic of Korea							
Mongolia	1	10	17.1	32.9	50.0	127.8	53.8
Republic of Korea	533	1 130	2.7	39.2	58.1	109.9	0.4
Pacific Islands	7	23	13.2	18.7	68.1		0.5
Cook Islands							
Fiji	2	4	12.9	18.8	68.3		5.4
Kiribati	0	0	25.3	8.2	66.5		2.3
Marshall Islands	0	0					4.2
Micronesia (Federated States of)	0	0					2.5
Nauru							
Niue							
Palau	0	0	5.6	8.6	85.9		0.9
Papua New Guinea	4	16					−2.5
Samoa	0	1	10.0	27.1	62.9		2.3
Solomon Islands	0	1					12.2
Tonga	0	0	19.5	22.4	58.1		2.4
Tuvalu	0	0					5.0
Vanuatu	0	1	22.5	9.5	68.0		7.4
Southeast Asia	499	1 964	13.6	42.0	44.4		2.7
Cambodia	4	14	36.7	23.5	39.8		7.0
Indonesia	165	878	14.7	47.2	38.1	50.1	2.3
Lao People's Democratic Republic	2	9	30.8	34.7	34.5		3.7
Malaysia	94	304	10.1	40.7	49.2	163.0	4.2
Myanmar							
Philippines	81	250	12.8	31.5	55.7	64.8	1.1
Thailand	123	366	12.4	41.2	46.5	148.8	2.4
Timor-Leste	0	1					4.3
Viet Nam	31	142	21.3	39.9	38.8	180.0	6.0
South and Southwest Asia	720	2 271	18.4	27.3	54.2		1.4
Afghanistan			24.3	23.3	52.5		0.5
Bangladesh	47	116	17.5	28.5	53.9	60.3	1.0
Bhutan	0	2	15.9	43.9	40.2		0.9
India	475	1 842	17.4	25.8	56.9	55.4	1.7
Iran (Islamic Republic of)	101						0.8
Maldives	1	2	4.1	19.1	76.8		13.1
Nepal	5	19	36.4	15.1	48.6	42.4	0.5
Pakistan	74	231	20.1	25.5	54.4	33.1	0.4
Sri Lanka	16	59	12.1	29.9	58.0		1.6
Developed Countries	5 199	7 648	1.3	26.9	71.9		0.9
Australia	416	1 521	2.3	19.8	77.9	42.6	4.8
Japan	4 731	5 960	1.2	26.2	72.7		0.0
New Zealand	52	167					2.7
Regional Office for Africa	342	1 263					3.2
Regional Office for Europe and Central Asia	9 709	21 311	1.8	26.2	72.0	83.6	1.8
Regional Office for Latin America and the Caribbean	2 080	5 614	6.3	32.4	61.3		3.0
Regional Office for the Near East	818						1.4
World	31 979	69 569					2.5

TABLE 4: **Land**

	Land area				Agricultural area				Cropland
	total	agricultural	forest	other	total	arable	permanent		per capita
							crops	meadows & pastures	
	million ha	percent	percent	percent	thousand ha	percent	percent	percent	ha/cap
	2011	2011	2011	2011	2011	2011	2011	2011	2011
Regional Office for Asia and the Pacific	5 013	38.9	31.3	29.8	1 951 899	30.8	4.0	65.4	0.17
Developing countries and transition economies	4 182	36.5	33.1	30.4	1 526 295	36.0	5.0	59.0	0.16
Central Asia	1 950	23.1	41.8	35.0	451 025	33.2	0.5	66.3	0.81
Kazakhstan	270	77.5	1.2	21.3	209 115	11.5	0.0	88.5	1.49
Russian Federation	1 638	13.1	49.4	37.4	215 250	56.4	0.8	42.7	0.86
Uzbekistan	43	62.7	7.7	29.6	26 660	16.1	1.4	82.5	0.17
East Asia	1 106	57.5	21.0	21.8	636 151	18.1	2.3	79.5	0.09
China	929	55.8	22.6	22.0	518 333	21.4	2.8	75.8	0.09
Democratic People's Republic of Korea	12	21.2	46.0	32.8	2 555	90.0	8.0	2.0	0.10
Mongolia	155	73.1	7.0	20.0	113 507	0.5	0.0	99.5	0.22
Republic of Korea	10	18.1	64.0	17.9	1 756	85.0	11.7	3.3	0.04
Pacific Islands	52	4.0	63.0	33.2	2 046	26.4	52.5	21.6	0.17
Cook Islands	0	12.5	64.6	22.9	3	66.7	33.3		0.15
Fiji	2	23.4	55.7	20.9	428	39.2	19.9	40.9	0.29
Kiribati	0	42.0	15.0	43.0	34	5.9	94.1		0.34
Marshall Islands	0	72.2	70.2		13	15.4	61.5	23.1	0.18
Micronesia (Federated States of)	0	31.4	91.7		22	9.1	77.3	13.6	0.17
Nauru	0	20.0	0.0	80.0	0		100.0		0.04
Niue	0	19.2	71.2	9.6	5	20.0	60.0	20.0	4.00
Palau	0	10.9	87.6	1.5	5	20.0	40.0	40.0	0.14
Papua New Guinea	45	2.6	63.1	34.3	1 190	25.2	58.8	16.0	0.14
Samoa	0	12.4	60.4	27.2	35	22.9	62.9	14.3	0.16
Solomon Islands	3	3.3	78.9	17.9	91	19.8	71.4	8.8	0.15
Tonga	0	43.1	12.5	44.4	31	51.6	35.5	12.9	0.26
Tuvalu	0	60.0	33.3	6.7	2		100.0		0.18
Vanuatu	1	15.3	36.1	48.6	187	10.7	66.8	22.5	0.59
Southeast Asia	433	29.4	49.0	21.6	127 323	54.4	32.2	13.4	0.19
Cambodia	18	32.0	56.5	11.5	5 655	70.7	2.7	26.5	0.29
Indonesia	181	30.1	51.7	18.2	54 500	43.1	36.7	20.2	0.18
Lao People's Democratic Republic	23	10.3	67.9	21.8	2 378	58.9	4.2	36.9	0.24
Malaysia	33	24.0	62.0	14.0	7 870	22.9	73.5	3.6	0.26
Myanmar	65	19.2	48.2	32.6	12 558	85.9	11.7	2.5	0.25
Philippines	30	40.6	25.9	33.5	12 100	44.6	43.0	12.4	0.11
Thailand	51	41.2	37.2	21.6	21 060	74.8	21.4	3.8	0.29
Timor-Leste	1	24.2	49.1	26.6	360	41.7	16.7	41.7	0.18
Viet Nam	31	35.0	45.0	20.1	10 842	60.0	34.1	5.9	0.11
South and Southwest Asia	640	48.4	14.5	37.1	309 750	69.3	5.5	25.2	0.13
Afghanistan	65	58.1	2.1	39.8	37 910	20.6	0.3	79.1	0.24
Bangladesh	13	70.1	11.1	18.8	9 128	83.6	9.9	6.6	0.06
Bhutan	4	13.5	84.9	1.6	520	18.3	3.4	78.3	0.15
India	297	60.5	23.1	16.5	179 799	87.5	6.8	5.6	0.14
Iran (Islamic Republic of)	163	30.1	6.8	63.1	48 957	35.8	3.9	60.3	0.26
Maldives	0	23.3	3.0	73.7	7	42.9	42.9	14.3	0.02
Nepal	14	29.7	25.4	44.9	4 259	55.3	2.8	41.9	0.08
Pakistan	77	34.4	2.1	63.4	26 550	78.0	3.1	18.8	0.12
Sri Lanka	6	41.8	29.4	28.8	2 620	45.8	37.4	16.8	0.10
Developed Countries	831	51.2	21.9	26.9	425 605	12.3	0.2	88.5	0.35
Australia	768	53.3	19.3	27.4	409 673	11.6	0.1	88.3	2.13
Japan	36	12.5	68.6	18.9	4 561	93.3	6.7		0.04
New Zealand	26	43.2	31.4	25.4	11 371	4.1	0.6	95.2	0.12
Regional Office for Africa	2 126	43.6	27.9	30.2	955 135	20.3	2.6	77.8	0.25
Regional Office for Europe and Central Asia	2 694	29.7	38.3	32.0	800 592	41.5	2.5	56.1	0.39
Regional Office for Latin America and the Caribbean	2 013	36.7	46.8	16.4	739 587	22.7	2.7	74.6	0.32
Regional Office for the Near East	1 222	33.8	1.9	64.4	521 071	13.7	1.9	85.0	0.17
World	12 766	37.4	31.0	32.0	4 911 605	28.6	3.2	68.5	0.22

TABLE 5: **Water resources per capita and irrigation**

	Water resources			Irrigation			
	per capita			potential	total area equipped	equipped area actually irrigated	
	m^3/yr/cap	m^3/yr/cap	m^3/yr/cap	thousand ha	thousand ha	year	share percent
	1990	2000	2010	2012	2009	1987-2012	1987-2012*
Regional Office for Asia and the Pacific							
Developing countries and transition economies							
Central Asia							
Kazakhstan	6 546	7 328	6 839	3 768	3 556	2 010	61
Russian Federation	30 399	30 717	31 534	29 000	4 300	2 008	79
Uzbekistan	2 457	2 035	1 837	4 915	4 223	2 005	88
East Asia							
China							
Democratic People's Republic of Korea	3 830	3 370	3 169		1 460	1 995	93
Mongolia	15 869	14 434	12 627	518	84	1 993	75
Republic of Korea	1 622	1 516	1 447	1 782	806		
Pacific Islands							
Cook Islands							
Fiji	39 217	35 160	33 159		3		
Kiribati							
Marshall Islands							
Micronesia (Federated States of)							
Nauru	0	0					
Niue	0	0					
Palau							
Papua New Guinea	192 641	148 912	116 798	36			
Samoa							
Solomon Islands	144 194	109 291	83 086				
Tonga							
Tuvalu							
Vanuatu							
Southeast Asia							
Cambodia	49 948	38 250	33 675		285	2 006	90
Indonesia	10 952	9 461	8 417	10 886	6 722	2 005	100
Lao People's Democratic Republic	79 556	62 723	53 782	600	310	2 005	87
Malaysia	31 852	24 770	20 422	414	365		
Myanmar	29 744	25 980	24 352	10 500	2 275	2 004	100
Philippines	7 772	6 196	5 136	3 126	1 540	2 006	100
Thailand	7 685	6 945	6 345	12 245	6 415	2 007	79
Timor-Leste	11 057	9 898	7 309		35	2 002	83
Viet Nam	13 175	11 226	10 064	9 400	4 600	2 005	100
South and Southwest Asia							
Afghanistan	4 988	2 844	2 069		3 199	2 002	59
Bangladesh	11 657	9 468	8 252	6 933	5 100	2 008	100
Bhutan	139 535	136 602	107 438		28	2 007	100
India	2 187	1 813	1 560	139 500	66 700	2 008	94
Iran (Islamic Republic of)	2 506	2 104	1 859	15 000	9 133	2 006	77
Maldives	137	110	95				
Nepal	11 016	8 614	7 016	2 178	1 168		
Pakistan	2 207	1 708	1 422	21 300	20 200	2 008	100
Sri Lanka	3 046	2 817	2 531	570	570	2 006	81
Developed Countries							
Australia	28 779	25 673	22 094		2 550		
Japan	3 517	3 420	3 398		2 506	1 993	100
New Zealand	96 233	84 759	74 863		619	2 007	82
Regional Office for Africa							
Regional Office for Europe and Central Asia							
Regional Office for Latin America and the Caribbean							
Regional Office for the Near East							
World							

TABLE 6: **Labour**

	Employment		Employment in agriculture			Labor force		Children in employment
	female	male	share of total	female	male	participation rate		% of children ages 7-14
	million people 2010	million people 2010	percent 2005-12*	share of female employment percent 2005-12*	share of male employment percent 2005-12*	female percent 2010	male percent 2010	total percent 2000-12*
Regional Office for Asia and the Pacific	728	1 168				49.4	80.0	
Developing countries and transition economies	695	1 125				49.4	80.3	
Central Asia	43	46				55.7	71.8	
Kazakhstan	4	4	28.3	29.2	31.1	66.4	76.8	3.6
Russian Federation	34	36	9.7	6.7	10.5	56.1	70.7	
Uzbekistan	4	7				47.6	74.4	5.1
East Asia	362	444				67.3	79.9	
China	345	422	36.7			67.9	80.2	
Democratic People's Republic of Korea	7	7				71.8	83.9	
Mongolia	1	1	40.0	38.7	41.2	53.9	65.0	10.1
Republic of Korea	10	14	6.6	6.9	6.4	49.2	71.6	
Pacific Islands	2	2				65.4	75.2	
Cook Islands								
Fiji	0	0				39.3	79.6	
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea	1	2				70.6	74.1	
Samoa						42.9	78.2	
Solomon Islands	0	0				53.1	79.9	
Tonga						53.6	75.2	
Tuvalu								
Vanuatu						61.3	79.7	
Southeast Asia	120	164				58.1	82.0	
Cambodia	4	4	54.2	55.4	52.9	79.3	86.6	34.5
Indonesia	41	68	38.3	38.0	39.0	51.0	84.2	3.7
Lao People's Democratic Republic	2	2				76.6	79.4	18.6
Malaysia	4	7	13.3	8.5	16.0	43.7	77.1	
Myanmar	13	14				75.0	82.0	
Philippines	14	22	33.2	22.5	41.3	49.5	79.4	13.3
Thailand	18	21	38.2	36.0	40.1	63.8	80.2	15.1
Timor-Leste	0	0				38.4	74.4	19.9
Viet Nam	24	26	51.7	53.8	49.6	73.1	81.1	13.0
South and Southwest Asia	169	468				30.9	81.0	
Afghanistan	1	7				15.5	80.4	
Bangladesh	28	42	48.1	68.1	41.8	56.9	84.4	16.2
Bhutan	0	0	59.5	65.3	54.0	65.5	76.0	
India	114	341	51.1	65.3	46.1	29.0	80.7	2.5
Iran (Islamic Republic of)	4	19	21.2	30.6	19.3	16.1	71.8	
Maldives	0	0	11.5	7.1	14.0	55.1	76.4	
Nepal	8	8				80.3	87.7	
Pakistan	11	45	44.7	75.0	36.9	22.4	83.3	13.0
Sri Lanka	3	6	32.7	37.8	30.2	34.6	76.2	10.7
Developed Countries	33	44				51.2	72.1	
Australia	5	6	3.3	2.2	4.2	58.7	72.5	
Japan	27	36	3.7	3.7	3.8	49.5	72.0	
New Zealand	1	1	6.6	4.4	8.6	61.5	74.2	
Regional Office for Africa	141	169				62.8	76.4	
Regional Office for Europe and Central Asia	175	213	14.1	12.5	13.5	49.9	67.3	
Regional Office for Latin America and the Caribbean	105	155	14.9	9.1	19.7	53.3	80.1	
Regional Office for the Near East	24	97				21.6	73.5	
World	1 201	1 820				50.6	77.3	

TABLE 7: **Inputs**

	Agricultural tractors	Pesticides use	Fertilizers consumption		
	total	per ha of arable land and permanent crops	per ha of arable land and permanent crops		
	tractors 2000-12*	kg/ha 2008-12*	nitrogen kg/ha 2011	phosphate kg/ha 2011	potash kg/ha 2011
Regional Office for Asia and the Pacific			106.76	35.62	22.36
Developing countries and transition economies			112.39	35.63	23.42
Central Asia			13.22	3.56	2.07
Kazakhstan	52 084		0.99	0.70	0.03
Russian Federation	329 980		10.24	3.46	2.27
Uzbekistan			155.32	20.89	7.51
East Asia			299.80	83.57	62.04
China			303.57	84.00	62.07
Democratic People's Republic of Korea					
Mongolia	4 700		0.00	0.00	0.00
Republic of Korea	191 631	10.89	129.60	81.65	82.24
Pacific Islands			13.03	1.76	12.62
Cook Islands		1.14	10.00	3.33	2.00
Fiji	5 983		16.24	5.34	15.96
Kiribati					
Marshall Islands			0.00	0.00	0.00
Micronesia (Federated States of)					
Nauru					
Niue					
Palau					
Papua New Guinea			12.48	0.96	11.42
Samoa	94		0.13	0.17	0.20
Solomon Islands					
Tonga	243		22.67	0.04	45.52
Tuvalu	1				
Vanuatu					
Southeast Asia			63.55	15.26	30.49
Cambodia	2 166		8.04	6.45	0.41
Indonesia	4 013		67.20	13.31	26.44
Lao People's Democratic Republic		0.00			
Malaysia		7.93	138.85	13.27	129.78
Myanmar	10 606	0.36	6.87	2.67	1.04
Philippines	58 800		43.89	6.69	15.71
Thailand	439 139	4.22	75.62	22.66	27.36
Timor-Leste		0.01			
Viet Nam	162 746		79.17	38.00	43.14
South and Southwest Asia			97.54	39.95	12.89
Afghanistan	110		6.24	0.00	0.00
Bangladesh	1 000	1.53	160.15	31.62	34.97
Bhutan	117	0.18	7.48	2.42	1.63
India	2 091 000	0.24	102.09	46.85	15.13
Iran (Islamic Republic of)	228 000	0.45	13.24	8.34	2.08
Maldives			3.50	0.83	0.67
Nepal	26 300	0.08	21.62	8.13	0.55
Pakistan	326 595		155.80	37.14	0.85
Sri Lanka		0.59	96.05	28.63	28.76
Developed Countries			33.70	34.19	7.81
Australia			22.86	18.31	3.74
Japan	2 027 674	11.24	96.43	97.20	49.55
New Zealand		8.33	468.11	912.85	17.99
Regional Office for Africa			6.87	3.24	1.55
Regional Office for Europe and Central Asia	11 467 067		45.08	11.69	12.29
Regional Office for Latin America and the Caribbean			45.66	32.58	32.64
Regional Office for the Near East	651 197		35.94	26.59	3.66
World			73.34	26.83	19.82

TABLE 8: **Agricultural capital stock**

	Gross capital stock								
	total			share					
		p.a. growth		land development	plantation crops	livestock fixed assets	livestock inventory	structures for livestock	machinery & equipment
	million US$	percent	percent	percent	percent	percent	percent	percent	percent
	2007	1990-2000	2000-07	2007	2007	2007	2007	2007	2007
Regional Office for Asia and the Pacific	1 719 508	0.9	0.7	32.5	10.2	25.9	4.6	4.1	22.6
Developing countries and transition economies	1 254 991	1.7	1.1	40.9	13.8	24.6	4.3	3.8	12.6
Central Asia	241 681		−1.1	57.0	3.5	18.9	3.3	1.4	15.9
Kazakhstan	47 162		0.9	73.6	1.0	14.4	2.5	1.4	7.0
Russian Federation	167 552		−2.0	54.3	4.4	18.9	3.3	1.2	17.8
Uzbekistan	26 967		1.4	44.1	2.6	26.2	4.6	2.5	19.9
East Asia	35 659	3.1	1.2	15.7	3.7	43.7	7.7	2.6	26.6
China									
Democratic People's Republic of Korea	7 366	−0.5	0.6	43.5	8.7	20.8	3.7	1.2	22.2
Mongolia	10 992	3.4	0.5	2.7	0.0	77.4	13.7	5.5	0.7
Republic of Korea	17 301	4.6	1.9	12.1	3.8	32.1	5.7	1.4	44.9
Pacific Islands	5 139	1.3	0.6	4.5	58.4	27.2	4.8	1.3	3.8
Cook Islands									
Fiji	1 009	1.3	−0.2	10.0	32.5	40.4	7.1	3.4	6.5
Kiribati	206	−1.4	0.1	0.8	96.3	2.0	0.3	0.0	0.5
Marshall Islands	40		0.0	0.0	99.4	0.0	0.0	0.0	0.6
Micronesia (Federated States of)	79		0.1	1.4	68.9	23.2	4.1	1.7	0.7
Nauru									
Niue	8	0.1	1.1	3.9	83.1	9.8	1.7	0.1	1.1
Palau	5		0.0	6.4	91.2	0.0	0.0	0.0	2.3
Papua New Guinea	2 465	1.9	0.5	3.3	57.2	29.3	5.2	0.4	4.7
Samoa	344	−0.3	1.4	5.7	62.3	26.2	4.6	0.8	0.4
Solomon Islands	199	0.6	1.2	2.9	76.6	14.8	2.6	0.6	2.5
Tonga	125	0.2	0.5	6.6	37.5	44.9	7.9	1.7	1.4
Tuvalu									
Vanuatu	657	1.3	1.6	1.9	82.9	10.8	1.9	2.2	0.4
Southeast Asia	286 148	2.2	2.0	24.1	41.5	19.1	3.4	2.0	10.0
Cambodia	5 553	1.5	1.4	37.6	8.9	35.7	6.3	6.8	4.8
Indonesia	100 102	1.5	1.6	19.6	49.3	16.1	2.8	1.4	10.8
Lao People's Democratic Republic	3 798	1.9	2.4	24.1	7.1	51.4	9.1	6.0	2.3
Malaysia	22 014	1.1	0.3	5.8	82.4	7.4	1.3	0.4	2.7
Myanmar	23 638	2.1	3.2	33.0	14.9	33.6	5.9	6.0	6.6
Philippines	30 360	0.8	0.7	16.0	53.5	22.0	3.9	2.0	2.7
Thailand	32 726	0.1	1.4	38.9	29.1	20.0	3.5	2.3	6.2
Timor-Leste	689	4.4	2.2	13.2	30.1	42.7	7.5	4.5	2.0
Viet Nam	67 267	5.9	3.5	28.9	31.4	17.0	3.0	1.3	18.3
South and Southwest Asia	686 365	1.4	1.4	43.9	6.1	27.8	4.9	5.5	11.9
Afghanistan	30 924	1.1	−0.0	80.6	0.4	14.9	2.6	1.5	0.0
Bangladesh	66 126	1.1	2.1	14.1	3.0	65.1	11.5	4.3	2.0
Bhutan	350	−0.6	0.8	23.3	23.4	33.6	5.9	10.7	3.0
India	369 127	1.6	1.2	42.7	8.4	20.6	3.6	7.0	17.7
Iran (Islamic Republic of)	85 173	1.0	1.6	63.5	1.7	17.9	3.2	1.2	12.6
Maldives	15	2.0	−2.6	11.6	83.1	0.0	0.0	0.0	5.2
Nepal	8 855	1.4	1.3	32.5	3.9	39.1	6.9	12.4	5.2
Pakistan	119 020	1.7	2.2	42.6	2.6	39.9	7.0	4.9	2.9
Sri Lanka	6 774	−1.2	−0.1	25.5	52.7	14.3	2.5	2.1	2.9
Developed Countries	464 516	−0.7	−0.3	9.8	0.5	29.7	5.2	5.0	49.7
Australia	115 091	0.3	−0.4	27.2	1.0	39.2	6.9	13.4	12.2
Japan	292 402	−1.1	−0.5	3.9	0.3	18.8	3.3	0.8	72.9
New Zealand	57 024	−0.4	0.5	5.5	0.5	66.5	11.7	9.2	6.6
Regional Office for Africa	430 811	1.8	2.0	25.5	7.3	48.0	8.5	7.7	3.0
Regional Office for Europe and Central Asia	1 239 351		−0.4	35.2	5.8	16.5	2.9	4.3	35.3
Regional Office for Latin America and the Caribbean	725 911	0.5	0.9	24.3	6.9	47.1	8.3	5.2	8.1
Regional Office for the Near East	335 938	1.9	1.2	61.9	3.3	21.9	3.9	2.3	6.7
World	4 797 327	0.6	0.6	31.0	7.6	26.8	4.7	5.4	24.5

TABLE 9: **Foreign direct investment and official development assistance**

	FDI, inward flows				ODA				
	agriculture, hunting, forestry, fishing		food, beverages, tobacco		total receipts		agriculture	forestry	fishery
	thousand US$ 2000-01*	thousand US$ 2010-12*	million US$ 2000-01*	million US$ 2010-12*	million US$ 2000	million US$ 2010	share of total percent 2010	share of total percent 2010	share of total percent 2010
Regional Office for Asia and the Pacific					22 256	43 802	4.3	0.4	0.1
Developing countries and transition economies					22 256	43 802	4.3	0.4	0.1
Central Asia					396	1 097	0.6	0.0	0.0
Kazakhstan	5 030	3 820	90	209	302	311	0.6	0.0	0.0
Russian Federation	48 000	235 000	528	1 801	0	0			
Uzbekistan					94	786	0.7	0.0	0.0
East Asia					3 710	3 067	1.1	2.1	0.3
China	899 000	2 009 000	0	0	3 271	2 383	0.6	2.5	0.0
Democratic People's Republic of Korea	−21 960	6 300	542	65	128	74	0.8	0.0	0.0
Mongolia	830	400	0	4	311	611	3.1	0.4	1.4
Republic of Korea					0	0			
Pacific Islands					1 381	2 030	3.7	0.1	0.6
Cook Islands					2	22	0.0	0.0	2.2
Fiji	130		1		15	65	18.9	0.1	1.5
Kiribati					30	34	0.8	0.0	4.5
Marshall Islands					56	82	0.1	0.0	0.6
Micronesia (Federated States of)					114	113	0.0	0.0	0.9
Nauru					0	19	0.0	0.0	1.3
Niue					1	12	0.0	0.0	0.0
Palau					18	20	0.7	0.0	1.6
Papua New Guinea					898	971	4.6	0.2	0.1
Samoa					47	117	1.4	0.1	0.1
Solomon Islands					130	381	3.3	0.1	1.6
Tonga					31	95	1.1	0.0	0.4
Tuvalu					3	23	0.1	0.0	1.8
Vanuatu	70		0		36	76	2.0	0.5	0.2
Southeast Asia					9 383	11 681	4.5	0.8	0.2
Cambodia	4 850	156 560	13	5	641	1 027	5.3	0.1	0.1
Indonesia	−1 566 000	317 000	0	0	2 310	3 294	3.6	2.1	0.2
Lao People's Democratic Republic	1 010	4 000	0	0	322	595	2.9	0.4	0.1
Malaysia	0	40 160	0	0	1 239	95	0.6	5.8	0.3
Myanmar	5 530		0		81	346	6.7	0.5	0.3
Philippines	0	3 970	0	0	1 119	1 344	3.3	0.4	0.5
Thailand	−4 270	21 570	156	220	1 107	567	1.4	0.5	0.3
Timor-Leste					435	406	2.7	0.1	0.1
Viet Nam	120 330	77 380	0	0	2 128	4 007	6.2	0.1	0.0
South and Southwest Asia					7 387	25 927	4.7	0.0	0.0
Afghanistan					218	7 666	8.7	0.0	0.0
Bangladesh	1 060	5 590	11	23	1 849	2 759	4.6	0.2	0.2
Bhutan					94	113	5.5	0.2	0.0
India		0	49	0	2 840	7 765	2.8	0.0	0.0
Iran (Islamic Republic of)			42		182	128	1.4	0.3	0.0
Maldives					46	95	0.1	0.0	0.0
Nepal					407	1 174	2.5	0.3	0.0
Pakistan	0	0	0	98	1 298	5 099	3.2	0.0	0.0
Sri Lanka			18		453	1 126	1.1	0.0	0.1
Developed Countries					0	0			
Australia	−12 930		0		0	0			
Japan		−5 490	290	286	0	0			
New Zealand					0	0			
Regional Office for Africa					24 913	42 252	6.6	0.5	0.3
Regional Office for Europe and Central Asia					5 636	8 877			
Regional Office for Latin America and the Caribbean					8 633	13 085	5.6	2.5	0.4
Regional Office for the Near East					6 205	11 726	3.9	0.0	0.7
World					68 583	123 943			

TABLE 10: **Government expenditures**

	Agriculture, forestry, fishing, and hunting				Environmental Protection	
	% of total outlays		% of agricultural GDP		% of total outlays	
	cash percent 2009-12*	non-cash percent 2009-12*	cash percent 2009-12*	non-cash percent 2009-12*	cash percent 2009-12*	non-cash percent 2009-12*
Regional Office for Asia and the Pacific						
Developing countries and transition economies						
Central Asia						
Kazakhstan						
Russian Federation		0.4		2.4		0.1
Uzbekistan						
East Asia						
China	1.7		2.3		0.1	
Democratic People's Republic of Korea						
Mongolia						
Republic of Korea						
Pacific Islands						
Cook Islands						
Fiji	2.8		3.3		0.2	
Kiribati						
Marshall Islands						
Micronesia (Federated States of)						
Nauru						
Niue						
Palau						
Papua New Guinea	2.4		2.4			
Samoa						
Solomon Islands						
Tonga						
Tuvalu						
Vanuatu	1.9		2.3			
Southeast Asia						
Cambodia						
Indonesia	0.9		0.9		0.5	
Lao People's Democratic Republic						
Malaysia	3.2		7.9		0.0	
Myanmar	6.3					
Philippines	5.9		8.0		1.0	
Thailand		5.6		9.2		0.2
Timor-Leste						
Viet Nam	2.5		4.1			
South and Southwest Asia						
Afghanistan	3.7		2.7		0.1	
Bangladesh	8.9		6.4		0.1	
Bhutan	11.2		20.4		0.0	
India	6.8		6.4			
Iran (Islamic Republic of)	1.4				0.1	
Maldives	1.3		19.1		0.6	
Nepal	8.5		4.8		0.5	
Pakistan	1.2		1.0		0.0	
Sri Lanka	5.3		9.6			
Developed Countries						
Australia						
Japan						
New Zealand						
Regional Office for Africa						
Regional Office for Europe and Central Asia						
Regional Office for Latin America and the Caribbean						
Regional Office for the Near East						
World						

TABLE 11: **Innovation**

	Agricultural R&D spending		Total public agric. research expenditures	Fixed broadband Internet per 100 people	Mobile cellulars per 100 people	Telephone lines per 100 people	CPIA business regulatory environment rating
	million 2005 PPP US$ 2000	million 2005 PPP US$ 2008	share of GDP percent 2008-12*	subscribers 2011	subscriptions 2011	lines 2011	(1=low to 6=high) rating 2012
Regional Office for Asia and the Pacific	9 942	13 454		6.5	81.0	14.1	
Developing countries and transition economies	6 113	9 628		5.7	80.0	12.7	
Central Asia	220	487		10.0	164.2	27.0	
Kazakhstan	18	45		7.4	155.7	26.3	
Russian Federation	167	376		12.2	179.3	30.9	
Uzbekistan	34	67		0.5	91.6	6.9	3.0
East Asia	2 490	4 733		12.5	73.3	22.2	
China	1 907	4 048		11.6	73.2	21.2	
Democratic People's Republic of Korea					4.1	4.8	
Mongolia	1	0		3.2	104.6	6.7	3.5
Republic of Korea	583	685	2.3	36.9	108.5	60.9	
Pacific Islands	22	18		0.4	40.5	3.7	
Cook Islands							
Fiji	0	0		2.7	83.7	15.0	
Kiribati	0	0		0.9	13.6	8.4	2.5
Marshall Islands							2.5
Micronesia (Federated States of)	0	0			24.7	7.5	2.0
Nauru							
Niue							
Palau	0	0		2.5	74.9	33.6	
Papua New Guinea	21	17	0.4	0.1	34.2	1.9	3.0
Samoa	0	0					3.5
Solomon Islands	0	0		0.4	49.8	1.5	3.0
Tonga	0	0		1.2	52.6	28.7	3.0
Tuvalu				4.6	21.6	14.7	2.5
Vanuatu	0	0		1.0	55.8	2.5	3.0
Southeast Asia	962	1 155		2.4	101.8	10.8	
Cambodia	14	14	0.2	0.2	96.2	3.7	3.5
Indonesia	243	379	0.3	1.1	102.5	15.8	
Lao People's Democratic Republic	21	16		0.7	87.2	1.7	3.5
Malaysia	322	349	1.0	7.4	127.0	15.7	
Myanmar	6	7		0.0	2.6	1.1	
Philippines	126	133		1.9	99.3	3.7	
Thailand	190	171		5.5	111.6	9.6	
Timor-Leste				0.0	53.2	0.3	1.5
Viet Nam	40	86	0.2	4.3	143.4	11.5	3.5
South and Southwest Asia	2 419	3 235		1.0	69.0	4.1	
Afghanistan					54.3	0.0	2.5
Bangladesh	142	132	0.3	0.3	56.1	0.6	3.5
Bhutan	0	0		1.8	65.6	3.7	3.5
India	1 487	2 121	0.4	1.1	72.0	2.6	3.0
Iran (Islamic Republic of)	574	731	1.0	2.4	74.9	37.1	
Maldives	0	0		5.4	165.7	7.5	4.0
Nepal	25	24	0.2	0.3	43.8	2.8	3.0
Pakistan	136	188	0.2	0.4	61.6	3.2	3.0
Sri Lanka	55	39	0.3	1.7	87.0	17.1	4.0
Developed Countries	3 829	3 826		27.0	105.6	50.2	
Australia	818	590	3.6	23.9	108.3	46.8	
Japan	2 885	3 112	5.5	27.6	105.0	51.1	
New Zealand	126	124	2.2	25.8	109.2	42.6	
Regional Office for Africa	1 317	1 748		0.2	53.2	1.4	
Regional Office for Europe and Central Asia	6 267	7 315		20.0	128.7	36.9	
Regional Office for Latin America and the Caribbean	2 826	3 302		7.7	105.3	18.1	
Regional Office for the Near East	1 541	1 731		2.3	94.9	14.7	
World	26 053	31 744		8.5	85.4	17.0	

PART

2

Hunger dimensions

In 2011-2013 roughly one in eight people in the Asia and Pacific Region (APR) did not eat enough food to meet their daily minimum dietary energy needs. Nonetheless this number represents a very substantial reduction in the level of hunger and undernourishment in the region since 1990-1992, a benchmark period of the United Nations' Millennium Development Goals (MDGs). Currently the APR has nearly 30 percent fewer hungry people than two decades ago – the world's best record in hunger reduction after Latin America and the Caribbean.

The *prevalence* of hunger in the region dropped by about 43 percent, from 24.1 percent in 1990-1992 to 13.5 percent in 2011-2013. The region as a whole is therefore very close to achieving the target set in the first of the

MDGs – that of halving between 1990 and 2015 the proportion of people suffering from hunger, i.e. consuming below the minimum level of dietary energy requirements.

But the prevalence of undernourishment and number of undernourished population indicators can provide only a rough idea of the extent and distribution of hunger. Food security is too complex to be reflected by just these indicators. To understand food security in all its dimensions, all the underlying factors need to be studied and measured for developing policies to eradicate hunger.

The main dimension of food insecurity is the lack of access to food by the poor, but the relationship between hunger and poverty is not always straightforward. Reduced access to food can result from a number of factors, including political instability and shortfall in production due to adverse weather conditions resulting in decline in availability.

Over recent years, researchers have also been studying food deprivation not just in terms of lack of calories but also in terms of unbalanced diets from the perspective of protein consumption and the lack of vitamins and minerals. Food insecurity can also be a consequence of inadequate food safety and hygiene, or lack of access to adequate health care, clean water and sanitation.

Whatever its causes, hunger tends to be self-perpetuating, with food insecurity causing low labour productivity, low incomes and thus more food insecurity. Unless this vicious circle is interrupted, there is no escaping from the hunger trap.

To capture the many facets of food insecurity, and properly address its various causes, FAO has developed a suite of

indicators that supplement the traditional measurements of the magnitude and prevalence of hunger.

Some of these indicators look at food insecurity as an outcome, for example the number of undernourished, the prevalence of hunger, the extent of nutrition gaps and the incidence of stunting, wasting and being underweight. Others focus on the conditions that generate food insecurity such as poverty, food availability, access, affordability and utilization as well as vulnerability and instability.

This chapter presents some food security indicators, mostly calculated by FAO, characterizing both the outcome and the conditions leading to food insecurity.

Number of undernourished and their prevalence in the population

According to FAO's latest figures 842 million people, or 12 percent of the global population, suffered from chronic hunger in 2011-2013, down 26 million or 3 percent from the 2010-2012 total of 868 million.

The APR, together with Latin America and the Caribbean, made remarkable progress in hunger reduction during the reference period given above. The region is therefore well placed to achieve the MDG hunger target. Nonetheless the APR remains the region with the highest number of undernourished; nearly 530 million or 62 percent of the world's total of which China and India account for about 70 percent (Table 12).

Of the subregions, Southeast Asia has made the most rapid advance in reducing hunger since the benchmark period of 1990-1992, with a decline from 30.9 percent to 10.6 percent in 2011-2013, thus achieving MDG1 before the reference period of 2015. East Asia was second with a 48.7 percent reduction from 22.2 to 10.6 percent, nearly achieving MDG1. But progress in South Asia was slower, especially in terms of the number of people undernourished. Countries in the region that have achieved MDG1 include China, Samoa, Indonesia, Thailand, Viet Nam, Bangladesh, Cambodia and the Maldives. In addition, the region includes a number of countries such as the Republic of Korea (ROK) and Malaysia where hunger was minimal in 1990 and has remained so. Hunger reduction in East and Southeast Asia has been spurred by continuous and often rapid economic growth, while in some countries in Southeast Asia, such as Indonesia and the Philippines considerable inflows of remittances had some role in reduction of hunger. Food price inflation, conflict, degraded environment or political instability are usually the main reasons behind poor performance in reduction of hunger.

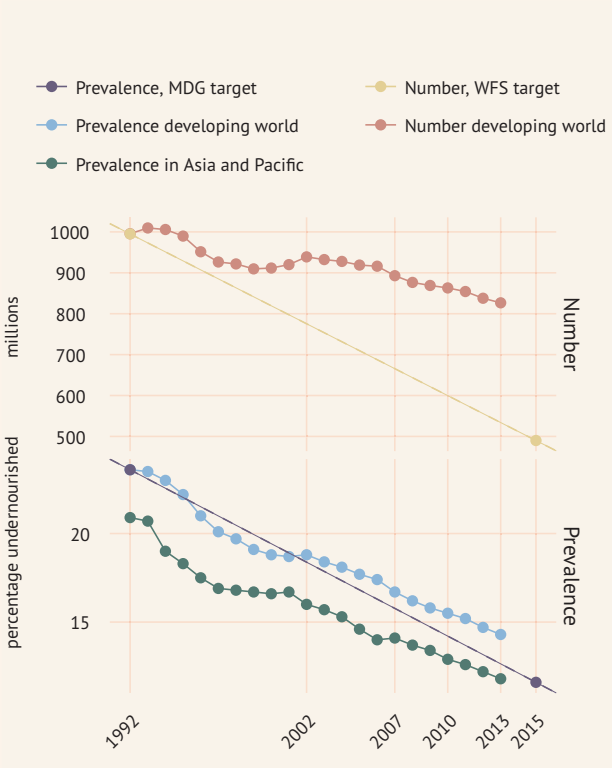
A new indicator, called prevalence of food inadequacy, is published for the first time this year. This indicator, besides including the chronically undernourished population also includes the population which cannot be considered as chronically undernourished but is at risk of not being able to cover their energy requirement in jobs that require significant physical effort. The indicator thus reports a higher level of undernourishment. Table 12 provides comparison of this indicator with the prevalence of undernourishment indicator.

In more than one country, the difference between the prevalence of undernourishment and the prevalence of food inadequacy is striking, showing that the quality of the diet of a significant proportion of the population is inadequate, even though chronic undernourishment may not be widespread.

Further reading

- FAO The State of Food Insecurity in the World 2013 - The multiple dimensions of food security (www.fao.org/publications/sofi/en/)
- FAO Hunger Portal (www.fao.org/hunger)

CHART 23: **Undernourishment in the developing world (1990-1992 to 2011-2013)**

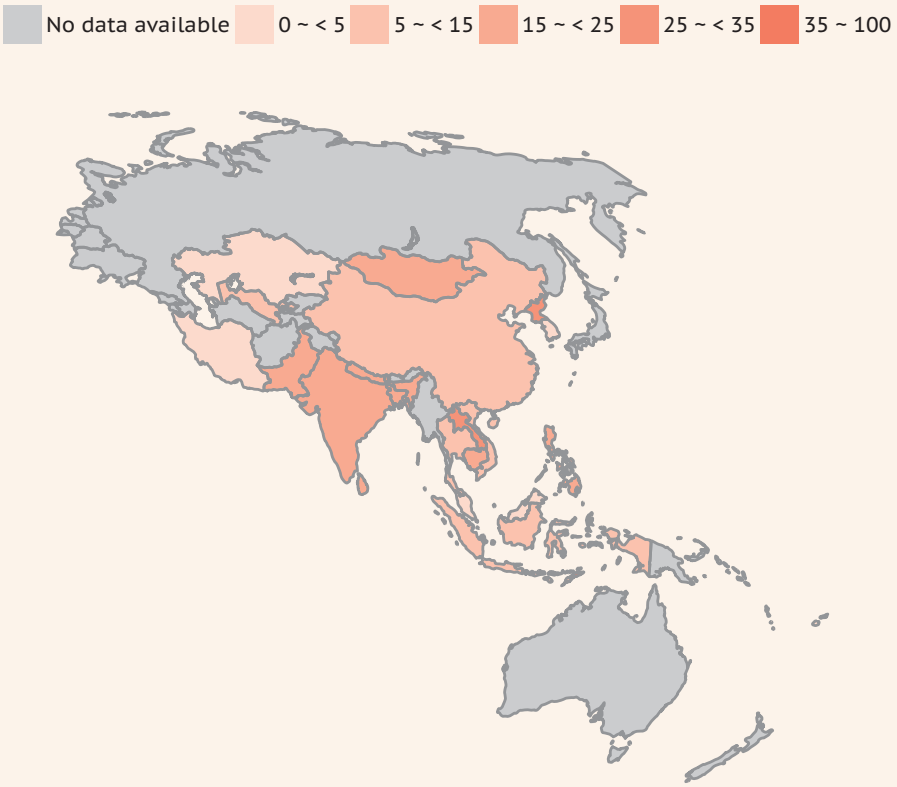


Source: FAO, Statistics Division.

CHART 24: **Number of people undernourished (1990-1992 and 2011-2013)**

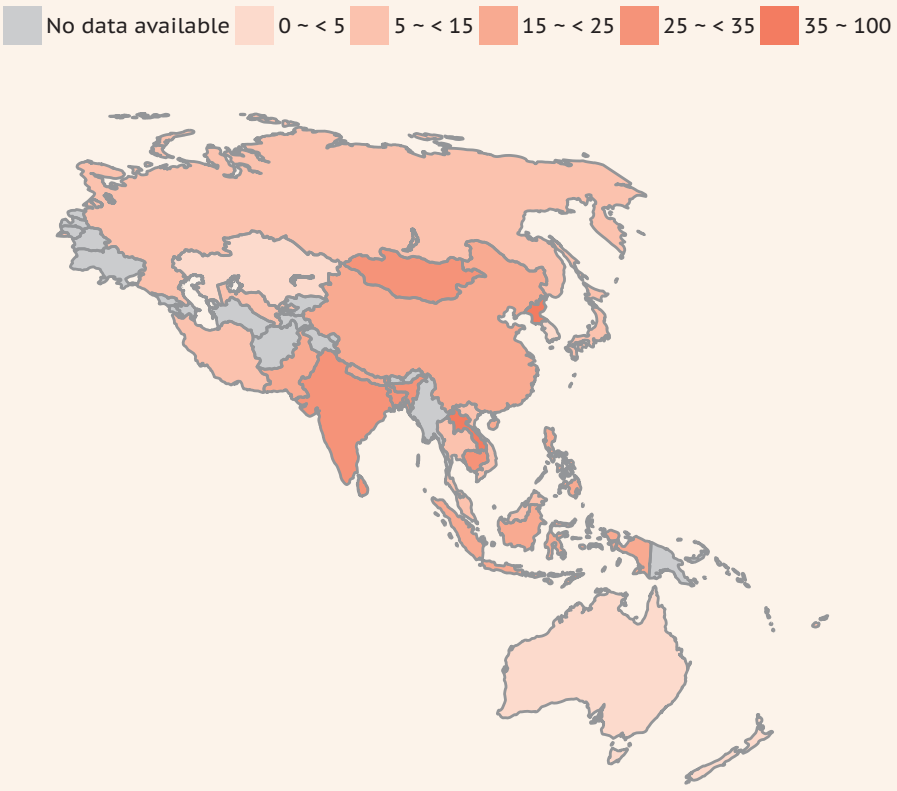
Source: FAO, Statistics Division.

MAP 16: **Hunger map (percent, prevalence of undernourishement 2011-2013)**



Source: FAO, Statistics Division.

MAP 17: **Prevalence of food inadequacy (percent, 2011-2013)**



Source: FAO, Statistics Division.

Anthropometric indicators

Anthropometric indicators are a valuable source of information on the consequences of chronic and acute undernourishment. Measures in children under five years of age can approximate the nutritional status of a population. Stunting – being too short for one's age – is the result of inadequate nutrition over a prolonged period and/or repeated infections; wasting – being too thin – results from acute malnutrition; and low body weight reflects a combination of chronic and acute malnutrition.

But anthropometric data are not as readily available as other indicators, and are not updated as regularly, which prevents full comparison across countries, regions and periods.

Between 2005 and 2011 stunting rates in children under five years of age exceeded 40 percent in seven countries in South Asia. Stunting can be prevalent in countries with low rates of undernourishment, indicating that while many children there may be receiving sufficient calories they are not getting enough nutrients.

Among reporting countries, stunting rates[3] among under-fives were highest in Timor-Leste (57.7 percent), India (47.9 percent), Lao PDR (47.6 percent), Papua New Guinea (43.9 percent), Bangladesh (43.2 percent), Pakistan (43 percent), Cambodia (40.9 percent) and Nepal (40.5 percent). A stunting rate of over 40 percent is considered very high by the World Health Organization (WHO).

Juxtaposing stunting and being underweight with undernourished populations can give an indication of the prevalence of nutritional disorders. In Viet Nam, which reported only 9 percent undernourishment in 2011-2013, more than 20 percent of children under five were underweight. The country also had a high rate of adults being underweight, at 26.5 percent.

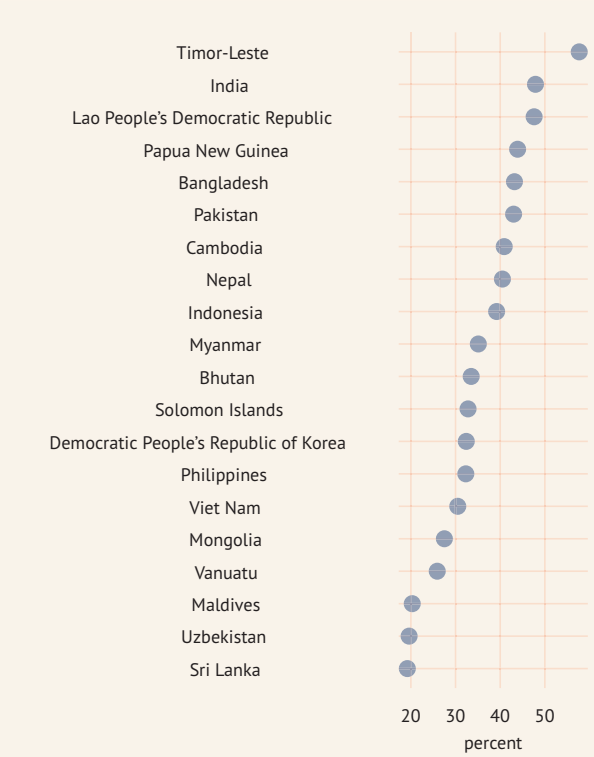
Such differences between food security indicators may provide the basis for in-depth analyses and the design of specific policy interventions. Policies, may for instance, emphasize, where needed, utilization of safe and nutritious foods and hygienic conditions. At the same time, high availability of food in a country coupled with high rates of stunting, wasting or being underweight would suggest that emphasis is to be shifted away from interventions to increase food supply.

Further reading

- FAO Nutrition and Consumer Protection Division (www.fao.org/food/)
- UNICEF Nutrition (www.unicef.org/nutrition/)

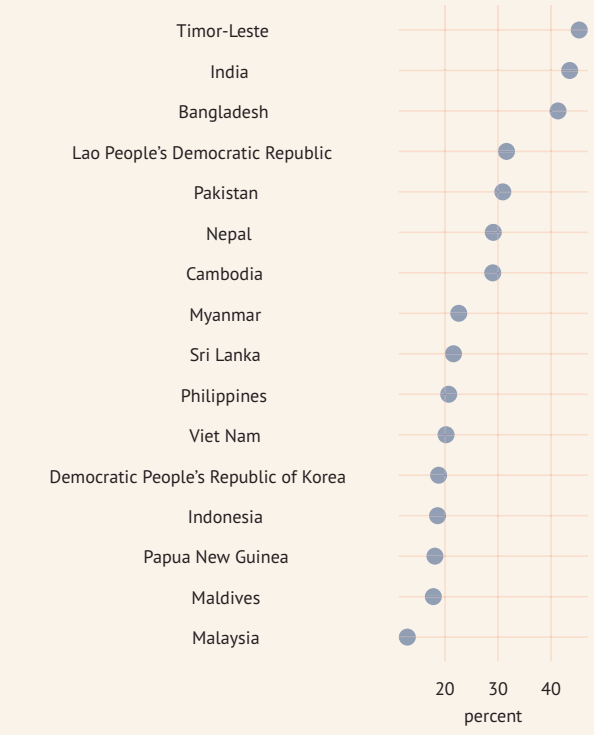
[3]The latest figures published by the countries may be different from ones reported in this publication, and may indicate an improvement in the most recent years. Often methodological aspects of the samples surveys to estimate this indicator may explain the differences in numbers between sources or even over time.

CHART 25: **Percentage of children under five years of age who are stunted (2005-2011*)**



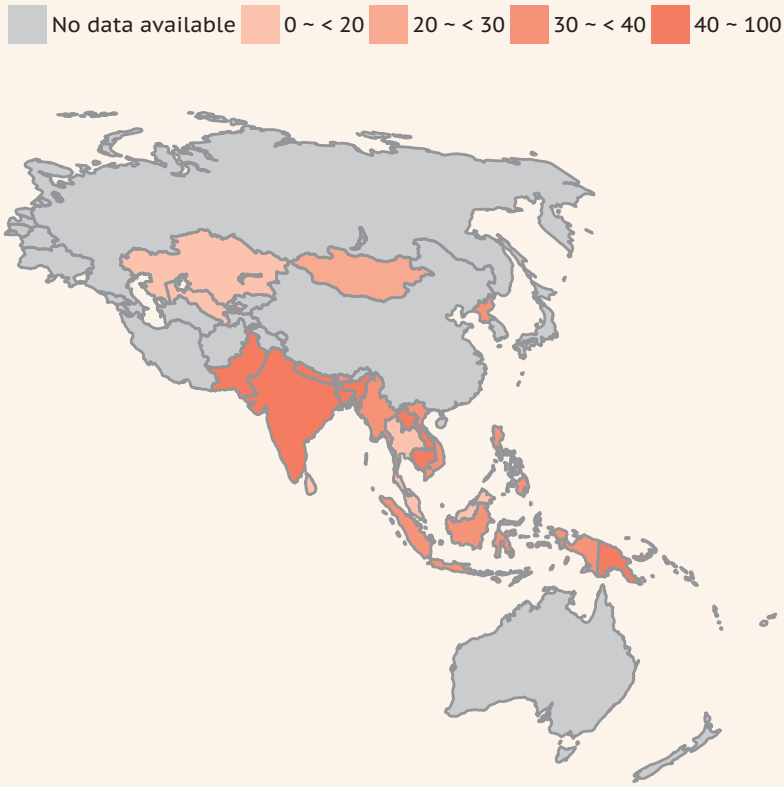
Source: FAO, Statistics Division.

CHART 26: **Percentage of children under five years of age who underweight (2005-2011*)**



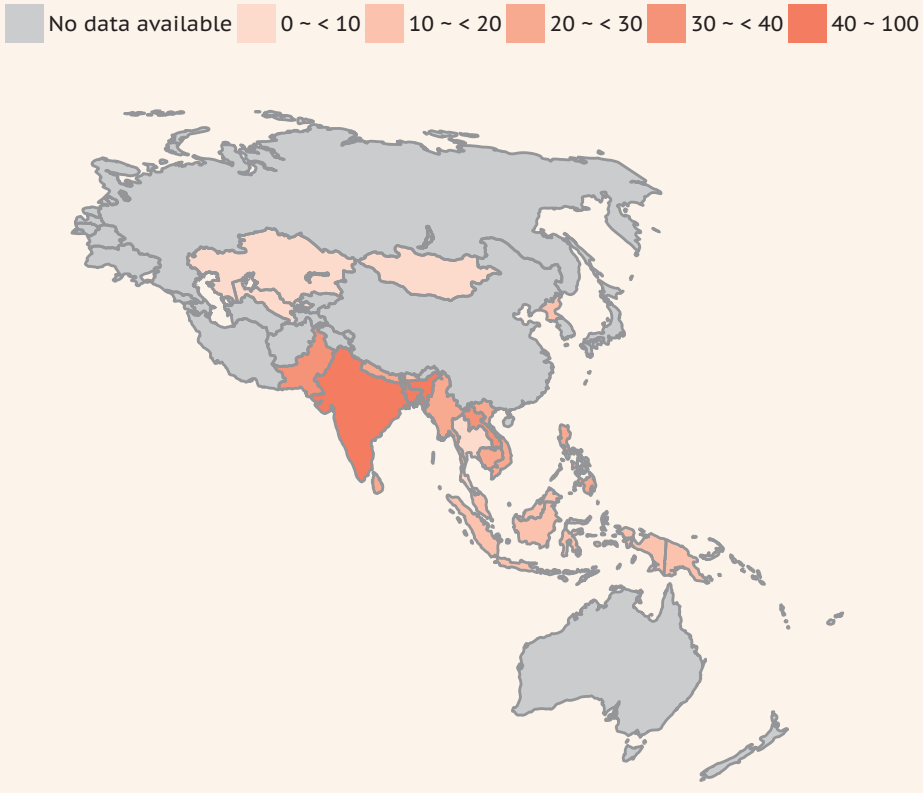
Source: FAO, Statistics Division.

MAP 18: **Percentage of children under five years of age who are stunted (percent, 2005-2011*)**



Source: World Bank (WDI).

MAP 19: **Percentage of children under five years of age who are underweight (percent, 2005-2011*)**



Source: FAO, Statistics Division.

Poverty

The main reason for hunger is poverty. In 1990 the global share of people living in absolute poverty (i.e. so poor that they could not meet their basic food needs) was 43 percent. Since then, economic progress has been accompanied by fast and significant reduction of poverty in China and the APR as a whole, although progress has been slower in South Asia.

Overall, the MDG target of halving the proportion of people living in extreme poverty – with less than US$1.25 a day – has already been achieved and further progress can be expected by 2015.

In Southeast Asia, for example, the number of absolute poor fell from 45 percent of the population in 1990 to 14 percent in 2010. In China the fall was even greater – from 60 percent to 12 percent. Excluding India, South Asia has achieved the target, reducing absolute poverty from 52 percent to 22 percent in 2010. Including India, it was still short of the objective in 2010 but broadly on course to reach it, having cut poverty from 51 to 30 percent in 20 years.

Among reporting countries the poorest, in terms of people living on less than US$1.25 a day, was Bangladesh, with 43.2 percent in 2005-2012. Second was Lao PDR with 33.9 percent, followed by India (32.7 percent) and Pakistan (21.0 percent). Malaysia reported no one living under US$1.25 a day, as did the Russian Federation. Thailand reported 0.4 percent persons below this benchmark income level.

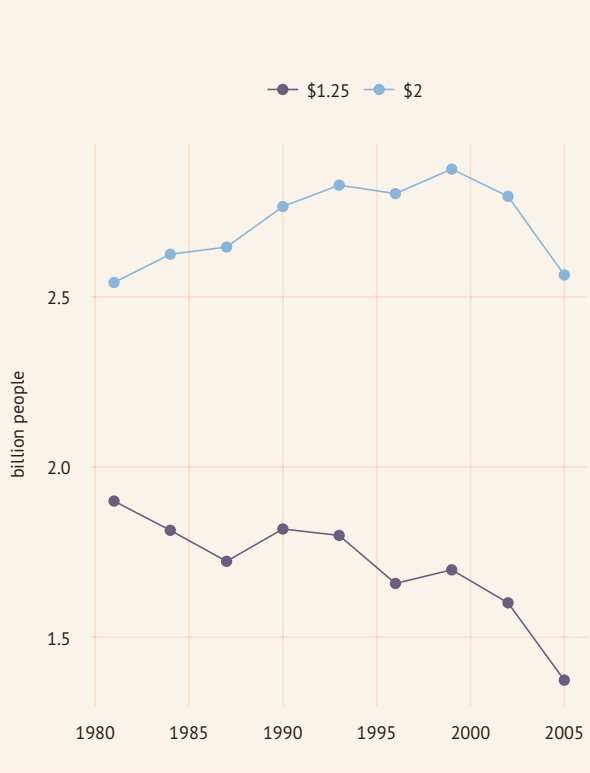
Despite the overall progress in poverty reduction, relative poverty or inequality has been increasing in several Asian countries since the early 1990s, reflecting a growing gap between urban and rural populations and between skilled and unskilled workers. A high level of inequality is often found in the top-performing economies.

As measured by the Gini Index, where 0 is perfect equality and 100 is absolute inequality, Malaysia had the highest score, i.e. the highest inequality, in 2005-2012, with 46.2. The top 20 percent of Malaysians also shared 51.5 percent of total incomes. Similarly, China scored 42.1 on the index and the richest 20 percent shared 47.1 percent of incomes.

Further reading

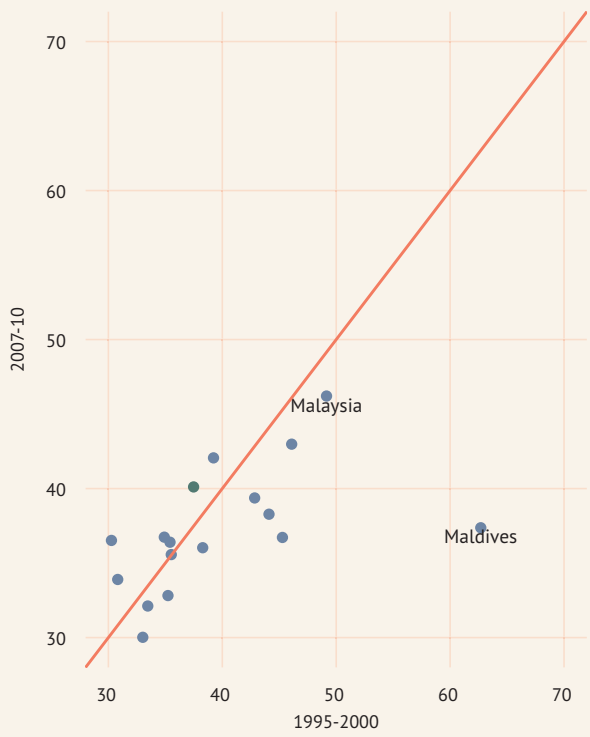
- MDG Indicators web site: http://mdgs.un.org/unsd/mdg/Metadata.aspx?IndicatorId=0&SeriesId=584
- World Bank Poverty Reduction and Equity Group (wwwr.worldbank.org/poverty)

CHART 27: **People in the world living on less than 2005 PPP US$1.25 and US$2 a day (1981-2005)**



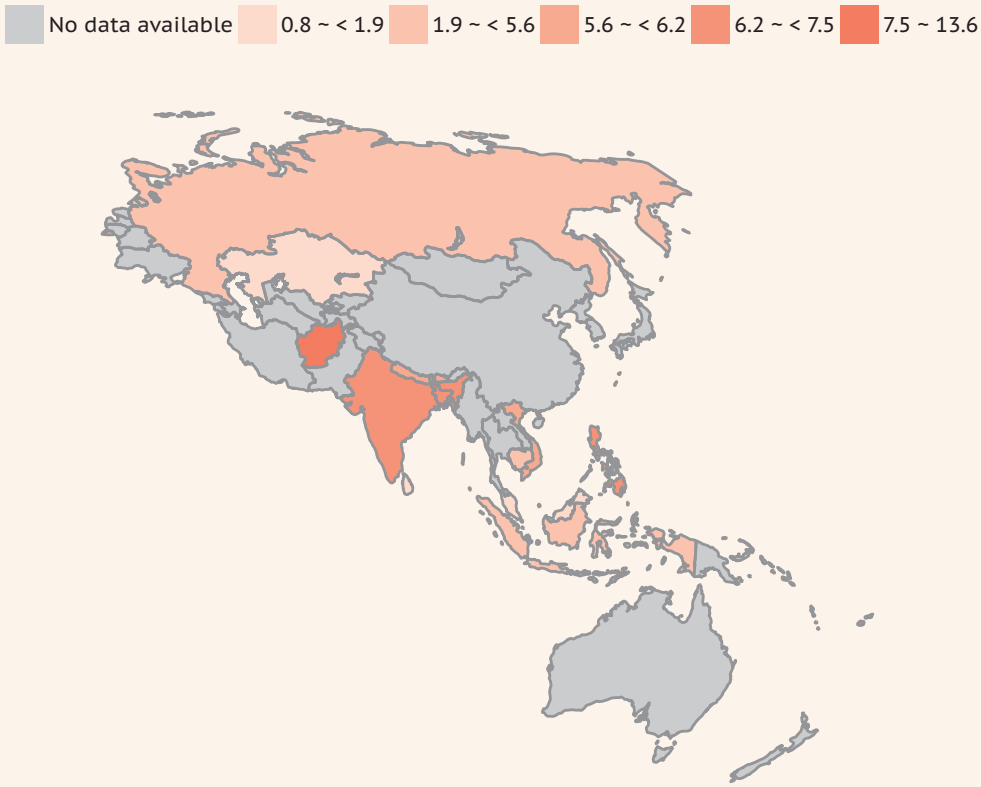
Source: World Bank (WDI).

CHART 28: **Gini coefficient for Asia and Pacific countries (1995-2000 and 2007-2010)**



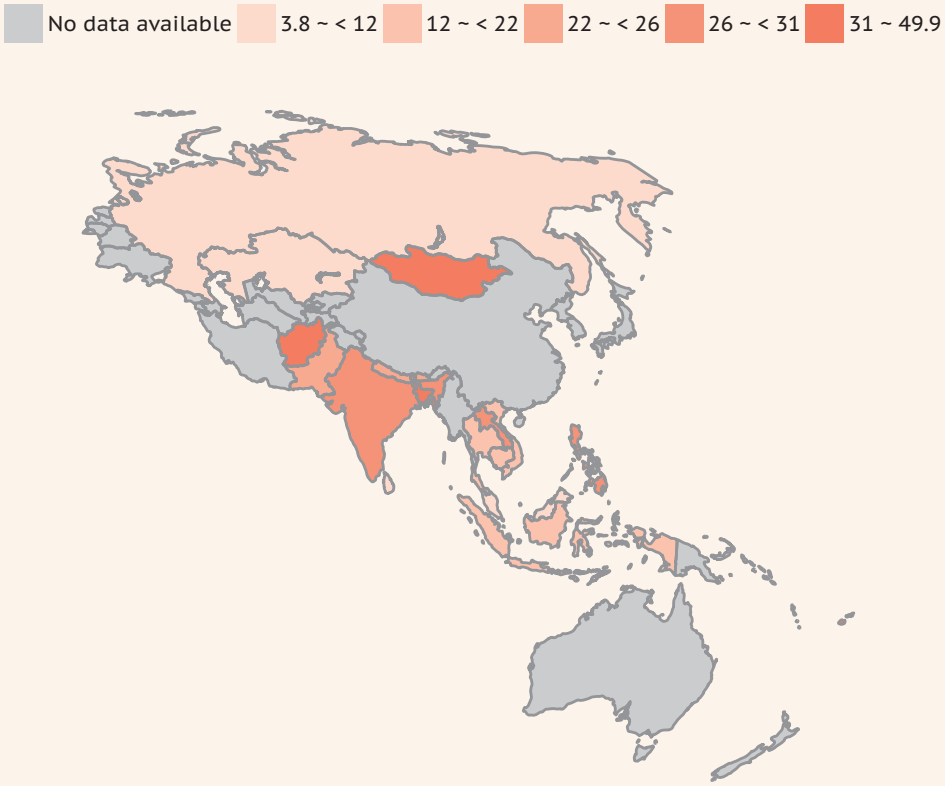
Source: World Bank (WDI).

MAP 20: **Poverty gap at national poverty line (percent, 2005-2012*)**



Source: World Bank (WDI).

MAP 21: **Poverty headcount ratio at national poverty line, share of population (percent, 2005-2011*)**



Source: World Bank (WDI).

Food availability

Food availability is one of the main dimensions of food security alongside access to and utilization of food supplies. Over time stability of these dimensions is the other prerequisite of food security.

Over the last two decades, food availability per capita has increased in most regions, as shown by the rise in the FAO index measuring average dietary energy supply adequacy. The index shows how well food supply is able to meet people's needs, and it has risen globally by eight points, from 114 to 122 points, in the past 20 years (Table 15).

But progress has been uneven between and within regions. In the APR as a whole, the 10-point rise from 107 to 117 over the period 1990-1992 to 2011-2013 exceeded the world average. Food supply was most abundant in Western Asia at 134 points in 2011-2013, and least abundant in South Asia at 108 points, although this was still more than adequate.

In only two countries of the region is the food supply inadequate to meet people's dietary needs – DPRK and Timor-Leste. Rising incomes in the region have been accompanied by a generalized shift from cereal- and starch-based diets to protein-rich ones, with increased consumption of meat and fish.

In East Asia, 68 percent of people's energy needs were met by cereals, roots and tubers some 20 years ago. By 2008-2010 the proportion had declined to 52 percent – less than the world average of 56 percent. The trend was less marked in Southeast Asia with corresponding figures of 67 and 63 percent while in South Asia cereal and starch consumption dropped from 67 to 62 percent. The Pacific Islands ran counter to the trend, indicating a slight increase in cereal and starch consumption, from 48 to 51 percent.

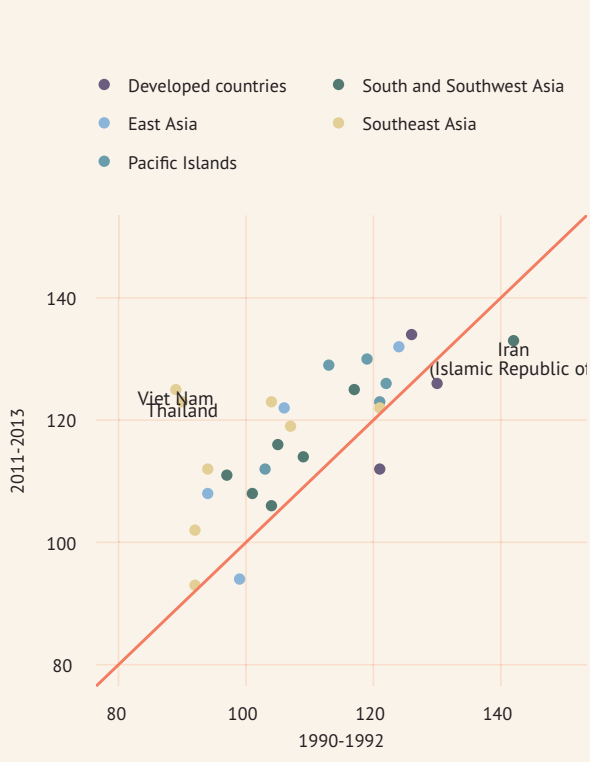
Reduction in grain and starch consumption occurred in tandem with an increase in intake of protein, especially animal protein. Meat and fish consumption virtually doubled in the APR from 15 to 26 grams per person per day over the period. It soared in Central Asia from 17 to 49 grams and more than doubled in East Asia, from 15 to 36 grams.

Increases and total consumption were more contained in South Asia, up from 10 to 13 grams, and from 14 to 22 grams in Southeast Asia. The Pacific Islands once again bucked the trend with animal protein consumption marginally decreasing from 29 to 28 grams over the period, indicating that their food consumption basket has not changed much.

Further reading

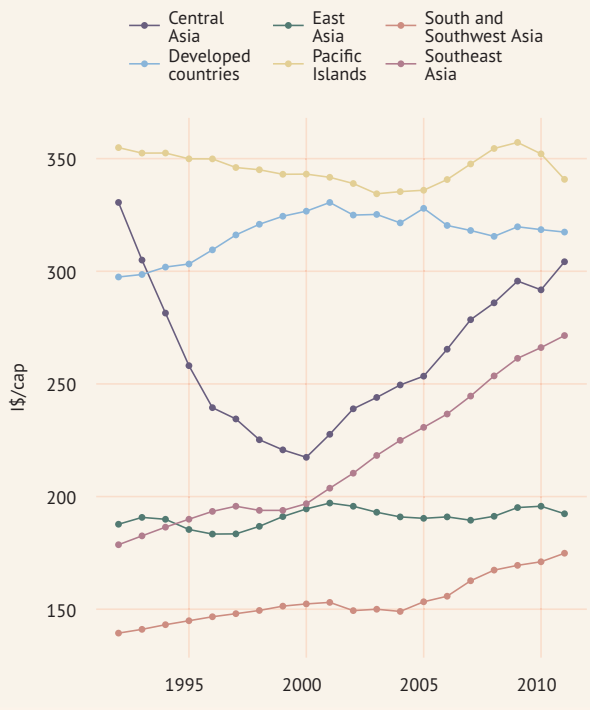
- WHO Nutrition and disorders (www.who.int/topics/nutrition/en/)
- FAO The State of Food Insecurity in the World 2013 - The multiple dimensions of food security (www.fao.org/publications/sofi/en/)

CHART 29: **Average dietary supply adequacy (1990-1992 and 2011-2013)**



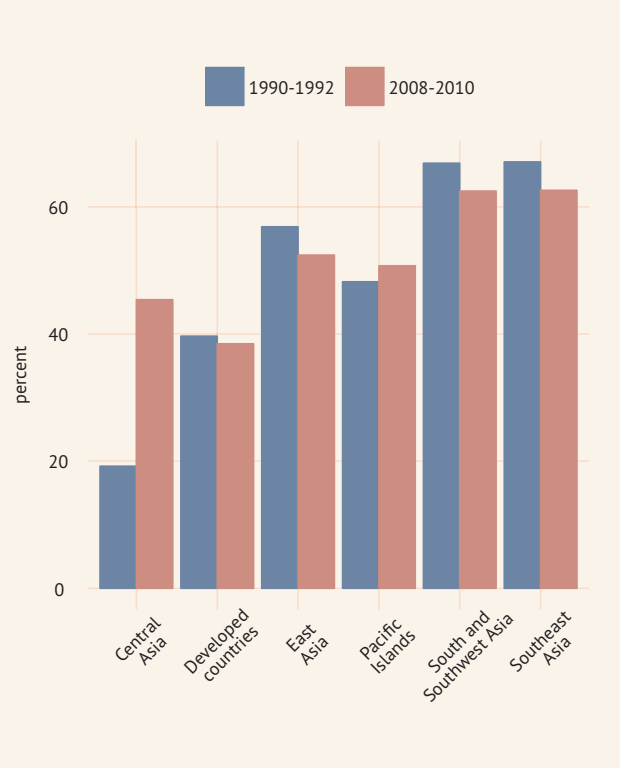
Source: FAO, Statistics Division.

CHART 30: **Trend of the value of food production (1992-2011)**



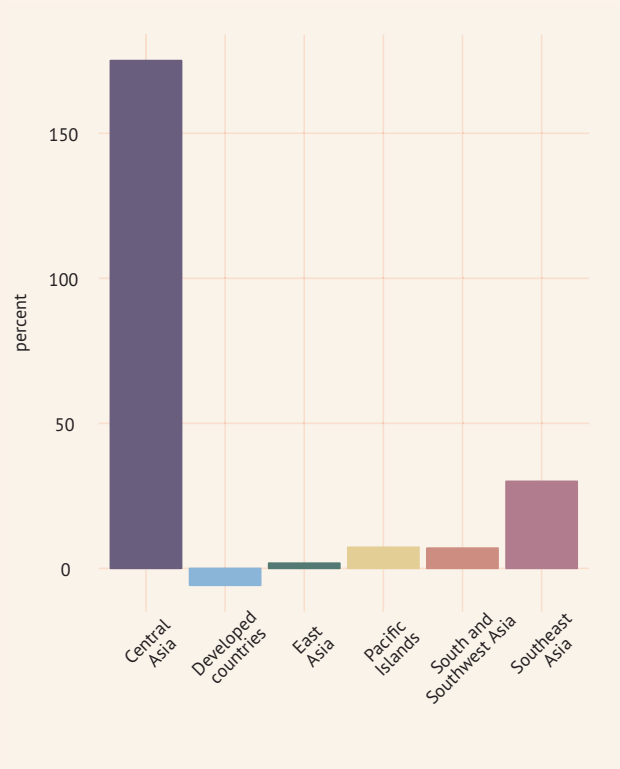
Source: FAO, Statistics Division.

CHART 31: **Share of energy supply derived from cereals, roots and tubers (1990-1992 and 2008-2010)**



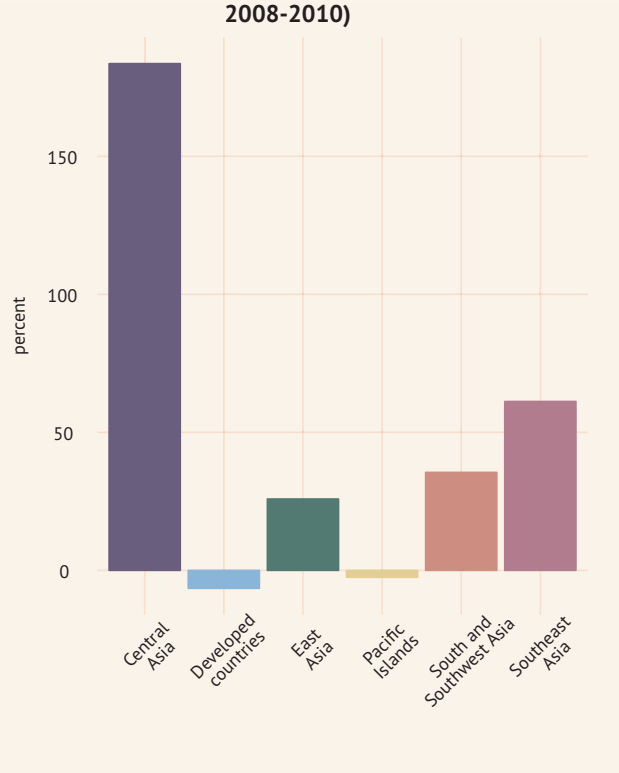
Source: FAO, Statistics Division.

CHART 32: **Relative change in average protein supply (between 1990-1992 and 2008-2010)**



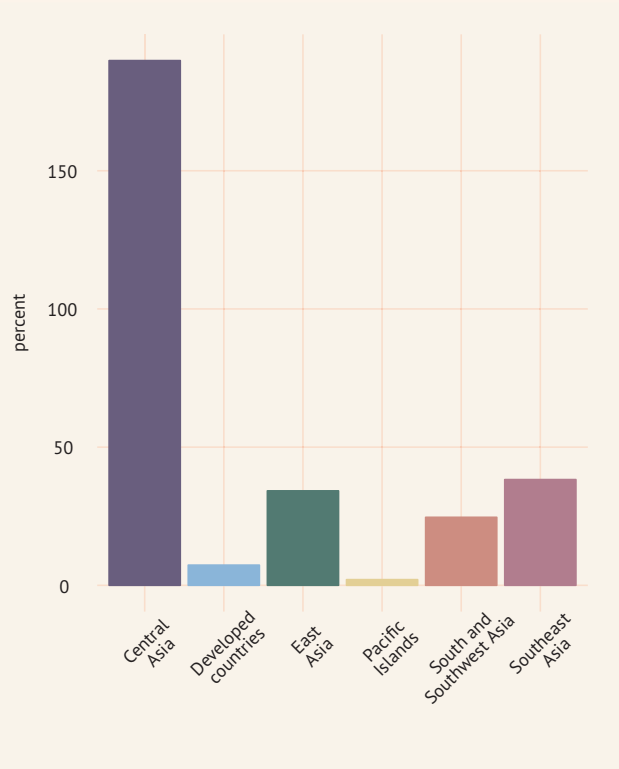
Source: FAO, Statistics Division.

CHART 33: **Relative change in average protein supply from animal origin (between 1990-1992 and 2008-2010)**



Source: FAO, Statistics Division.

CHART 34: **Relative change in average fat supply (between 1990-1992 and 2008-2010)**



Source: FAO, Statistics Division.

Economic and physical access

Food availability in a country, by itself, is no guarantee of food security for its population. This depends on whether households have adequate access to the food, which in turn hinges on a number of variables, including whether they have enough income to buy food, whether food prices are affordable and whether there is sufficient infrastructure in the country to bring food and people to markets.

Poor people spend a large part of their income – more than 70 percent in some cases – on buying food so they are especially vulnerable to food price rises. But international food price increases in recent years have had different impacts in different subregions and countries.

Transmission of international prices to domestic markets is far from automatic, being governed by several factors including policies (such as the existence of food subsidies) and how far vulnerable populations are net buyers or sellers of food.

Thus the price of food relative to total household expenditure (Table 16) has risen most in East Asia and Southeast Asia but declined in South and Southwest Asia. However, in China, Nepal and Pakistan, for example, rising food prices have been accompanied by a declining prevalence of undernourishment.

Among the countries for which 2013 data are available, the highest increases in economic access to food are reported in the ROK, Pakistan and Indonesia.

As for physical access to markets, and based on available figures, the highest percentage of paved roads (2005-2010) is in the Maldives, followed by Kazakhstan and Malaysia. East Asia has almost the same percentage of paved roads as the developed countries in the region.

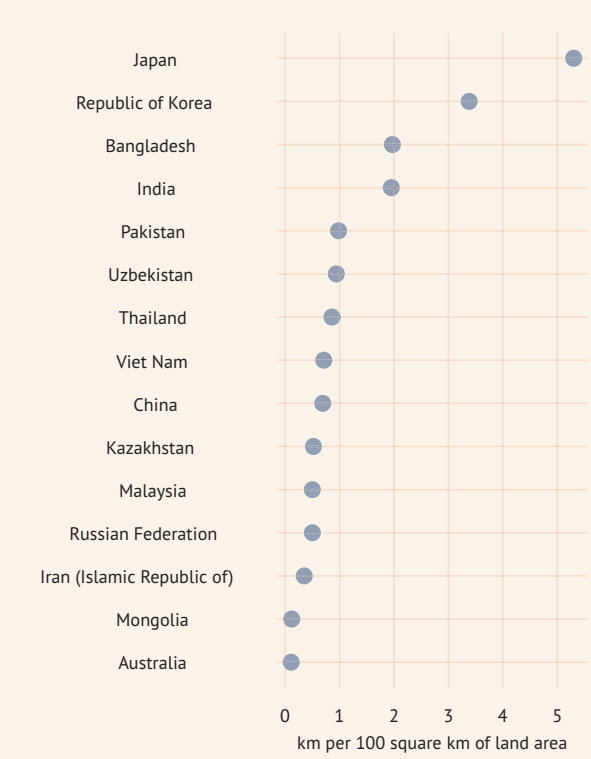
Road density per 100 kilometres in the same period was highest in Sri Lanka and India, followed by ROK. South and Southwest Asia have proportionately more roads than East or Central Asia.

In 2005-2011, rail line density in the region's developing and transition economies – railways are essential for transporting food in countries with a poor road system – varied between 0.1 kilometre per 100 square kilometres of land in Mongolia, to 3.4 kilometres in ROK. Japan had proportionately the most rail track, with 5.4 kilometres for every 100 square kilometres of land.

Further reading

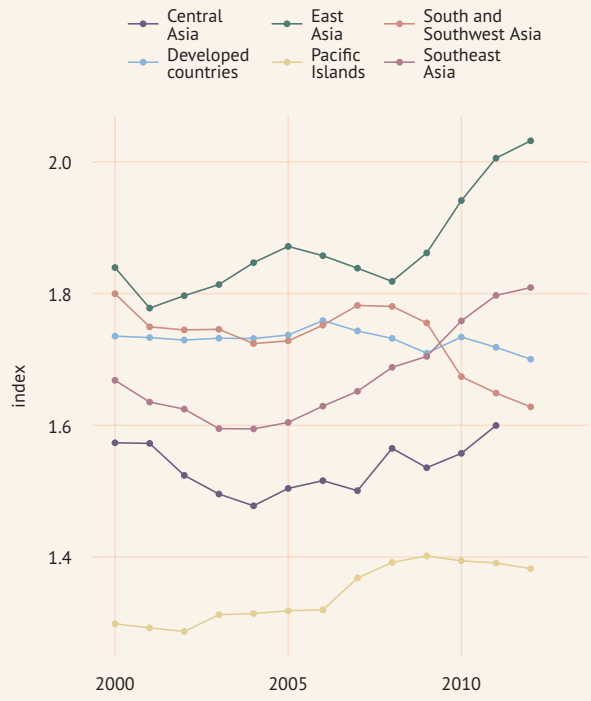
- Asian Development Bank (2013d)
- FAO The State of Food Insecurity in the World 2013 - The multiple dimensions of food security (www.fao.org/publications/sofi/en/)

CHART 35: **Rail-line density (2011)**



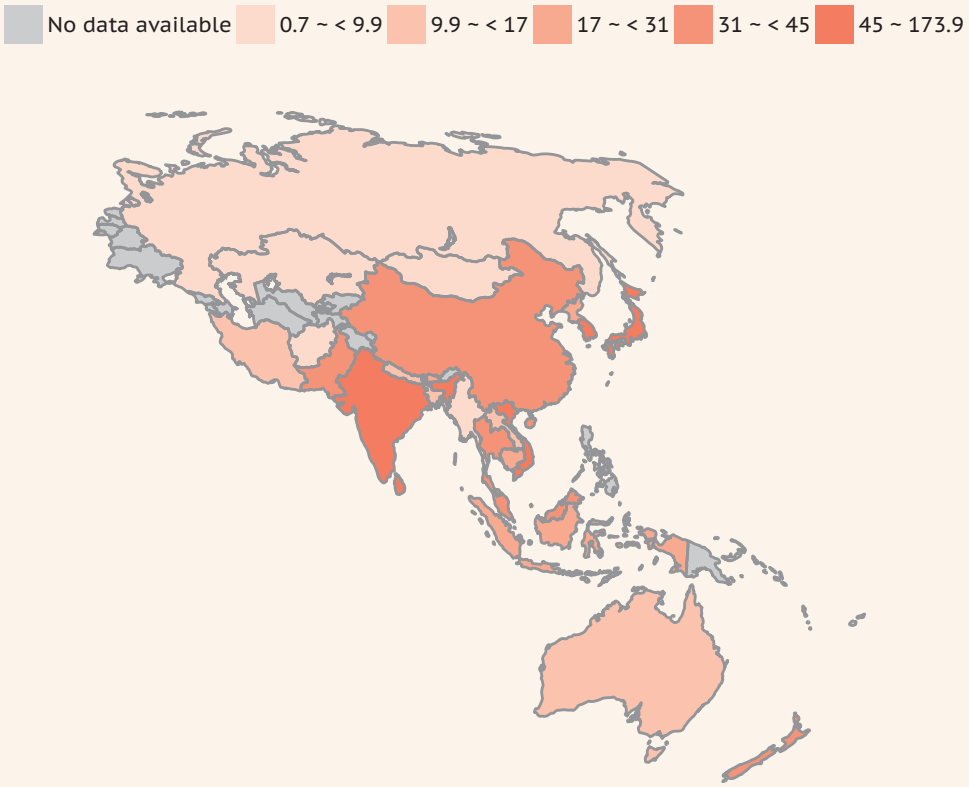
Source: FAO, Statistics Division.

CHART 36: **Relative price of food (2000-2013)**



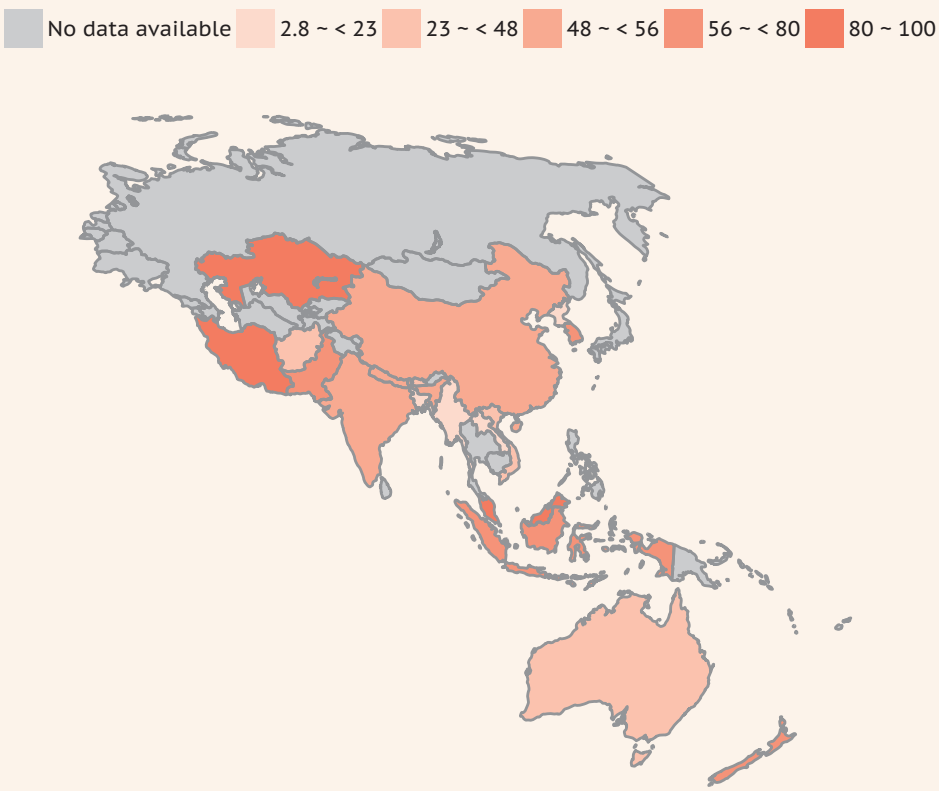
Source: FAO, Statistics Division.

MAP 22: **Road density (km per 100 square km of land area, 2005-2010*)**



Source: FAO, Statistics Division.

MAP 23: **Percent of paved roads over total roads (percent, 2005-2010*)**



Source: FAO, Statistics Division.

Clean water and sanitation

Clean water and sanitation have a direct effect on the health status of populations and on their ability to absorb nutrients. Poor access to safe drinking water and proper sanitation is often associated with high rates of undernourishment. The two indicators are therefore closely monitored by FAO.

MDG7 on environmental sustainability set the target of halving by 2015 the proportion of the population without access to safe drinking water and basic sanitation. The water target has been achieved at the global level and in 2010 just 11 percent of the world's population lacked good drinking water, compared with 24 percent in 1990.

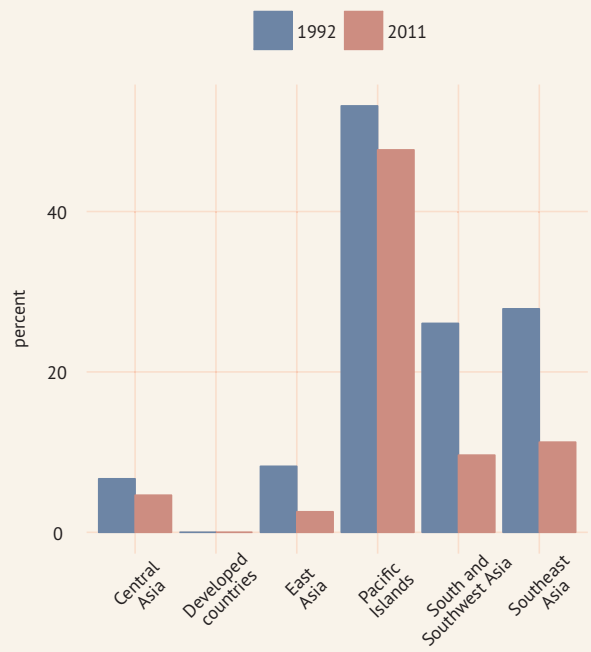
But remarkable water disparities persist among and within countries while, with regard to sanitation, the target is unlikely to be met because of often substantial but generally insufficient progress. Poor sanitation, alongside polluted water, represents a very serious health risk.

In the context of drinking water, the Pacific Islands made the least progress over the period, with 44 percent of the populations lacking access to improved water sources in 2011 . In East Asia the corresponding figure was 8 percent, compared with 32 percent in 1990. South and Southwest Asia and Southeast Asia also achieved excellent results.

At the country level, both China and India made considerable headway, the former reducing the proportion of those lacking clean water from 33.3 percent to 8.3 percent over the period, and India improving from 29.7 percent to 8.4 percent.

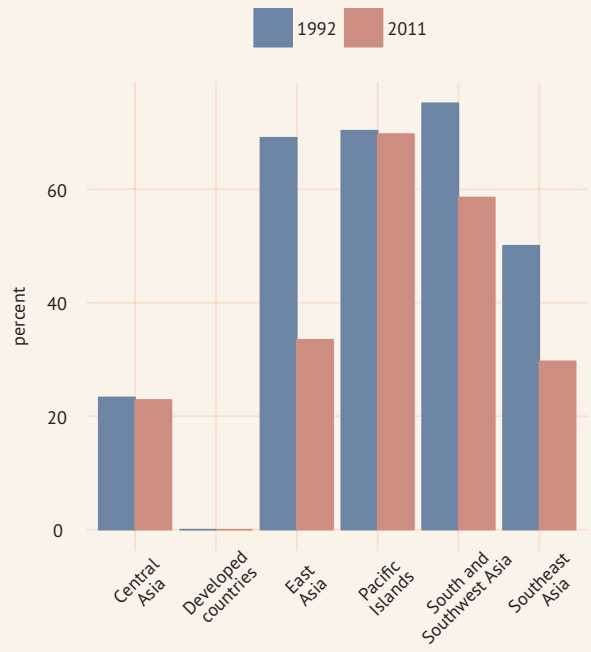
But the story is very different where sanitation is concerned. Except in East Asia, progress towards giving populations greater access to improved facilities has been very slow. Although East Asia met the MDG target, its proportion of those without adequate sanitation remains relatively high at 33 percent. Almost no headway was made in the Pacific Islands, where some 70 percent of populations still lack proper toilets. In South and Southwest Asia just under 60 percent lack such amenities while in Southeast Asia the figure is around 30 percent. These figures are obviously higher in rural than in urban areas. At the country level, 35 percent of the population is still without proper sanitation in China, and nearly 65 percent in India. In Pakistan the proportion is 52.6 percent and in Bangladesh 45.3 percent. It stands at 41.3 percent in Indonesia and 25.8 percent in the Philippines. Only 4.3 percent of Malaysians do not have proper toilets.

CHART 37: **Percentage of population without reasonable access to improved water sources (1992 and 2011)**



Source: FAO, Statistics Division.

CHART 38: **Percentage of population without reasonable access to improved sanitation facilities (1992 and 2011)**

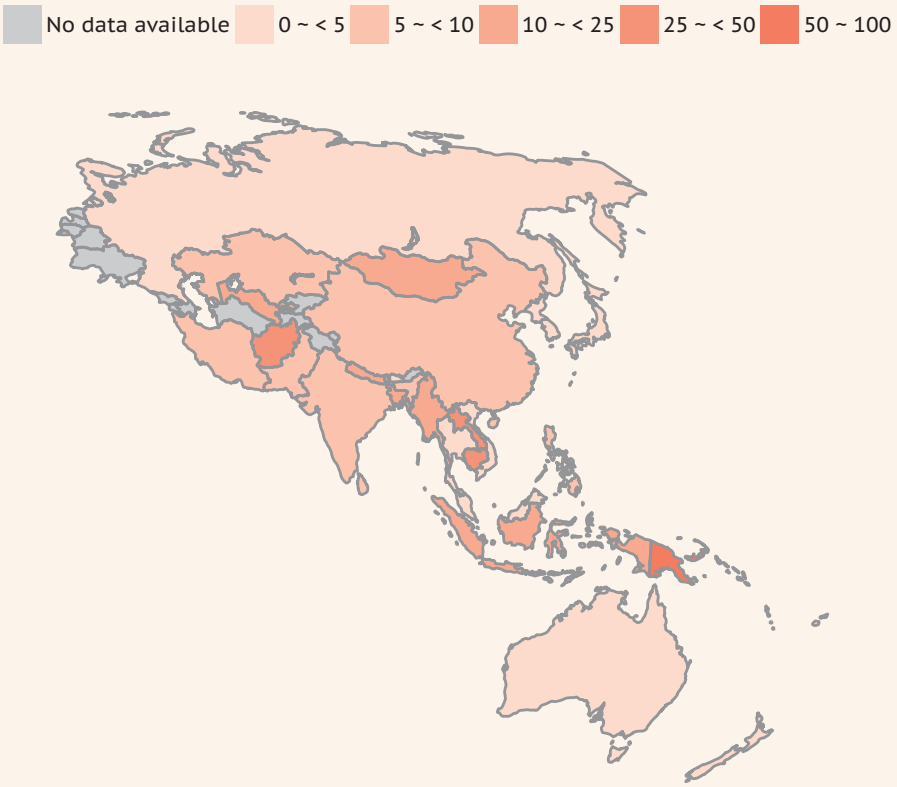


Source: FAO, Statistics Division.

Further reading

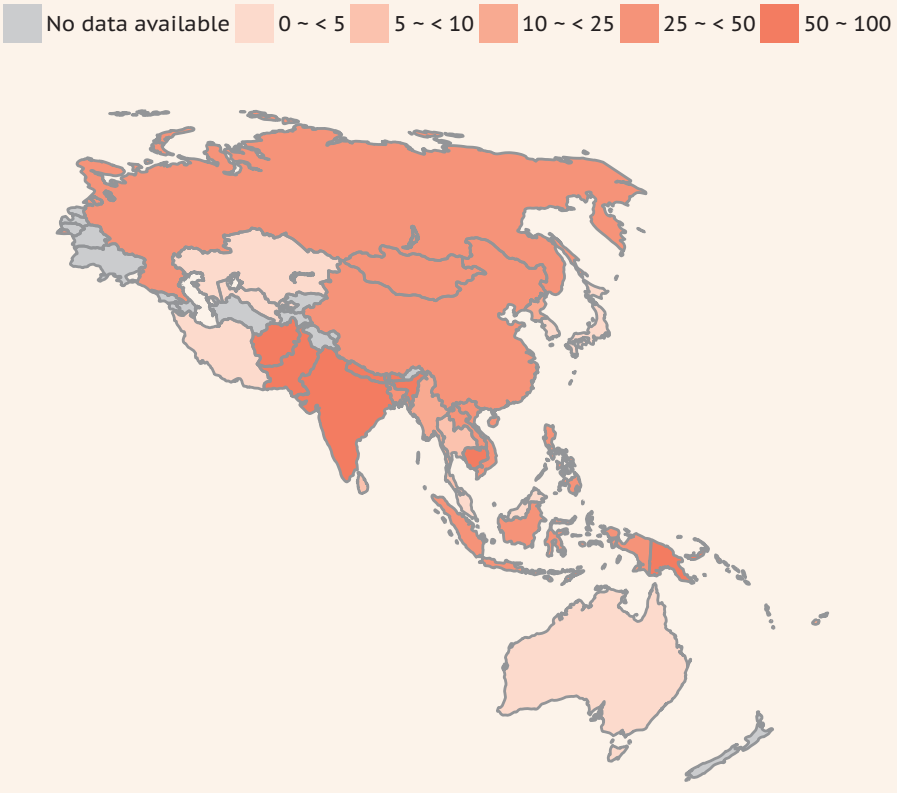
- UNICEF Water, Sanitation and Hygiene (www.unicef.org/wash/)

MAP 24: **Share of population without reasonable access to improved water sources (percent, 2011)**



Source: FAO, Statistics Division.

MAP 25: **Share of population without reasonable access to improved sanitation facilities (percent, 2011)**



Source: FAO, Statistics Division.

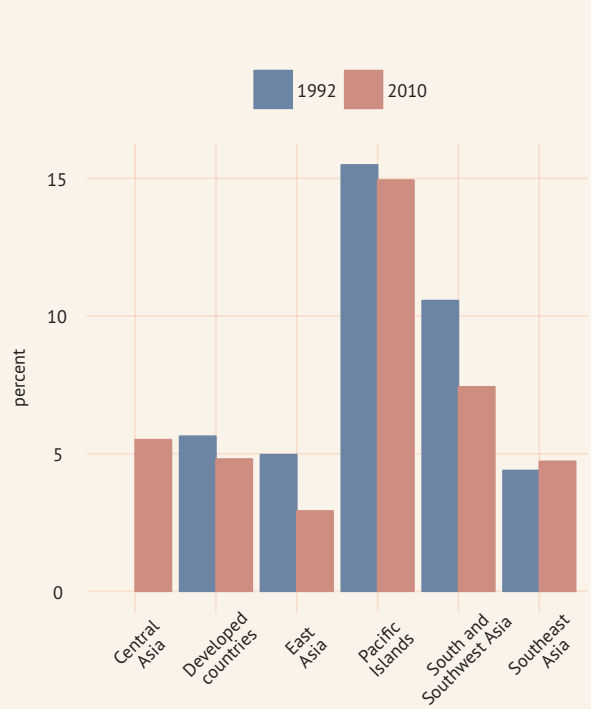
Economic and political stability

Food price volatility has affected agricultural markets since the mid-2000s; it has a direct impact on food security. Unpredictable price swings create a climate of insecurity which discourages farmers from investing. Higher prices translate into less, or less-nutritious food for the poor.

High food prices can also cause unrest among populations as witnessed in the Philippines in 2008 over rice prices. How far countries are vulnerable to price swings on world markets depends in part on their ability to generate foreign exchange through exports. The ratio between the value of a country's staple food imports and its earnings from exports is therefore a significant pointer to the degree of national food security. According to this indicator, several Pacific Islands are extremely vulnerable.

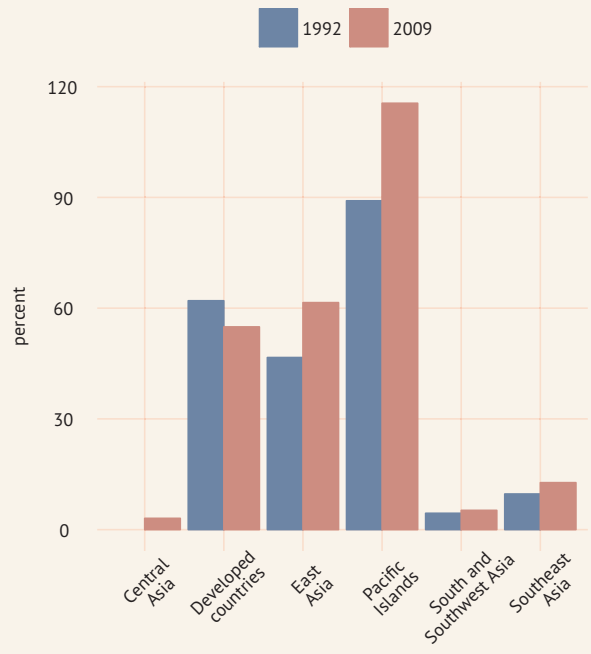
Another significant indicator of vulnerability is a country's cereal import dependency ratio, which shows how much of a country's cereal supply has to be imported. Again, several Pacific Islands appear at risk here – Fiji, Kiribati and Samoa imported 100 percent of their cereals in 2007-2009 for example. But Malaysia also appears vulnerable, with nearly 80 percent, as does Japan (76.8 percent) and the Maldives (99.7 percent).

CHART 39: **Value of food imports over total merchandise exports (1992 and 2010)**



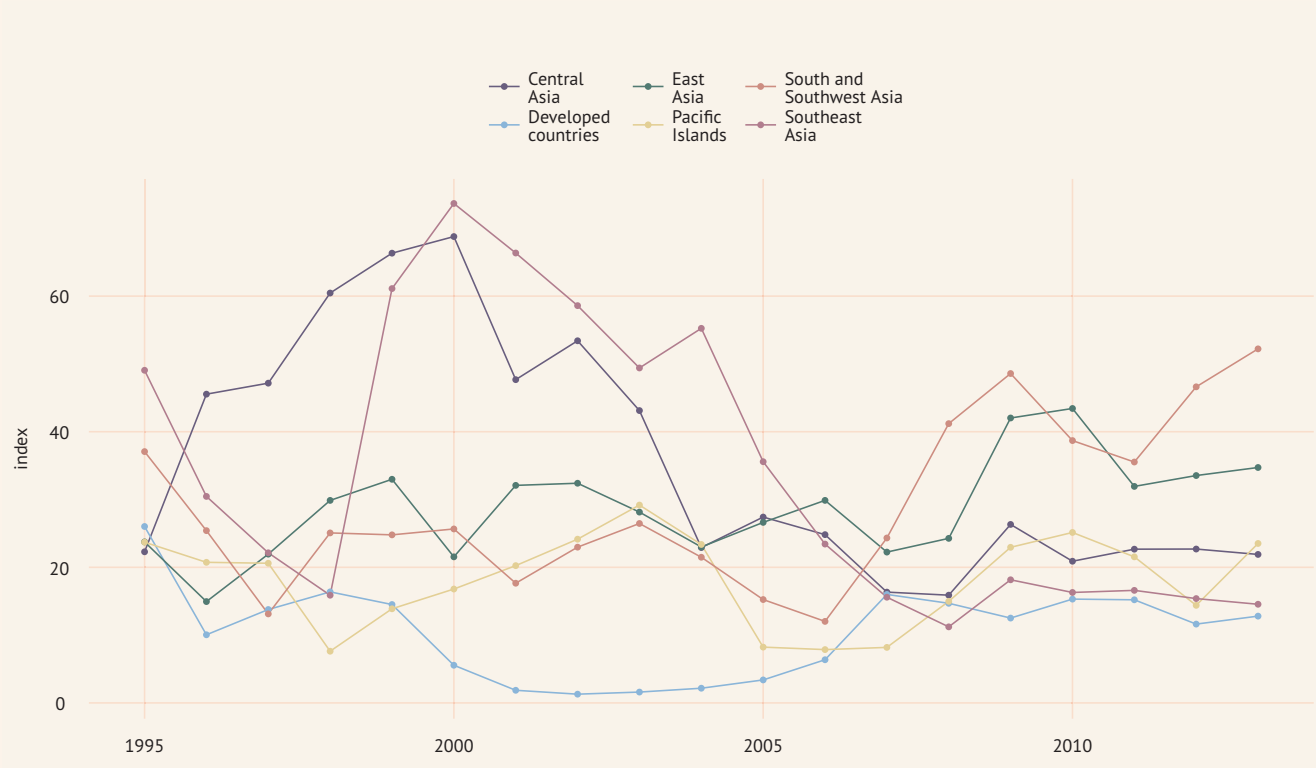
Source: FAO, Statistics Division.

CHART 40: **Cereal import dependency ratio (1992 and 2009)**



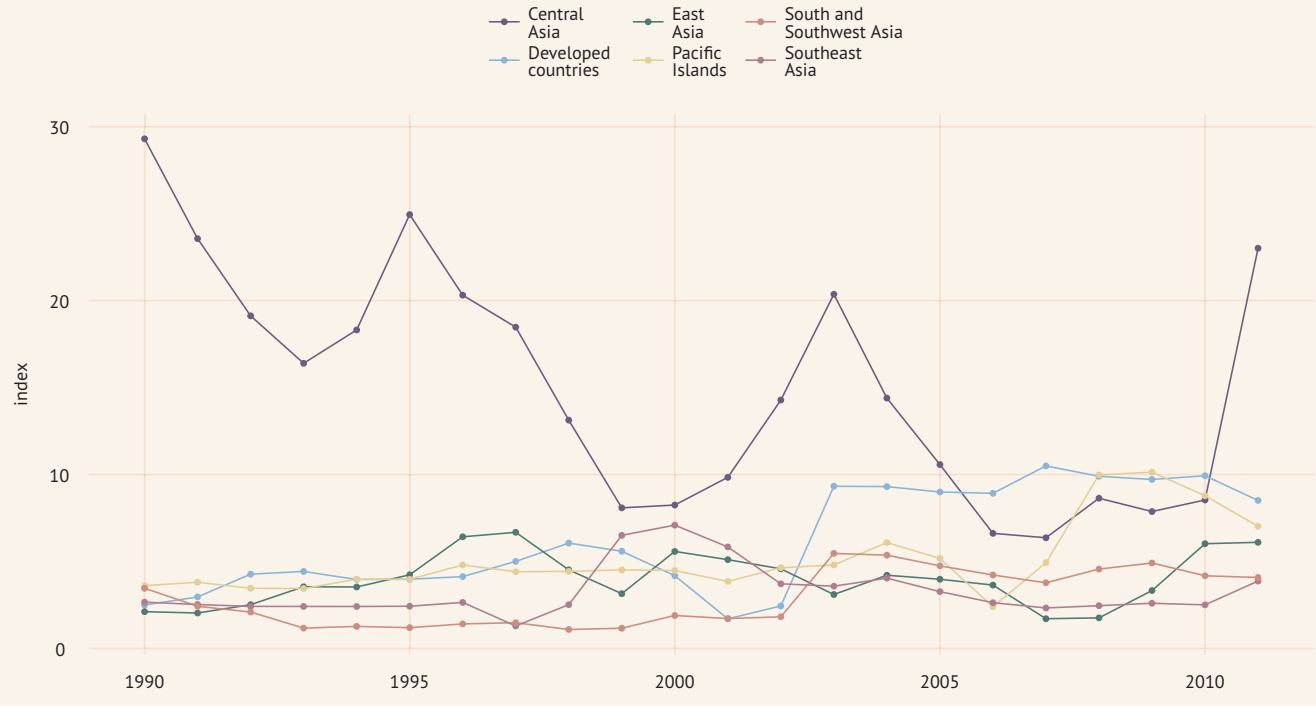
Source: FAO, Statistics Division.

CHART 41: **Domestic food price volatility (1995-2013)**



Source: FAO, Statistics Division.

CHART 42: **Per capita food production variability (1990-2011)**



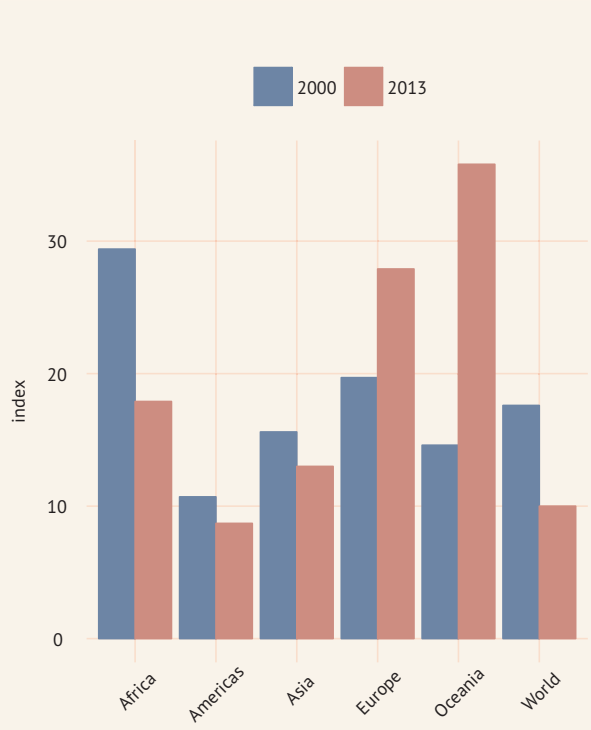
Source: FAO, Statistics Division.

The extent to which a country's crops can be irrigated gives a further indication of vulnerability because dependency on rainfall is hazardous, especially in an age of changing climate. In this context, the APR does better than any other region in the world, except the Near East, with 35.6 percent of the region's arable land equipped for irrigation. Comparable figures are 2.9 percent for Africa and 13 percent for Latin America and the Caribbean.

Asia registered less food price volatility between 2000 and 2013 than any other region in the world. Oceania showed the highest rate. Within the region, Southeast Asia was the most volatile in 2000 but the least volatile in 2013. It was also the only subregion, along with Central Asia, where volatility decreased over the period.

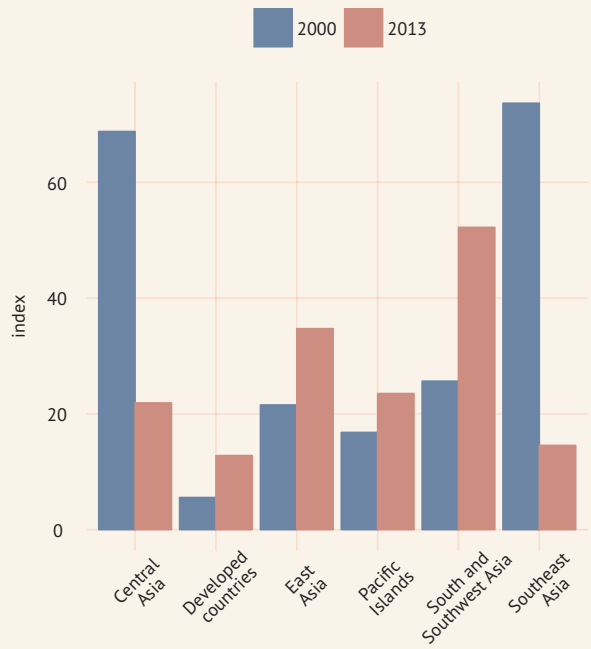
Political stability and peace are also key determinants for ensuring food security. Low political stability is associated with a high prevalence of undernourishment.

CHART 43: **Domestic food price volatility (2000 and 2013)**



Source: FAO, Statistics Division.

CHART 44: **Domestic food price volatility (2000 and 2013)**

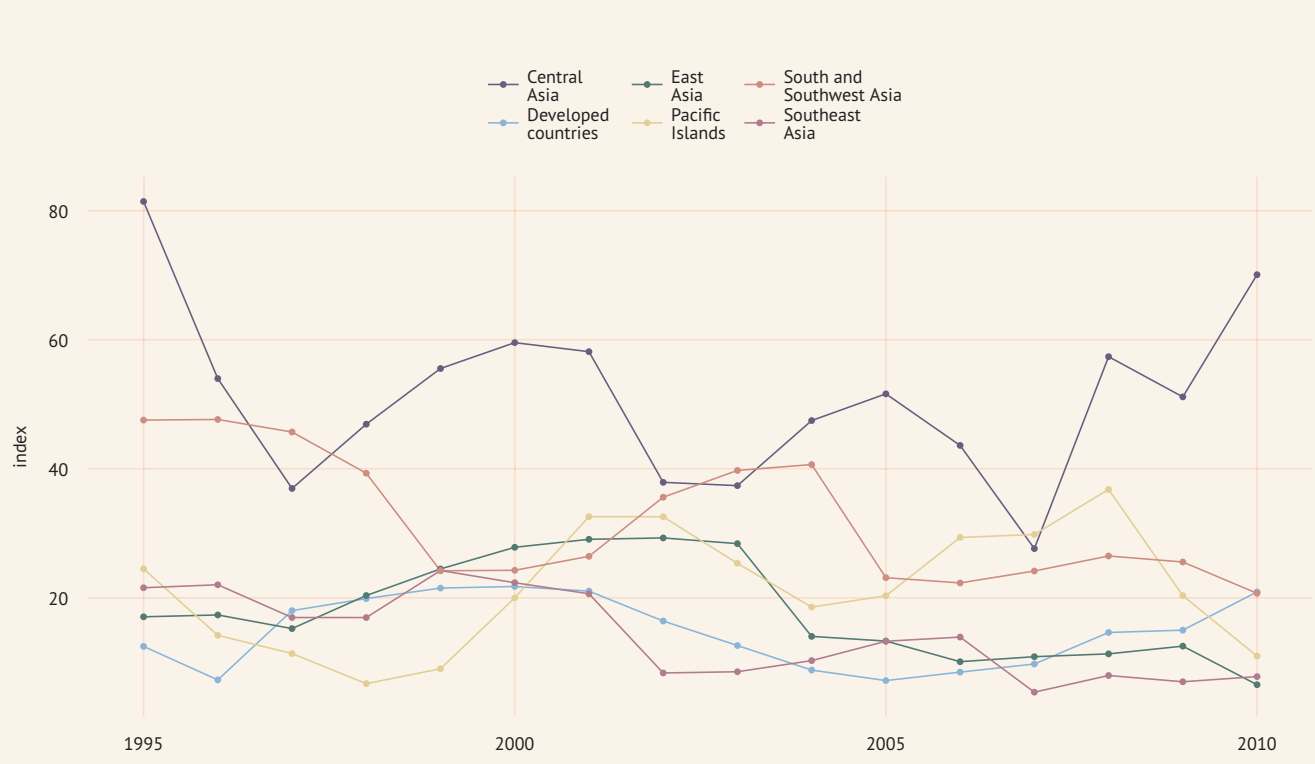


Source: FAO, Statistics Division.

Further reading

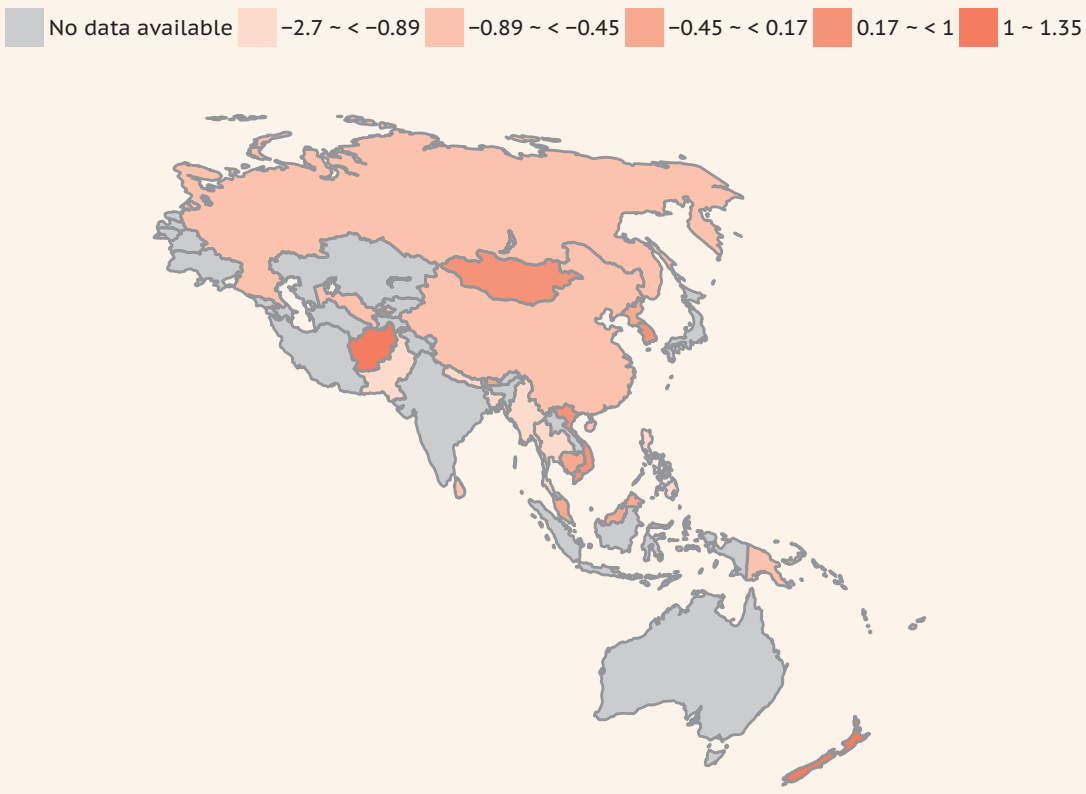
- FAO The State of Food Insecurity in the World 2012 - Economic Growth Is Necessary but Not Sufficient to Accelerate Reduction of Hunger and Malnutrition (www.fao.org/publications/sofi/en/)
- Global Information and Early Warning System (www.fao.org/giews/english/index.htm)
- Prakash (2011) (www.fao.org/economic/est/issues/volatility/vgm/en/)

CHART 45: **Per capita food supply variability (1995-2010)**



Source: FAO, Statistics Division.

MAP 26: **Political stability and absence of violence/terrorism (index, 2011)**



Source: FAO, Statistics Division.

Education and health

People who are better educated and in good physical condition are more productive and earn higher incomes. Education is especially important in the case of women because it translates into better nutritional status of the family, and thus lower child malnutrition and infant mortality rates.

An important indicator is the literacy rate among females aged more than 15 years, which generally stands at well over 80 percent in the region and over 99 percent in Central Asia. In China, 91.3 percent of women in the over-15 age group can read and write and in Mongolia the figure is 97.9 percent.

Female literacy rates in Southeast Asia are also high everywhere except Timor-Leste, Cambodia and Lao PDR. South Asia generally has fewer literate women except in the Maldives, Sri Lanka and the Islamic Republic of Iran.

On the basis of available figures, the number of children finishing primary schooling has increased in the last two decades. Completion rates in 2011 were very high almost everywhere in the region except Pakistan and Timor-Leste. Among reporting countries, girls' primary school enrolment rates were generally over 90 percent but only 65 percent in Pakistan.

People who are sick cannot work. The coverage and quality of health care systems, especially for poor population groups, thus has a major bearing on food security. In general a low share of GDP invested in health is associated with a high prevalence of undernourishment.

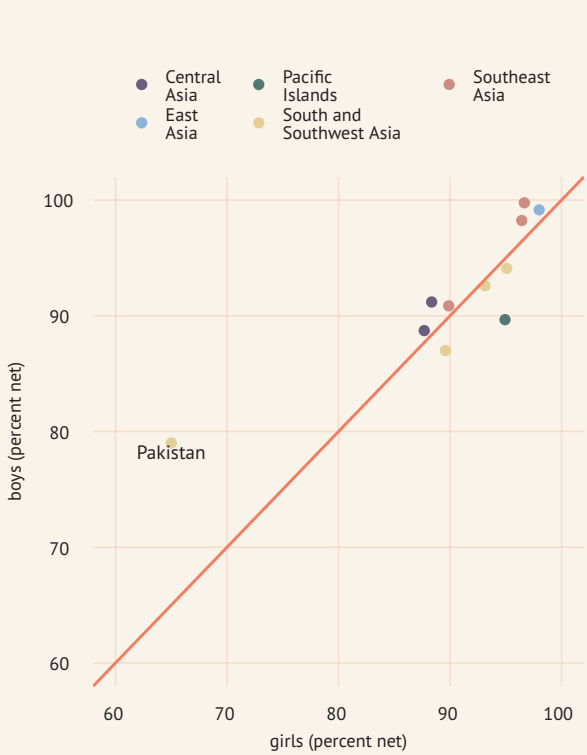
In the APR as a whole, that share was 6.4 percent in 2011, only higher than the Near East and Africa among the FAO regions, and well below the world average of 10.1 percent.

Among the subregions, Central Asia spent the most on health care – 6.0 percent of the GDP in 2011 – followed by East Asia at 5.4 percent. Health expenditure was lowest is Southeast Asia at 3.6 percent. However, spending on health care increased in all subregions between 1995 and 2011.

Further reading

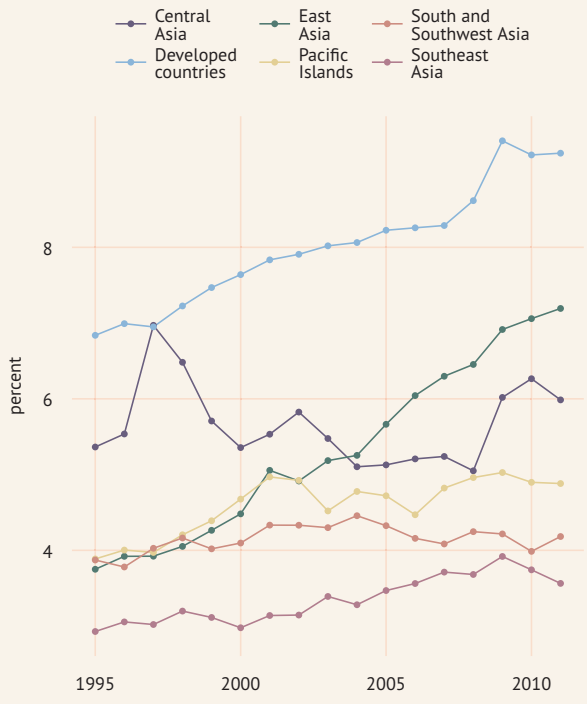
- UNESCO education (www.unesco.org/new/en/education/)
- UNDP Human Development Report 2010 - The Real Wealth of Nations: Pathways to Human Development (hdr.undp.org/en/reports/global/hdr2010/)
- O'Donovan (2008)

CHART 46: **Girls' and boys' enrolment in primary education (2011)**



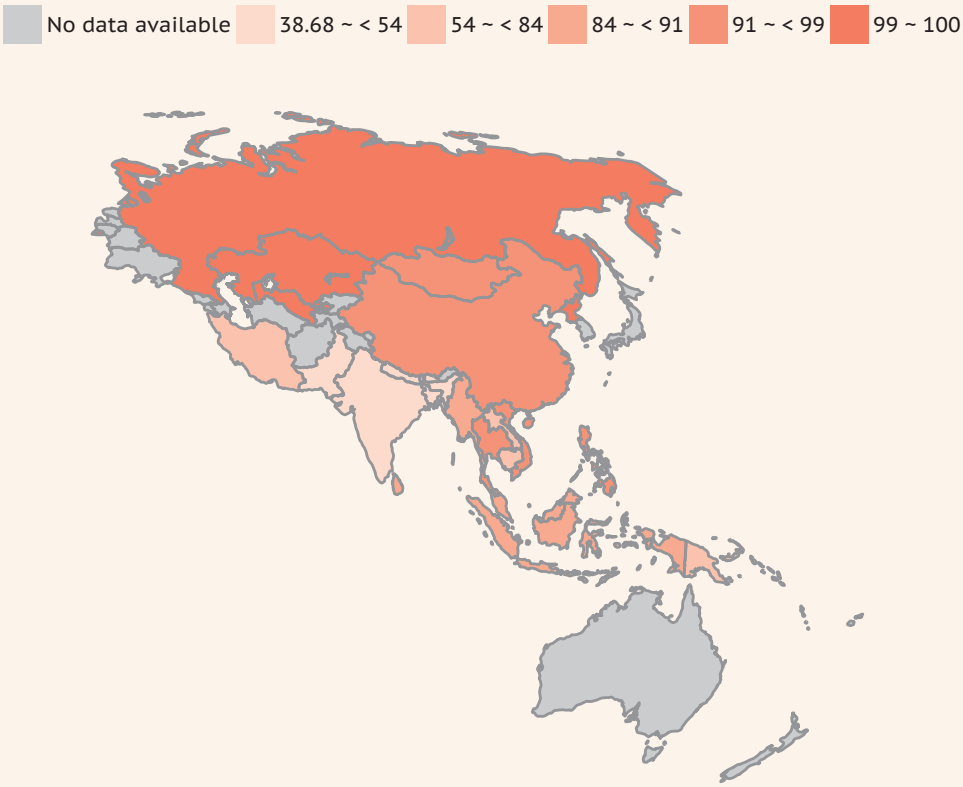
Source: World Bank (WDI).

CHART 47: **Total health expenditure, share of GDP (1995-2011)**



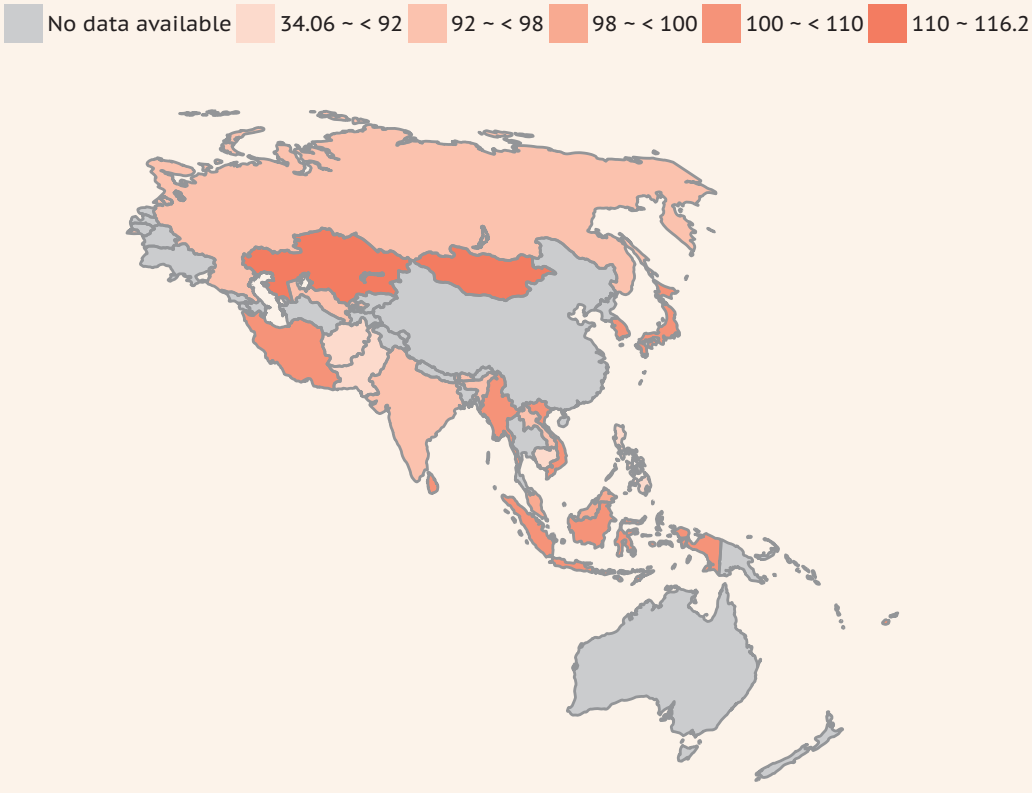
Source: World Bank (WDI).

MAP 27: **Adult female literacy rate, share of females ages 15 and above (percent, 2005-2011*)**



Source: World Bank (WDI).

MAP 28: **Primary completion rate, total (percent, 2005-2011*)**



Source: World Bank (WDI).

Natural and human-induced risks

Armed conflict and natural disasters are an obvious threat to food security, particularly in poor countries.

The UN High Commission for Refugees (UNHCR) reports that 6.5 million people were at risk in 2011 because of the military or political situation in the APR – the highest number of any region. But set against overall population, it becomes clear that people in the APR are much less prone to military or political upheaval than their counterparts in Africa or the Near East. In the APR, 0.16 people out of every 100 were regarded as being at risk by the UNHCR in 2011 while the proportion was 0.47 percent in Africa and 2.6 percent in the Near East.

South and Southwest Asia were the most turbulent subregions, with 5 million people being at risk. This was largely a result of the Afghan war and the situation in Pakistan.

But while generally facing lesser military and political risk, Asia is by far the region most prone to natural disasters, according to the International Centre for Research into the Epidemiology of Disasters (CRED). In its 2012 report, the organization found that Asia's share of all disasters in the world that year was 40.6 percent, compared to 22 percent in the Americas and 18 percent in Europe.

Asia accounted for 64.5 percent of worldwide-reported disaster victims that year while Africa suffered 30.4 percent. The Asian figure represented a decrease from the 2002-2011 annual average, although there was an increase in Oceania.

Four of the top five countries most frequently hit by natural disasters in the last decade – China, the Philippines, India and Indonesia – lie in the APR (the fifth is the United States). China had the highest share of human victims in 2012, with 36 percent of victims worldwide.

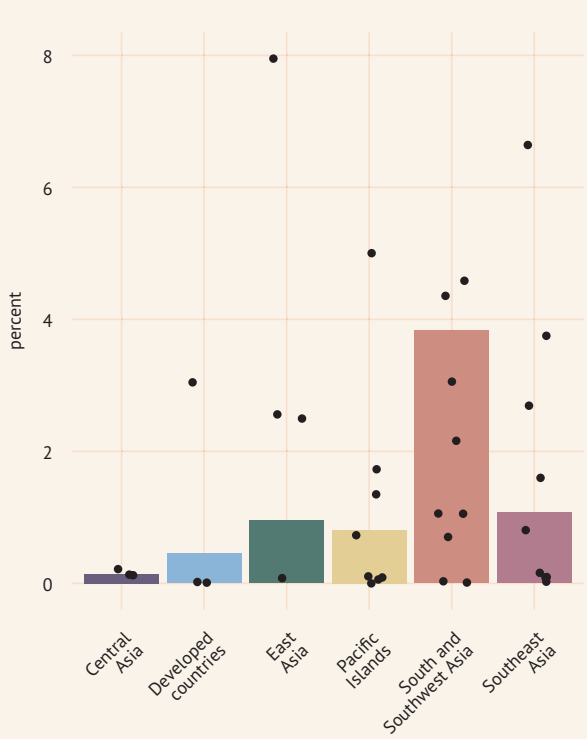
The Philippines has also been very hard hit, with Typhoon Bhopa killing 1 901 people in the country in 2011 and Typhoon Haiyan killing almost 6 000 in 2103.

In 2012 floods accounted for 68.8 percent of all disaster damage in Asia, followed by storms (23.4 percent) and earthquakes and volcanic eruptions (7.7 percent). But there were fewer disastrous floods (71) compared to the 2002-2011 average. Disaster damage in Asia in 2012 was estimated at US$28 billion, well below the average in the previous decade (US$61.9 billion). More than 80 million people were affected, also far below the 2002-2011 annual average (232 million).

Further reading

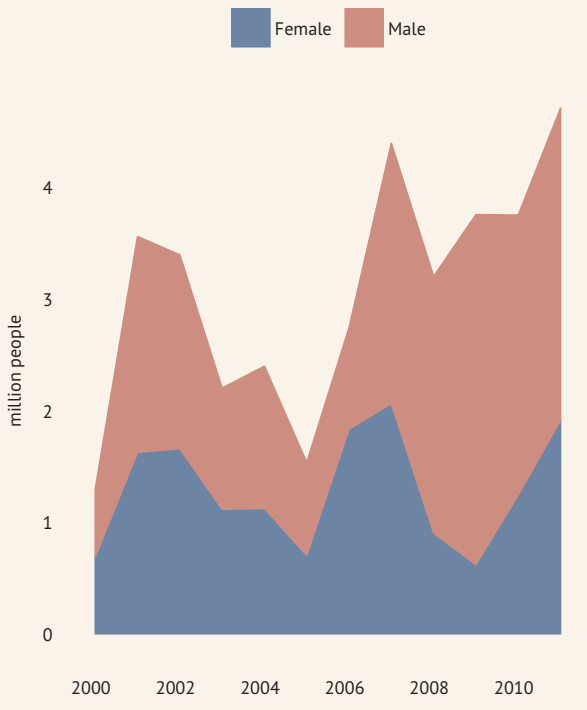
- Asian Development Bank (2013f)
- Centre for Research on the Epidemiology of Disasters (www.cred.be/)
- United Nations High Commissioner for Refugees (www.unhcr.org)
- Internal Displacement Monitoring Centre (www.internal-displacement.org/)

CHART 48: **Droughts, floods, extreme temperatures - share of population affected (2009)**



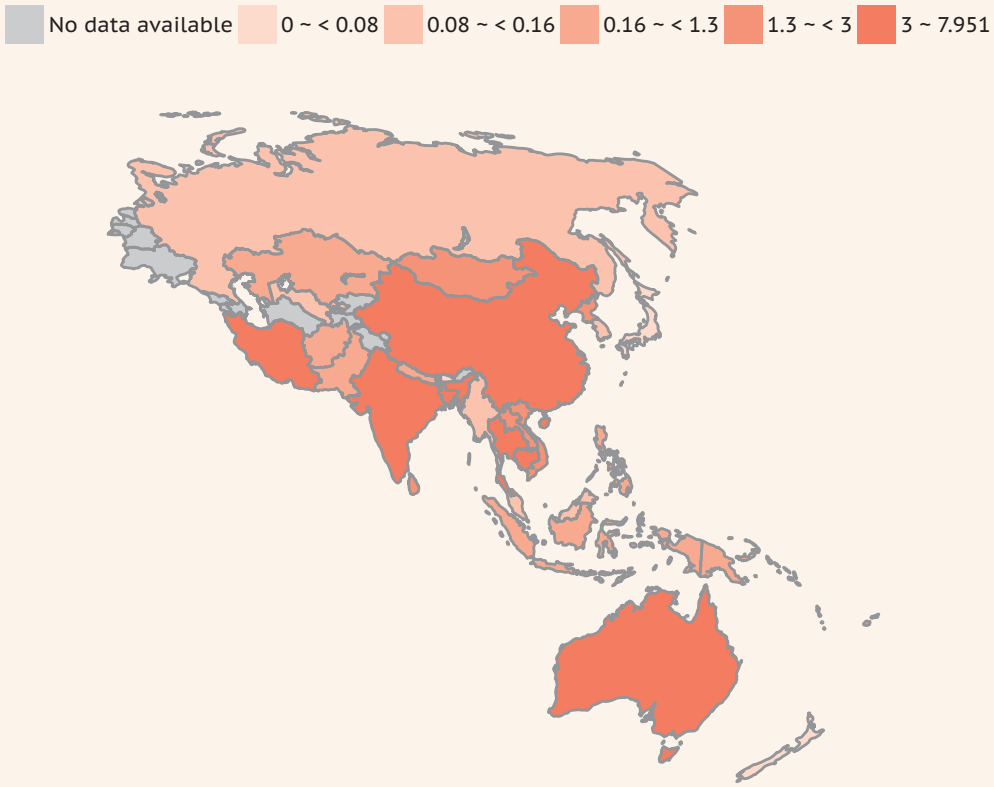
Source: World Bank (WDI).

CHART 49: **Refugees in Asia and the Pacific (2000-2011)**



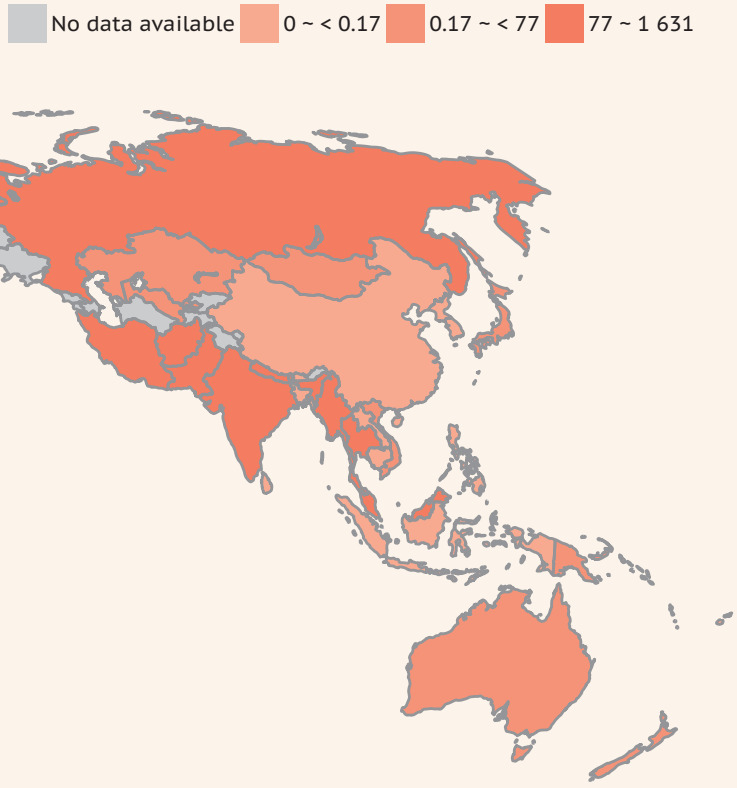
Source: Statistical Online Population Database .

MAP 29: **Droughts, floods, extreme temperatures - share of population affected (average 1990-2009) (percent, 2009)**



Source: World Bank (WDI).

MAP 30: **UNHCR total population of concern (thousand people, 2011)**



Source: Statistical Online Population Database .

TABLE 12: **Outcomes: Inadequate access to food**

	Inadequate access to food								
	prevalence of		number of		% of food expenditure of the poor	depth of the food deficit		prevalence of food inadequacy	
	undernourishment		undernourished						
	percent	percent	million people	million people	percent	kcal/cap/day	kcal/cap/day	percent	percent
	1990-92	2011-13	1990-92	2011-13	2000-12*	1990-92	2011-13	1990-92	2011-13
Regional Office for Asia and the Pacific	20.9	11.8	735.0	528.7		157.0	88.0	31.7	20.5
Developing countries and transition economies	23.5	12.8	733.8	526.9		164.0	91.0	32.9	20.8
Central Asia	3.6	2.2	6.6	4.1		24.0	15.0	8.5	5.9
Kazakhstan		< 5		*ns*	52.0		3.0		< 5
Russian Federation									
Uzbekistan		5.7		1.6			38.0		12.0
East Asia	22.2	11.4	278.7	166.6		161.0	71.0	31.7	17.9
China	22.9	11.4	272.1	158.0		167.0	76.0	32.5	18.9
Democratic People's Republic of Korea	23.7	31.0	4.8	7.6		171.0	238.0	36.4	45.6
Mongolia	38.4	21.2	0.9	0.6		271.0	188.0	49.0	29.2
Republic of Korea	< 5	< 5	*ns*	*ns*		13.0	6.0	5.3	< 5
Pacific Islands	13.9	12.4	0.8	1.1		85.0	77.0	22.1	20.7
Cook Islands									
Fiji	6.6	< 5	0.0	*ns*		41.0	18.0	12.0	6.2
Kiribati	9.1	7.6	0.0	0.0		55.0	48.0	15.1	13.4
Marshall Islands									
Micronesia (Federated States of)									
Nauru									
Niue									
Palau									
Papua New Guinea									
Samoa	11.0	< 5	*ns*	*ns*		69.0	23.0	17.9	7.3
Solomon Islands	23.5	13.4	0.1	0.1		144.0	81.0	33.1	21.4
Tonga									
Tuvalu									
Vanuatu	11.1	8.1	0.0	0.0		63.0	48.0	16.8	13.2
Southeast Asia	30.9	10.6	139.1	63.6		224.0	75.0	40.7	17.5
Cambodia	39.4	15.4	3.9	2.2	84.0	247.0	102.0	49.7	25.3
Indonesia	22.2	9.1	41.6	22.3	22.0	147.0	64.0	31.9	15.6
Lao People's Democratic Republic	44.7	26.7	1.9	1.7	84.0	333.0	195.0	52.9	37.1
Malaysia	< 5	< 5	*ns*	*ns*		27.0	23.0	9.2	8.2
Myanmar									
Philippines	24.5	16.2	15.5	15.6	61.0	157.0	100.0	32.9	23.2
Thailand	43.3	5.8	25.0	4.0		353.0	40.0	54.6	13.0
Timor-Leste	41.8	38.3	0.3	0.5		292.0	254.0	53.1	48.4
Viet Nam	48.3	8.3	33.1	7.4	65.0	367.0	63.0	57.3	13.7
South and Southwest Asia	25.5	16.6	311.2	291.5		167.0	120.0	34.9	26.1
Afghanistan									
Bangladesh	33.9	16.3	36.5	24.8	68.0	230.0	118.0	42.0	25.3
Bhutan					54.0				
India	25.5	17.0	227.3	213.8	68.0	167.0	121.0	35.4	27.0
Iran (Islamic Republic of)	< 5	< 5	*ns*	*ns*		18.0	29.0	5.6	8.7
Maldives	11.3	5.4	0.0	0.0	35.0	61.0	35.0	17.6	10.9
Nepal	25.4	16.0	5.0	5.0	72.0	157.0	112.0	34.9	23.6
Pakistan	27.2	17.2	31.2	31.0	75.0	169.0	131.0	34.9	24.3
Sri Lanka	33.4	22.8	5.9	4.8	67.0	241.0	200.0	44.8	30.7
Developed Countries	< 5	< 5	*ns*	*ns*				< 5	< 5
Australia									
Japan									
New Zealand									
Regional Office for Africa	32.8	24.8	173.1	222.7		241.0	189.0	41.1	31.2
Regional Office for Europe and Central Asia	8.2	< 5	10.0	*ns*		19.0	12.0	5.9	3.9
Regional Office for Latin America and the Caribbean	14.7	7.9	65.6	47.0		97.0	56.0	21.8	14.1
Regional Office for the Near East	9.0	10.0	25.8	43.7		59.0	78.0	13.5	14.6
World	18.9	12.0	1 015.3	842.3		128.0	83.0	26.2	18.4

TABLE 13: **Food utilization**

	Outcomes						
	children under 5 years of age						adults
	underweight		stunted		wasted		
	percent 1990-95*	percent 2005-11*	percent 1990-95*	percent 2005-11*	percent 1990-95*	percent 2005-11*	underweight percent 1990-2011*
Regional Office for Asia and the Pacific							
Developing countries and transition economies							
Central Asia							
Kazakhstan	6.7	4.9	19.0	17.5	7.3	3.7	
Russian Federation							
Uzbekistan		4.4		19.6		4.5	
East Asia							
China							
Democratic People's Republic of Korea		18.8		32.4		5.2	
Mongolia	10.8	5.3	32.5	27.5	2.3	2.7	4.9
Republic of Korea							4.7
Pacific Islands							
Cook Islands							
Fiji	6.9		4.3		9.8		6.1
Kiribati							0.5
Marshall Islands							
Micronesia (Federated States of)							
Nauru							
Niue							
Palau							
Papua New Guinea		18.1		43.9		4.4	
Samoa							
Solomon Islands		11.5		32.8		4.3	
Tonga							
Tuvalu		1.6				3.3	
Vanuatu		11.7		25.9		5.9	1.9
Southeast Asia							
Cambodia		29.0		40.9		10.8	
Indonesia	27.4	18.6		39.2		12.3	
Lao People's Democratic Republic	35.9	31.6	52.9	47.6	12.3	7.3	13.5
Malaysia	17.7	12.9		17.2			9.6
Myanmar	38.7	22.6	50.4	35.1	9.4	7.9	
Philippines	26.3	20.7	38.9	32.3	9.1	6.9	12.3
Thailand	15.4	7.0	18.1	15.7	6.7	4.7	19.2
Timor-Leste		45.3		57.7		18.9	
Viet Nam	40.6	20.2	52.5	30.5	13.5	9.7	26.5
South and Southwest Asia							
Afghanistan							
Bangladesh	58.0	41.3	68.5	43.2	15.7	17.5	
Bhutan		12.7		33.5		5.9	
India	50.7	43.5	57.1	47.9	21.1	20.0	32.9
Iran (Islamic Republic of)	13.8		24.4		8.1		5.9
Maldives	39.0	17.8	33.0	20.3	18.9	10.2	
Nepal	44.1	29.1	64.5	40.5	7.5	11.2	
Pakistan	34.2	30.9	42.7	43.0	17.2	14.8	31.2
Sri Lanka	29.3	21.6	26.1	19.2	15.3	11.8	
Developed Countries							
Australia	0.0				0.0		1.0
Japan							11.5
New Zealand							1.3
Regional Office for Africa							
Regional Office for Europe and Central Asia							
Regional Office for Latin America and the Caribbean							
Regional Office for the Near East							
World							

TABLE 14: **Poverty**

	Headcount ratio		Gap				GINI	Income share	
	in $ per day (PPP)		in $ per day (PPP)		at national poverty line	at rural poverty line	coefficient	held by highest 20%	held by lowest 20%
	1.25 percent 2005-12*	2 percent 2005-12*	1.25 percent 2005-12*	2 percent 2005-12*	percent 2005-12*	percent 2005-12*	index 2005-12*	percent 2005-12*	percent 2005-12*
Regional Office for Asia and the Pacific									
Developing countries and transition economies									
Central Asia									
Kazakhstan	0.1	1.1	0.0	0.2	0.9		29.0	38.4	9.1
Russian Federation	0.0	0.0	0.0	0.0	2.7	5.5	40.1	47.1	6.5
Uzbekistan									
East Asia									
China	11.8	27.2	2.8	9.1			42.1	47.1	4.7
Democratic People's Republic of Korea									
Mongolia							36.5	44.0	7.1
Republic of Korea									
Pacific Islands									
Cook Islands									
Fiji	5.9	22.9	1.1	6.0	10.1	14.8	42.8	49.6	6.2
Kiribati									
Marshall Islands									
Micronesia (Federated States of)									
Nauru									
Niue									
Palau									
Papua New Guinea									
Samoa									
Solomon Islands					7.5				
Tonga									
Tuvalu									
Vanuatu									
Southeast Asia									
Cambodia	18.6	49.5	3.5	15.1	4.2		36.0	44.5	7.9
Indonesia	16.2	43.3	2.7	13.0	1.9	2.4	38.1	46.0	7.3
Lao People's Democratic Republic	33.9	66.0	8.9	24.8			36.7	44.8	7.6
Malaysia	0.0	2.3	0.0	0.2	0.8	1.8	46.2	51.5	4.5
Myanmar									
Philippines	18.4	41.5	3.7	13.8	7.2		43.0	49.7	6.0
Thailand	0.4	4.0	0.0	0.7			39.4	46.7	6.8
Timor-Leste					13.6	14.2			
Viet Nam	16.9	43.4	3.8	13.5	5.9	7.8	35.6	43.4	7.4
South and Southwest Asia									
Afghanistan					7.9	8.3	27.8	37.5	9.4
Bangladesh	43.2	76.5	11.2	30.4	6.5	7.3	32.1	41.4	8.9
Bhutan	10.2	29.8	1.8	8.5	6.1	8.1	38.1	45.1	6.6
India	32.7	68.8	7.5	24.5	6.2	6.8	33.9	42.8	8.5
Iran (Islamic Republic of)	1.4	8.0	0.3	1.8			38.3	45.2	6.4
Maldives									
Nepal	24.8	57.2	5.5	19.0	5.6	6.0	32.8	41.5	8.3
Pakistan	21.0	60.2	3.5	17.9			30.0	40.0	9.6
Sri Lanka	4.1	23.9	0.6	5.4	1.7	1.8	36.4	44.6	7.7
Developed Countries									
Australia									
Japan									
New Zealand									
Regional Office for Africa									
Regional Office for Europe and Central Asia									
Regional Office for Latin America and the Caribbean									
Regional Office for the Near East									
World									

TABLE 15: **Determinants: Availability**

	Availability									
	average dietary supply adequacy		value of food production per capita		share of energy supply derived from cereals, roots and tubers		average supply of protein		average supply of protein of animal origin	
	percent	percent	I$/cap	I$/cap	percent	percent	g/cap/day	g/cap/day	g/cap/day	g/cap/day
	1990-92	2011-13	1990-92	2009-11	1990-92	2008-10	1990-92	2008-10	1990-92	2008-10
Regional Office for Asia and the Pacific	107	117	175	259	63.0	57.0	59.0	75.0	15.0	26.0
Developing countries and transition economies	106	117	170	257	65.0	58.0	57.0	74.0	13.0	25.0
Central Asia	122	128	331	304	19.0	45.0	35.0	97.0	17.0	49.0
Kazakhstan		146		449		47.0		103.0		53.0
Russian Federation		128		287		43.0		100.0		53.0
Uzbekistan		117		299		58.0		78.0		26.0
East Asia	107	124	172	340	68.0	52.0	65.0	92.0	15.0	36.0
China	106	122			71.0	54.0	66.0	94.0	14.0	36.0
Democratic People's Republic of Korea	99	94	176	148	63.0	68.0	73.0	57.0	15.0	10.0
Mongolia	94	108	369	282	44.0	48.0	75.0	80.0	51.0	49.0
Republic of Korea	124	132	184	212	55.0	45.0	81.0	91.0	28.0	41.0
Pacific Islands	113	115	355	341	48.0	51.0	64.0	68.0	29.0	28.0
Cook Islands			271	115						
Fiji	119	130	315	224	46.0	47.0	68.0	74.0	31.0	30.0
Kiribati	121	123	188	268	43.0	40.0	65.0	74.0	31.0	37.0
Marshall Islands			59	89						
Micronesia (Federated States of)			97	98						
Nauru			52	63						
Niue			498	1 000						
Palau										
Papua New Guinea										
Samoa	113	129	239	282	32.0	28.0	69.0	79.0	42.0	48.0
Solomon Islands	103	112	215	225	65.0	67.0	52.0	55.0	20.0	17.0
Tonga			233	243						
Tuvalu			83	93						
Vanuatu	122	126	409	315	44.0	48.0	60.0	67.0	25.0	28.0
Southeast Asia	99	121	179	271	67.0	63.0	49.0	64.0	14.0	22.0
Cambodia	94	112	113	250	84.0	74.0	45.0	62.0	9.0	18.0
Indonesia	104	123	151	222	73.0	67.0	48.0	58.0	9.0	16.0
Lao People's Democratic Republic	92	102	131	250	84.0	73.0	49.0	65.0	7.0	14.0
Malaysia	121	122	331	467	45.0	48.0	67.0	78.0	37.0	41.0
Myanmar										
Philippines	107	119	187	205	57.0	60.0	53.0	61.0	21.0	26.0
Thailand	90	123	284	385	52.0	52.0	53.0	62.0	23.0	24.0
Timor-Leste	92	93	130	111	74.0	72.0	55.0	55.0	20.0	15.0
Viet Nam	89	125	153	292	81.0	61.0	45.0	75.0	10.0	29.0
South and Southwest Asia	106	108	139	175	67.0	62.0	56.0	60.0	10.0	13.0
Afghanistan										
Bangladesh	101	108	97	137	85.0	80.0	46.0	55.0	5.0	9.0
Bhutan			183	192						
India	104	106	137	169	66.0	62.0	55.0	58.0	9.0	11.0
Iran (Islamic Republic of)	142	133	230	332	62.0	55.0	82.0	89.0	18.0	26.0
Maldives	117	125	38	30	50.0	40.0	79.0	100.0	41.0	63.0
Nepal	105	116	145	167	77.0	72.0	56.0	61.0	8.0	9.0
Pakistan	109	114	156	190	55.0	50.0	58.0	64.0	18.0	25.0
Sri Lanka	97	111	92	110	60.0	56.0	48.0	58.0	11.0	14.0
Developed Countries	122	116	297	317	40.0	38.0	98.0	92.0	57.0	53.0
Australia	126	134	916	982	25.0	26.0	106.0	104.0	71.0	67.0
Japan	121	112	166	135	42.0	41.0	96.0	90.0	55.0	51.0
New Zealand	130	126	1 865	2 258	27.0	28.0	98.0	94.0	62.0	57.0
Regional Office for Africa	100	111	152	160	62.0	64.0	52.0	59.0	12.0	13.0
Regional Office for Europe and Central Asia	132	135	431	419	29.0	38.0	79.0	101.0	42.0	53.0
Regional Office for Latin America and the Caribbean	117	127	315	457	43.0	40.0	68.0	82.0	30.0	41.0
Regional Office for the Near East	131	130	177	226	61.0	57.0	74.0	82.0	18.0	24.0
World	114	122	240	302	56.0	51.0	69.0	79.0	24.0	31.0

TABLE 16: **Determinants: Physical and economic access**

	Access										
	physical access						economic access			lack of access to	
	% of paved roads		rail-lines density		road density		food price level index			water	sanitation
	percent	percent	km per 100 square km of land area	km per 100 square km of land area	km per 100 square km of land area	km per 100 square km of land area	index	index	index	percent	percent
	1990	2005-10*	1990	2005-11*	1990	2005-10*	2000	2005	2013	2011	2011
Regional Office for Asia and the Pacific		54.7			17.6	24.0	1.7	1.7		8.8	41.8
Developing countries and transition economies		54.7				25.8	1.6	1.6		9.1	43.4
Central Asia	72.9				5.2	5.7	1.6	1.5		4.6	22.9
Kazakhstan	55.1	89.5	0.5	0.5		3.5	1.3	1.4		5.0	3.0
Russian Federation	74.2		0.5	0.5	5.2	5.7	1.6	1.5		3.0	30.0
Uzbekistan	79.0			0.9	16.2					13.0	0.0
East Asia		53.7				36.5	1.6	1.6		8.0	33.5
China		53.5	0.6	0.7		41.8				8.0	35.0
Democratic People's Republic of Korea	5.7	2.8			23.1	21.2				2.0	18.0
Mongolia			0.1	0.1	2.7	0.7	1.6	1.6		15.0	47.0
Republic of Korea	71.5	79.3	3.1	3.4	57.1	105.1	1.8	1.9	2.0	2.0	0.0
Pacific Islands	9.9				5.0		1.3	1.3		47.7	69.8
Cook Islands											
Fiji	44.5				16.7		1.3	1.3	1.4	4.0	13.0
Kiribati										34.0	61.0
Marshall Islands										6.0	24.0
Micronesia (Federated States of)	15.9									11.0	45.0
Nauru											
Niue											
Palau										5.0	0.0
Papua New Guinea	3.2				4.0					60.0	81.0
Samoa										2.0	8.0
Solomon Islands	2.1				4.2					21.0	71.0
Tonga										1.0	8.0
Tuvalu										2.0	17.0
Vanuatu	21.6									9.0	42.0
Southeast Asia	40.0				18.0		1.7	1.6		11.2	29.7
Cambodia	7.5		0.3	0.4	19.8	21.9	1.7	1.7	1.2	33.0	67.0
Indonesia	45.1	56.9		0.2	15.2	25.0	1.8	1.6	2.0	16.0	41.0
Lao People's Democratic Republic	24.0	13.7				16.7	2.0	2.0		30.0	38.0
Malaysia	70.0	80.4	0.5	0.5		43.7	1.5	1.5	1.6	0.0	4.0
Myanmar	10.9	11.9	0.5		3.7	5.1				16.0	23.0
Philippines			0.2	0.2	53.5		1.7	1.6	1.6	8.0	26.0
Thailand			0.8	0.9	14.1	35.1	1.6	1.6	1.9	4.0	7.0
Timor-Leste										31.0	61.0
Viet Nam	23.5	47.6	0.9	0.7	29.0	48.3	1.7	1.7		4.0	25.0
South and Southwest Asia		52.0			38.3	69.0	1.8	1.7		9.6	58.6
Afghanistan		29.3				6.5				39.0	71.0
Bangladesh		9.5	1.9	2.0	130.6	14.8	1.5	1.6	1.6	17.0	45.0
Bhutan	77.1	40.4				18.0	1.7	1.6		3.0	55.0
India		49.5	1.9	1.9	60.8	125.0	1.6	1.6	1.6	8.0	65.0
Iran (Islamic Republic of)		80.6	0.3	0.3	7.5	11.4	2.5	2.4		5.0	0.0
Maldives		100.0				29.3	1.3	1.4		1.0	2.0
Nepal	37.5	53.9				13.5	1.5	1.5		12.0	65.0
Pakistan	54.0	72.2	1.1	1.0	21.3	32.9	1.8	1.9	2.1	9.0	53.0
Sri Lanka			2.2	2.2	141.7	173.9	1.7	1.8	1.8	7.0	9.0
Developed Countries	44.2	54.5			13.7	15.0	1.7	1.7		0.0	0.0
Australia	35.0	43.5	0.1	0.1	10.5	10.7	1.1	1.2		0.0	0.0
Japan	69.2		5.4	5.3	66.1	89.1	1.8	1.8	1.8	0.0	0.0
New Zealand	57.0	66.2	1.5		34.6	35.2	1.3	1.3		0.0	
Regional Office for Africa							1.8	1.9		37.3	69.2
Regional Office for Europe and Central Asia					25.9	28.6	1.2	1.2		1.9	6.4
Regional Office for Latin America and the Caribbean	15.2	19.8			14.2	15.1	1.3	1.3		5.8	18.7
Regional Office for the Near East	54.1				5.4		1.6	1.6		9.6	9.6
World			0.8	0.9	20.9	24.6				11.0	37.0

TABLE 17: **Vulnerability/stability**

	Value of food imports over total merchandise exports			Cereal import dependency ratio			Percent of arable land equipped for irrigation		
	percent 1990-92	percent 1999-2001	percent 2008-10	percent 1990-92	percent 1999-2001	percent 2007-09	percent 1990-92	percent 1999-2001	percent 2009-11
Regional Office for Asia and the Pacific	5.0	4.0	4.0	10.8	10.3	8.6	32.9	30.7	35.6
Developing countries and transition economies	5.0	4.0	4.0	7.4	7.6	6.3	36.0	32.7	37.9
Central Asia		6.0	6.0		7.5	3.1		7.3	7.1
Kazakhstan		4.0	3.0		1.0	3.0		9.8	8.6
Russian Federation		6.0	6.0		7.8	1.7		3.7	3.6
Uzbekistan		10.0	7.0		15.7	16.1		93.9	97.6
East Asia	4.0	3.0	3.0	8.5	6.8	5.2	40.7	45.5	59.0
China	4.0	2.0	3.0	5.9	3.0	2.2	40.5	45.3	59.2
Democratic People's Republic of Korea	17.0	49.0	12.0	14.1	39.1	15.2	62.7	63.5	63.5
Mongolia	10.0	15.0	11.0	9.8	55.6	56.1	5.9	8.1	13.6
Republic of Korea	5.0	3.0	3.0	64.5	72.0	73.2	51.0	51.7	52.5
Pacific Islands	15.0	14.0	15.0	89.1	99.9	115.5	1.0	1.8	1.8
Cook Islands	140.0	135.0	489.0						
Fiji	18.0	17.0	32.0	88.2	100.0	100.0	1.0	1.8	1.8
Kiribati	201.0	132.0	147.0	100.0	100.0	100.0			
Marshall Islands									
Micronesia (Federated States of)									
Nauru	5.0	3.0	4.0						
Niue	784.0	298.0	58.0						
Palau									
Papua New Guinea	12.0	9.0	8.0						
Samoa	230.0	126.0	103.0	100.0	100.0	100.0			
Solomon Islands	15.0	17.0	38.0	96.8	94.3	95.9			
Tonga	94.0	103.0	382.0						
Tuvalu	413.0	110.0	1 281.0						
Vanuatu	55.0	53.0	74.0	93.7	95.3	96.4			
Southeast Asia	4.0	4.0	5.0	9.7	14.1	12.7	23.7	29.8	32.7
Cambodia	10.0	7.0	9.0	2.7	3.5	1.4	6.8	7.6	8.9
Indonesia	4.0	5.0	5.0	6.6	13.7	10.8	23.4	27.3	28.5
Lao People's Democratic Republic	10.0	11.0	11.0	1.9	2.0	1.9	17.5	32.1	22.4
Malaysia	5.0	3.0	5.0	72.9	80.2	79.6	19.4	20.1	20.3
Myanmar	18.0	11.0	8.0				10.7	18.5	21.3
Philippines	9.0	5.0	10.0	16.7	23.6	21.8	28.4	27.0	28.7
Thailand	2.0	2.0	2.0	6.0	7.7	10.7	24.9	35.6	40.8
Timor-Leste	77.0	129.0	207.0	15.9	30.2	17.8	13.7	24.7	22.3
Viet Nam	5.0	5.0	6.0	2.2	4.8	7.9	53.7	58.4	71.7
South and Southwest Asia	11.0	10.0	7.0	4.4	5.8	5.2	36.7	43.8	49.5
Afghanistan	59.0	121.0	225.0				37.9	41.7	41.2
Bangladesh	35.0	26.0	21.0	7.5	11.6	8.4	32.8	50.2	67.1
Bhutan	20.0	16.0	6.0				20.0	21.9	33.1
India	4.0	6.0	5.0	0.4	0.3	0.5	30.6	37.5	42.4
Iran (Islamic Republic of)	11.0	10.0	7.0	27.1	41.2	32.6	43.0	50.1	53.4
Maldives	48.0	89.0	75.0	100.0	99.7	99.7			
Nepal	28.0	23.0	50.0	0.6	2.1	3.2	37.2	48.9	49.6
Pakistan	15.0	15.0	17.0	8.3	5.9	5.6	80.1	84.1	98.1
Sri Lanka	22.0	13.0	18.0	36.5	36.1	34.3	59.1	62.5	48.9
Developed Countries	6.0	5.0	5.0	62.0	55.6	54.9	9.4	10.0	10.9
Australia	3.0	3.0	3.0	1.1	1.2	3.1	4.2	5.0	5.6
Japan	6.0	6.0	5.0	75.6	78.0	76.8	59.6	59.0	58.3
New Zealand	5.0	6.0	7.0	24.2	32.1	35.9	12.0	23.5	100.0
Regional Office for Africa	10.0	9.0	9.0	17.7	18.3	21.5	3.7	4.0	2.9
Regional Office for Europe and Central Asia	7.0	5.0	6.0	18.0	15.9	21.1	16.4	12.8	13.0
Regional Office for Latin America and the Caribbean	9.0	8.0	6.0	22.5	30.3	29.9	12.8	13.2	13.1
Regional Office for the Near East	12.0	9.0	7.0	40.9	53.4	52.8	29.9	32.1	42.1
World	7.0	5.0	5.0	14.6	15.2	15.7	18.8	20.8	22.6

TABLE 18: **Health and education**

	Literacy rate	Primary completion rate		School enrollment				Health expenditure	
	adult female, % of females ages 15 +	total		primary				share of GDP	
				female		male			
	percent 2005-11*	percent 1990	percent 2011	percent 1990	percent 2011	percent 1990	percent 2011	percent 1995	percent 2011
Regional Office for Asia and the Pacific								5.8	6.4
Developing countries and transition economies								3.8	5.1
Central Asia								5.4	6.0
Kazakhstan	99.6		116.2		87.7		88.7	4.6	3.9
Russian Federation	99.5							5.4	6.2
Uzbekistan	99.2		92.9		88.4		91.2	6.5	5.4
East Asia								3.6	5.4
China	91.3	108.6						3.5	5.2
Democratic People's Republic of Korea	100.0								
Mongolia	97.9		115.3		98.0		99.2	3.2	5.3
Republic of Korea		99.2						3.8	7.2
Pacific Islands								3.9	4.9
Cook Islands									
Fiji			103.4					3.1	3.8
Kiribati		101.0						9.4	10.1
Marshall Islands			97.3					15.9	16.5
Micronesia (Federated States of)								9.1	13.4
Nauru									
Niue									
Palau								13.1	10.6
Papua New Guinea	57.3	45.1						3.5	4.3
Samoa	98.6		98.4		94.9		89.7	4.7	7.0
Solomon Islands		60.1						3.2	8.8
Tonga	99.1	127.8		93.2		91.5		4.1	5.3
Tuvalu								5.4	17.3
Vanuatu	80.8							2.6	4.1
Southeast Asia								2.9	3.6
Cambodia	65.9		89.9		96.7		99.8	6.2	5.7
Indonesia	89.7	91.7	107.8	92.7		96.6		2.0	2.7
Lao People's Democratic Republic	63.2	44.3	92.6		96.4		98.2	4.1	2.8
Malaysia	90.7	87.9						2.9	3.6
Myanmar	89.9								
Philippines	95.8	88.6		97.0		98.4		3.4	4.1
Thailand	91.5							3.5	4.1
Timor-Leste	53.0		72.5		89.9		90.9		5.1
Viet Nam	91.1		104.3					5.2	6.8
South and Southwest Asia								3.9	4.2
Afghanistan									9.6
Bangladesh	52.2			66.9		78.2		3.5	3.7
Bhutan	38.7		95.1		89.6		87.0	4.1	4.1
India	50.8							4.0	3.9
Iran (Islamic Republic of)	80.7	87.0	106.1	90.0		98.2		3.8	6.0
Maldives	98.4		107.2		95.1		94.1	5.7	8.5
Nepal	48.3							5.3	5.4
Pakistan	40.3		66.8		65.0		79.0	3.3	2.5
Sri Lanka	90.0	97.0	100.6		93.1		92.6	3.4	3.4
Developed Countries								6.8	9.2
Australia				97.7		97.2		7.3	9.0
Japan		103.4						6.8	9.3
New Zealand								7.1	10.1
Regional Office for Africa								5.7	6.3
Regional Office for Europe and Central Asia								8.4	9.5
Regional Office for Latin America and the Caribbean								6.5	7.6
Regional Office for the Near East								3.8	4.6
World								8.8	10.1

TABLE 19: **Population at risk**

	Droughts, floods, extr temp	UNHCR population of concern				
	% of population affected	total		total refugees	internally displaced persons	others and stateless persons
	percent	thousand people	thousand people	thousand people	thousand people	thousand people
	2009	2000	2011	2011	2011	2011
Regional Office for Asia and the Pacific	4.4	3154.4	6556	1	1566	955
Developing countries and transition economies	4.6	3150.4	6518	1	1566	955
Central Asia	0.1	712.7	102	0	28	4
Kazakhstan	0.2	0.0	8	0	0	4
Russian Federation	0.1	674.3	94	0	28	0
Uzbekistan	0.1	38.4	0	0	0	0
East Asia	7.6	0.1	0	0	0	0
China	8.0	0.0	0	0	0	0
Democratic People's Republic of Korea	2.5	0.0	0	0	0	0
Mongolia	2.6	0.0	0	0	0	0
Republic of Korea	0.1	0.1	0	0	0	0
Pacific Islands	0.8	5.9	9	0	0	0
Cook Islands		0.0	0	0	0	0
Fiji	1.7	0.0	0	0	0	0
Kiribati	5.0	0.0	0	0	0	0
Marshall Islands	0.1	0.0	0	0	0	0
Micronesia (Federated States of)	1.3	0.0	0	0	0	0
Nauru		0.0	0	0	0	0
Niue		0.0	0	0	0	0
Palau		0.0	0	0	0	0
Papua New Guinea	0.7	5.9	9	0	0	0
Samoa	0.0	0.0	0	0	0	0
Solomon Islands	0.1	0.0	0	0	0	0
Tonga		0.0	0	0	0	0
Tuvalu		0.0	0	0	0	0
Vanuatu	0.1	0.0	0	0	0	0
Southeast Asia	1.1	282.0	1381	1	499	0
Cambodia	6.6	0.0	0	0	0	0
Indonesia	0.2	123.3	0	0	0	0
Lao People's Democratic Republic	2.7	0.0	0	0	0	0
Malaysia	0.1	0.0	120	0	0	0
Myanmar	0.1	0.0	1147	0	339	0
Philippines	0.8	0.2	0	0	159	0
Thailand	3.8	105.0	103	0	0	0
Timor-Leste	0.0	53.5	0	0	0	0
Viet Nam	1.6	0.0	11	1	0	0
South and Southwest Asia	3.8	2149.8	5025	0	1039	951
Afghanistan	1.1	0.0	1545	0	448	951
Bangladesh	4.6	21.6	0	0	0	0
Bhutan	0.0	0.0	0	0	0	0
India	4.4	13.9	89	0	0	0
Iran (Islamic Republic of)	3.1	77.0	887	0	0	0
Maldives	0.0	0.0	0	0	0	0
Nepal	0.7	129.2	874	0	0	0
Pakistan	1.1	1201.5	1631	0	453	0
Sri Lanka	2.2	706.5	0	0	138	0
Developed Countries	0.5	4.0	38	0	0	0
Australia	3.0	0.0	29	0	0	0
Japan	0.0	4.0	7	0	0	0
New Zealand	0.0	0.0	2	0	0	0
Regional Office for Africa	1.9	2616.4	4747	105	4445	12
Regional Office for Europe and Central Asia	0.2	2009.5	2589	3	1294	17
Regional Office for Latin America and the Caribbean	0.5	33.6	338	0	3888	0
Regional Office for the Near East	0.9	273.0	3900	0	1680	0
World	2.9	8349.7	17564	109	12844	980

PART

3

Feeding the world

Population in the Asia and Pacific Region (APR) is set to grow considerably over the coming years, albeit at a slower rate than in the past, and with considerable differences across subregions. Over the next four decades, Asia's population is forecast to increase by 1 billion people to exceed 5 billion by 2050. At the global level, where the projected population increase is expected to be 2 billion, FAO estimates indicate that to meet anticipated food demand, global agricultural production will have to increase by 60 percent from its 2005-2007 levels.

Urbanization and increasing incomes are major drivers of expected changes in consumption patterns. Over recent decades, many emerging economies including in Eastern Asia have undergone rapid and significant changes

in food consumption levels and patterns. Roots, tubers and coarse grains are gradually being replaced in diets by wheat, rice, sugar and vegetable oils as well as meat and dairy products.

In the coming decades, the burden of undernourishment is expected to decline in Asia as in most regions. At the same time, changes in consumption patterns and shifts towards more sedentary lifestyles are likely to promote other nutritional problems in both developed and developing countries. Diets are expected to become richer in fats, sugar and salt, while urbanization and reduction in physical activity will likely result in more widespread obesity. Undernourishment and overnutrition may coexist, posing a "double burden of malnutrition" in many developing countries.

Over the past 50 years, growth in world crop production resulted mostly from increased yields and higher cropping intensity. This is expected to continue, given the limited opportunities and high costs of expanding agricultural land. At the global level, the rates of yield growth rates for most crops have been decelerating, while yields continue to increase in absolute terms. To date, yield gains have come mostly from improved cropping techniques, fertilization and irrigation. Much can be achieved by narrowing the gap between average farm yields and potential yields, such as those obtained in experimental fields. In several developing countries average yields are estimated to be only 30 percent of the potential indicated by agricultural research systems.

The intensification of production is nonetheless associated with significant negative environmental effects, including groundwater pollution, soil erosion and a loss in

biodiversity. More sustainable use of the limited resource base requires substantial improvements in the management and use of land, water and inputs. Continuous investments are required in improved technologies to reduce losses in biodiversity and limit carbon emissions from agriculture.

Developing and transferring improved production technology alone will not address yield gaps. An enabling investment environment should also be established. Farmers are likely to adopt technologies only if there are sound incentives to do so: this calls for well-functioning input and output markets, improved infrastructure and better finance and risk management tools.

Aggregate agriculture

Agricultural productivity in the APR has increased a little faster than population growth in recent decades, resulting in an increase in per capita food availability.

The increase reflects a global trend which saw per capita food supply rising from 2 200 kcal/day in the early 1960s to more than 2 800 kcal/day by 2009. In Asia, the increase was from 1 789 to 2 706 kcal over the same period while protein intake surged from 47 grams per person per day to 78.4. Food availability was highest in Eastern Asia at 3 000 kcal per day and lowest in Southern Asia at 2 396 kcal. At 3 370 kcal, Europe had the greatest per capita food supply of any region in 2009.

Progress in reducing undernourishment has slowed in the APR in recent years, as it has at the global level, because of high and volatile food prices and a slowdown in the global economy. But the MDG 1 target on hunger reduction is still expected to be reached.

It must be noted, however, that progress in per capita food supply does not necessarily translate into reduction of hunger, given that food insecurity is the result of several factors such as access, food utilization, security and political instability.

The gap between demand for food – at present limited by low income and the other factors just mentioned – and potential demand is likely to persist for the foreseeable future. But the more the gap is reduced, the greater the incentive for agriculture to respond with increased production becomes.

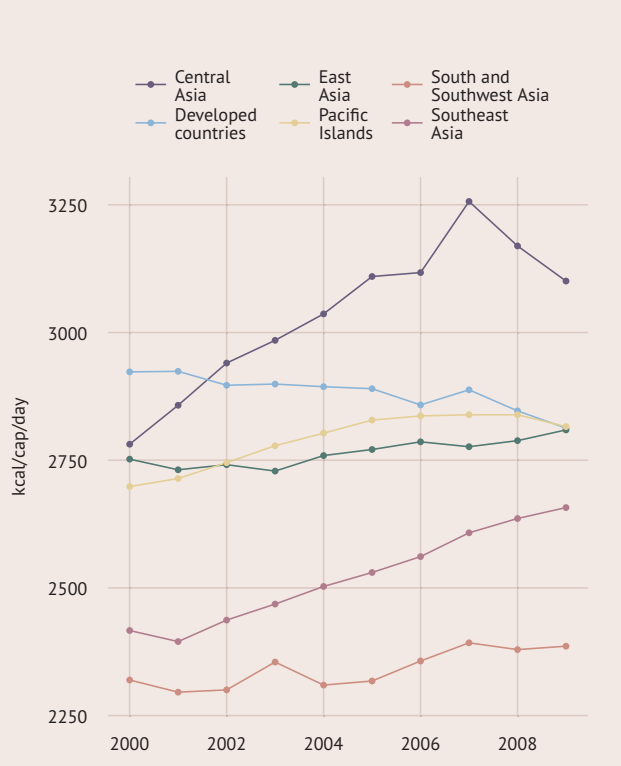
Growth in aggregate food demand is expected to slow in the APR given lower population growth and increasing dietary saturation in high-income countries (no one in an office job actually needs 3 000 kcal a day). But at the same time demand for non-food agricultural products is expected to expand. One example is biofuels which, while offering considerable opportunities, also present considerable challenges.

Although they provide farmers with a chance to raise their incomes, biofuels can also increase prices and food insecurity by diverting resources away from food production.

Further reading

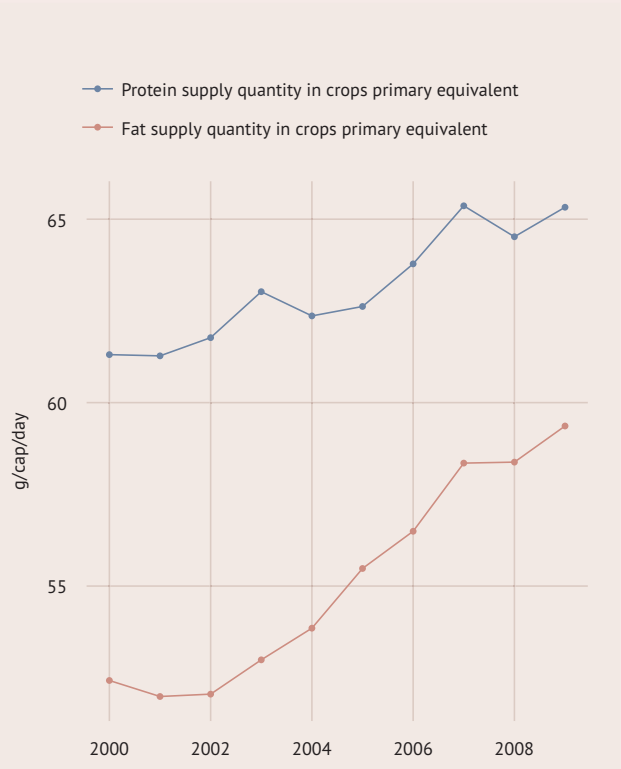
- Asian Development Bank (2013e)
- FAO Agricultural Development Economics Division (www.fao.org/economic/esa/esa-home/en/)
- Bruinsma (2011)

CHART 50: **Food supply in crops primary equivalent (2000-2009)**



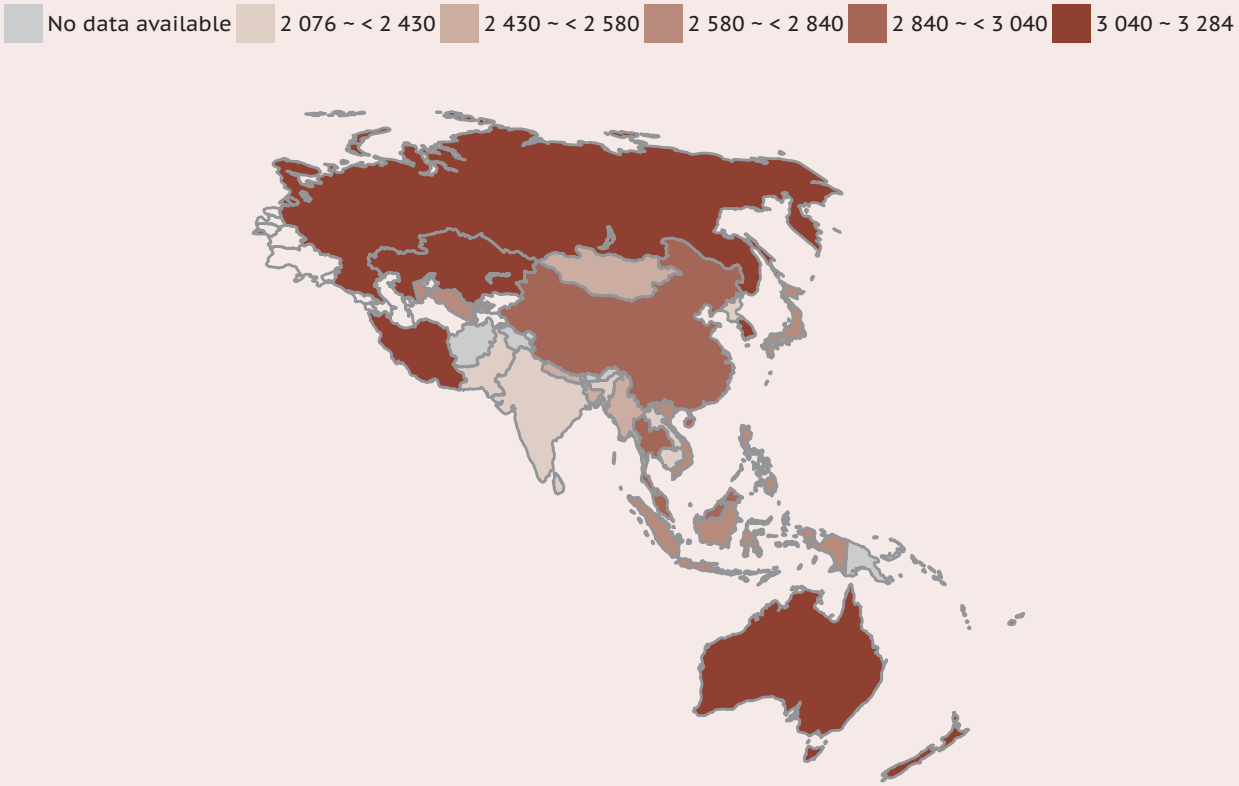
Source: FAO, Statistics Division (FAOSTAT).

CHART 51: **Asia and Pacific protein and fat supply in crops primary equivalent (2000-2009)**



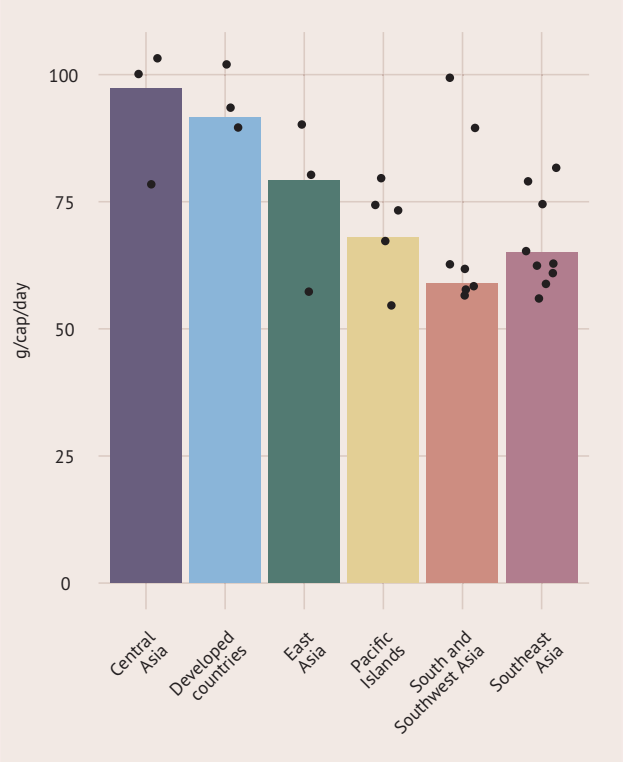
Source: FAO, Statistics Division (FAOSTAT).

MAP 31: **Food supply in crops primary equivalent (kcal/cap/day, 2009)**



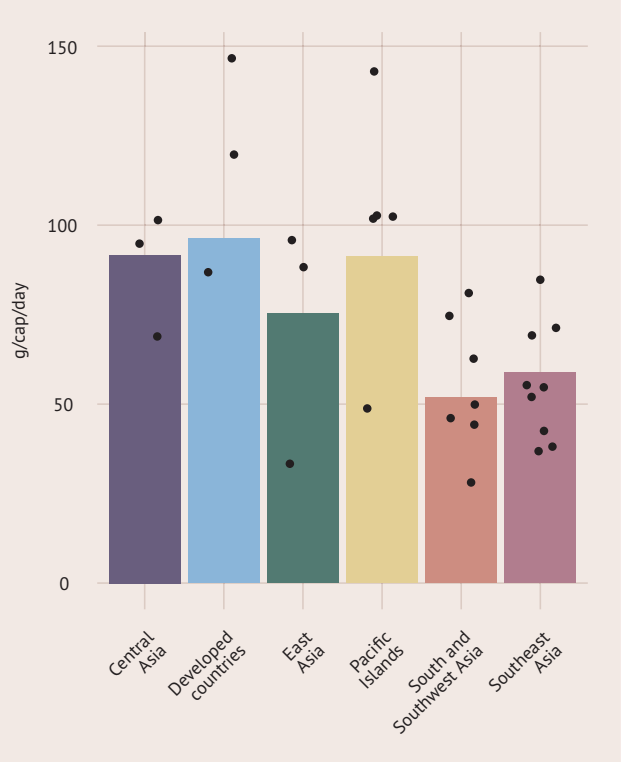
Source: FAO, Statistics Division (FAOSTAT).

CHART 52: **Protein supply in crops primary equivalent (2009)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 53: **Fat supply in crops primary equivalent (2009)**



Source: FAO, Statistics Division (FAOSTAT).

Growth in crop production

In the past 50 years, crop production in the APR has expanded. Most of the gain has stemmed from higher yields and production as a result of the adoption of intensive cropping practices like multiple cropping with reduced fallow periods. The expansion of arable land has generally played a smaller role.

Between 2000 and 2011 the area under cereal production in the APR grew at an average of 0.5 percent per year, just under the global average. But there were major differences between subregions and between countries. Southeast Asia, for example, showed the highest growth at 1.2 percent *per annum* while the land area under cereals in the Pacific Islands diminished slightly. It should be noted that the Pacific diet is largely dependent on root crops for carbohydrate requirements; the subregion's share in global cereal production is insignificant (Table 20).

Cereal cropland expansion was highest in Cambodia at 4.7 percent, followed by Mongolia (4.6 percent), Lao PDR (2.7 percent) and Sri Lanka (2.6 percent). Among the subregions, expansion was greatest in Southeast Asia at 1.2 percent. East Asia showed a 0.6 percent annual increase, the same as China's. There was almost no change – 0.2 percent – in South and Southwest Asia.

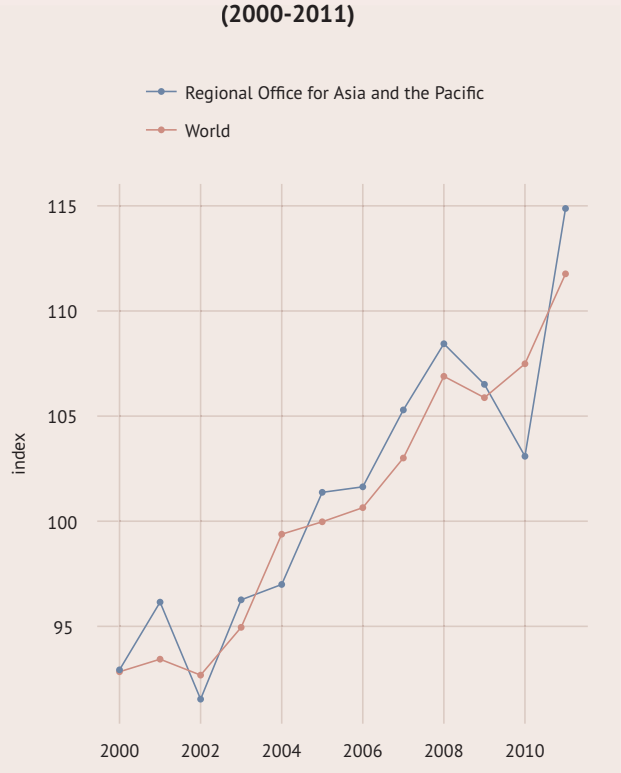
While expansion of land under cereals remained modest in much of the region, cereal production grew at a much faster rate – 2.5 percent in 2000-2011 compared with 1.5 percent in the preceding decade. Growth was highest in Central Asia at 4.4 percent per year between 2000 and 2011, followed by Southeast Asia with 3.1 percent annual growth, representing, however, a slight slowdown compared with the 3.3 percent achieved in the preceding decade. East Asia grew at a steady 2.3 percent compared to no growth in 1990-2000. Production in South and Southwest Asia grew consistently at 2.2 percent per year during 1990-2000 and 2000-2011.

Total cereal production in the APR was 1.37 billion tonnes in 2011 compared with 1.27 billion tonnes in 2010. Of this total, East Asia supplied the largest share, at 531 million tonnes, of which 98 percent was delivered by China. The APR now produces over half of the world's cereal supply, compared with less than 40 percent in 1961.

Further reading

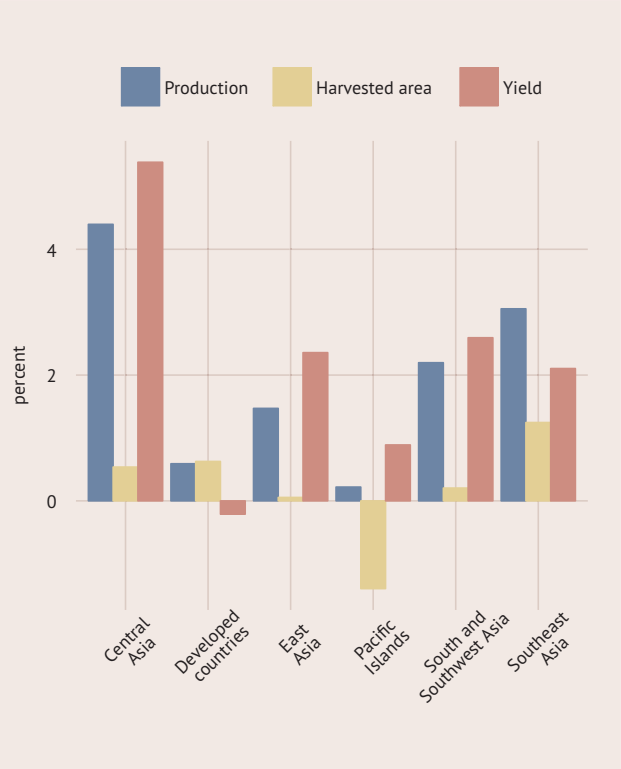
- FAO World Agriculture: Towards 2030/2050 - Prospects for Food, Nutrition, Agriculture and Major Commodity Groups (www.fao.org/docrep/009/a0607e/a0607e00.htm)
- FAO Food Outlook (www.fao.org/giews/english/fo/index.htm)

CHART 54: **Asia and Pacific crops, gross per capita production index number (2004-2006 = 100) (2000-2011)**



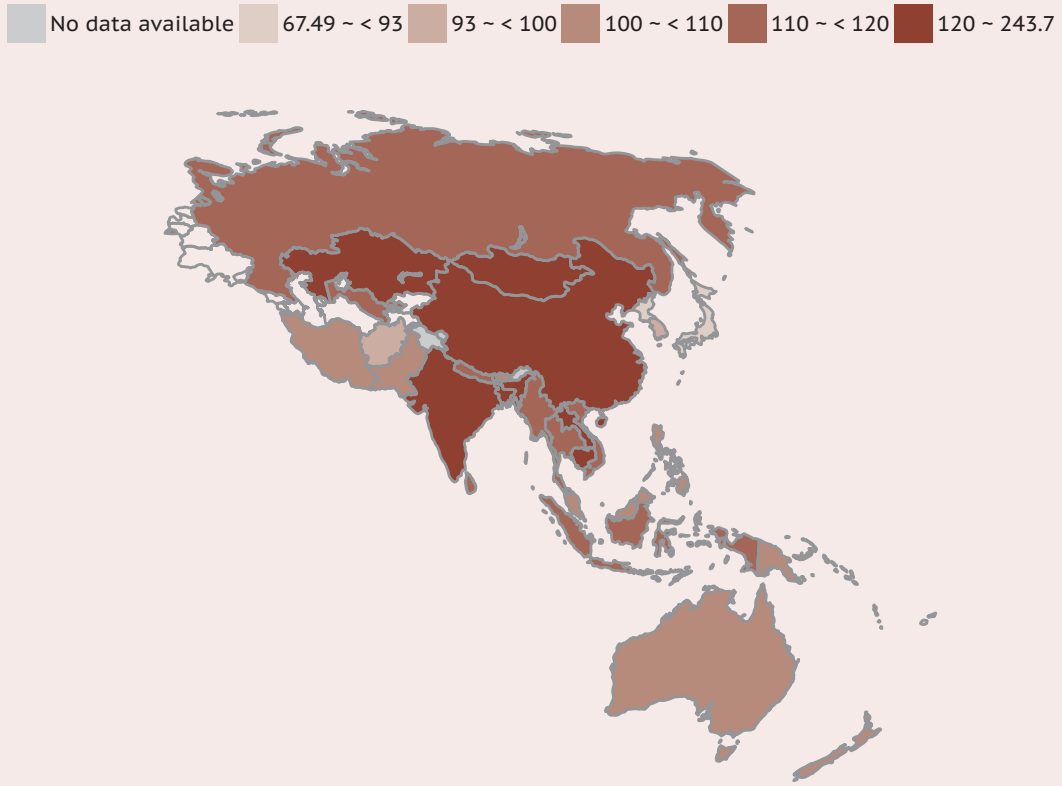
Source: FAO, Statistics Division (FAOSTAT).

CHART 55: **Growth in cereal production (2000-2012)**



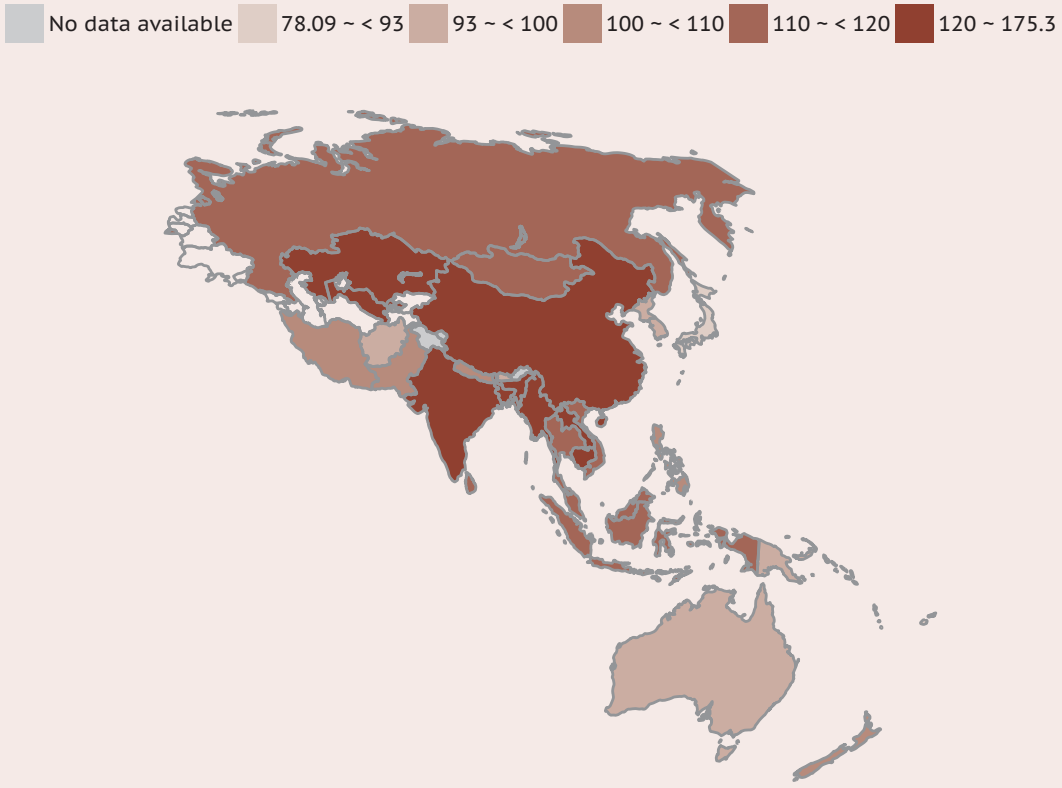
Source: FAO, Statistics Division (FAOSTAT).

MAP 32: **Crops, net per capita production index number (2004-2006 = 100) (index, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 33: **Food, net per capita production index number (2004-2006 = 100) (index, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

Trends in the crop sector

Given that major grain supplies are concentrated in certain parts of the world while demand is dispersed over the whole planet, it is clear that trade will continue to play an important role in meeting the demand for grains, particularly wheat and maize. With most production located in the temperate zones of developed countries, developing economies are dependent on imports.

Rice is the primary staple for more than half the world's population, with Asia representing the largest producing and consuming region. Rice production requires specific conditions that limit its cultivation geographically. Economically viable cultivation typically requires high average temperatures during the growing season, abundant supplies of water, smooth land surfaces and a subsoil stratum that inhibits the percolation of water.

East Asia, Southeast Asia and South and Southwest Asia account for the bulk of rice production. South and Southwest Asia had the largest contribution in 2011, at 229 million tonnes, in the region's total production of 652.6 million tonnes.

Rice yields grew by 1.8 percent in Asia between 2000 and 2011. Central Asia made the fastest progress with 4.7 percent annual yield growth. Rice yields in Southeast Asia grew at a robust 2.7 percent, by 2.1 percent in South and Southwest Asia and by only 0.6 percent in East Asia, with near stagnancy in China. The Pacific Islands registered a 1.7 annual decrease in rice yields.

More of the earth's surface is covered by wheat than by any other food crop. It is the cereal with the highest world production, after maize and rice. In terms of human dietary intake, however, wheat comes second to rice given that much of the maize crop is used for animal feed and for making ethanol.

Currently about 65 percent of the wheat crop is used for food, 17 percent for animal feed and 12 percent for industrial purposes, including biofuels. Growth in global wheat consumption has been facilitated by imports, particularly into developing markets where wheat is not produced as well as to the countries where land and water constraints limit its production. Wheat harvests have been growing both in China and India, the main producers in the APR. China's output grew from 99.6 million to 1 17.4 million tonnes in 2000-2011, while India climbed from 76.4 million tonnes to 86.9 million tonnes – more than North America that year. Europe was the world's largest wheat producer, with 225.9 million tonnes in 2011.

Between 2000 and 2011 coarse grain production in the APR grew faster than any other FAO region, at 4 percent *per annum*, to 349.3 million tonnes. China supplied more than half of the regional coarse grain production, of which approximately three-quarters was maize. Other countries where coarse grain production is significant include Australia, India, Indonesia and the Philippines. During the last decade growth in coarse cereal production has also taken place in Bangladesh (28 percent *per annum*), Lao PDR (25.6 percent *per annum*), Sri Lanka (15.8 percent *per annum*) and Cambodia (14.5 percent *per annum*).

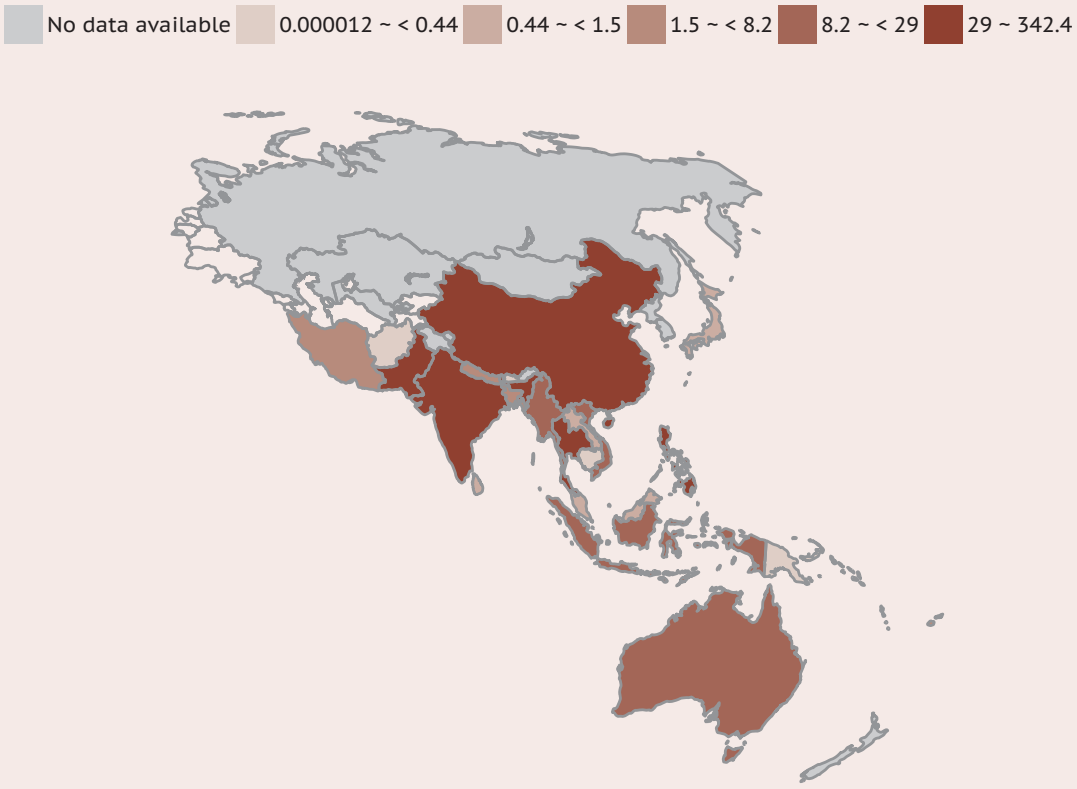
CHART 56: **Top 20 produced crops, quantity (2011)**

Source: FAO, Statistics Division (FAOSTAT).

CHART 57: **Net production value, top 20 commodities (2011)**

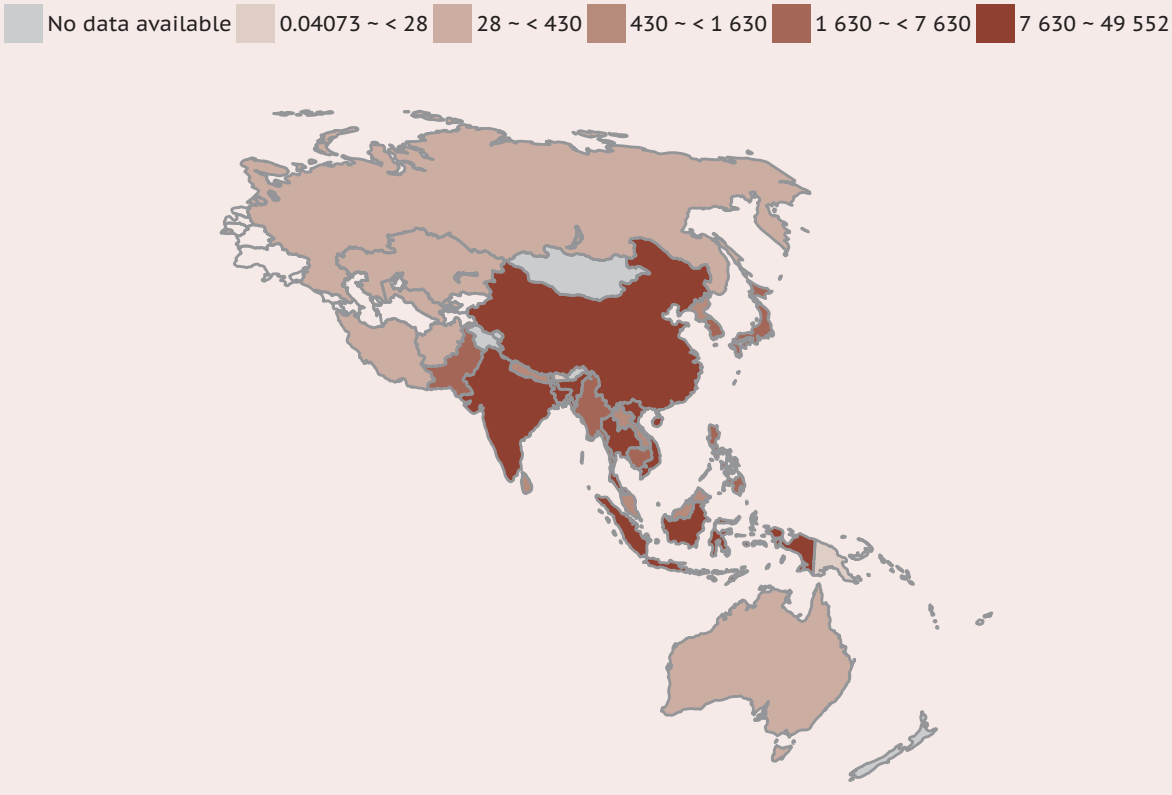
Source: FAO, Statistics Division (FAOSTAT).

MAP 34: **Sugar-cane producing countries (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 35: **Paddy rice producing countries (thousand US$, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

Cereals are, by and large, the most important source of energy for human beings. Of the 2.5 billion tonnes produced in the world in 2012 roughly 1 billion tonnes were used for food, 750 million tonnes went to feed animals and the remainder was processed for industrial purposes, used as seed or wasted.

Cereal supplies grew faster than demand in the second half of the 1990s when East Asian economies were hit by economic crisis and erratic weather. Low prices and large stocks also depressed growth in the early 2000s in the APR as a whole.

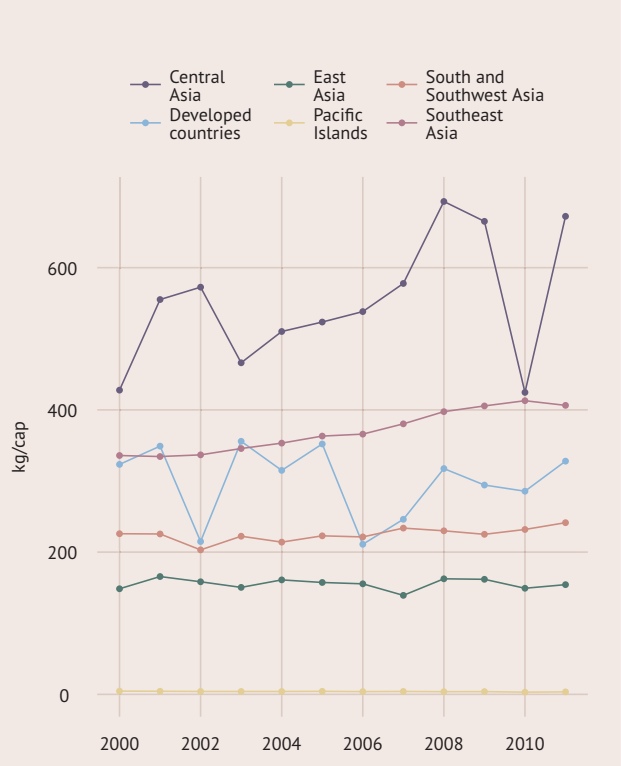
Production was sluggish up to 2006 and then picked up so that cereal production in the APR showed an average annual growth rate of 2.5 percent during 2000-2011 compared to a sluggish growth of 1.5 percent in 1990-2000.

Agricultural outlook 2013-2022, prepared jointly by FAO and the OECD, indicates that global agricultural production over the next decade is projected to grow by 1.5 percent per year compared to 2.1 percent in the previous decade, with slower area and productivity growth. But supply should keep pace with demand at relatively high prices. Measures to reduce pre- and post-harvest losses and food waste will be important in this context.

Since 2005 bad weather has adversely affected cereal production in many of the world's key exporting areas. Combined with reduced levels of investment and lower stocks this had led to sudden increases in world prices and greater volatility. Increases in non-food uses of cereals such as ethanol production also put additional pressure on prices while also serving as an incentive to increase production.

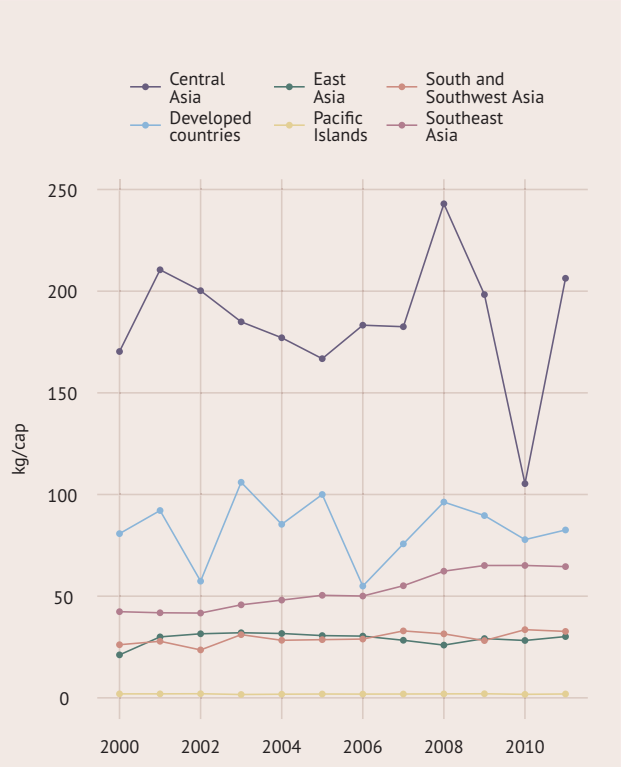
The outlook indicates that cereal prices are expected to drop initially during the 2012-2022 period due to a rebound in production, but strengthen over the rest of the decade due to a combination of slower production growth and stronger demand, including for biofuels. Developments in Chinese agriculture will exert a major influence in APR and world markets. With increasing production constraints and strong demand growth, additional agricultural import demand is expected from China.

CHART 58: **Per capita cereal production (2000-2011)**



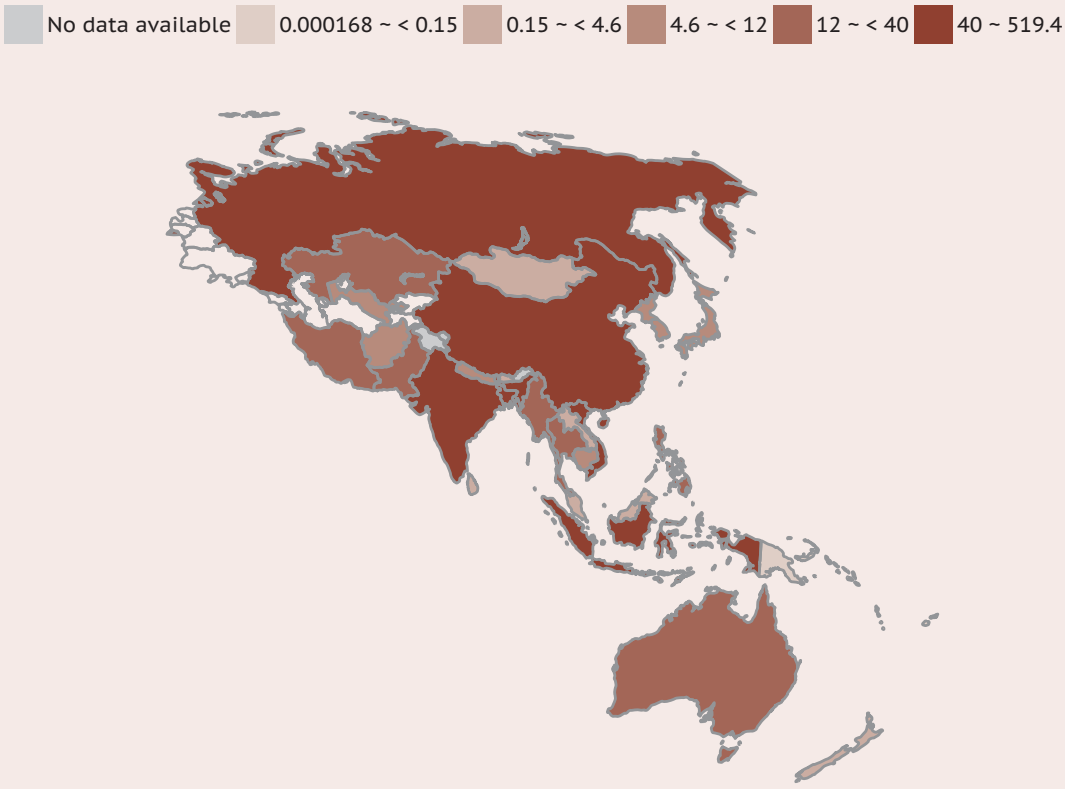
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

CHART 59: **Per capita coarse grain production (2000-2011)**



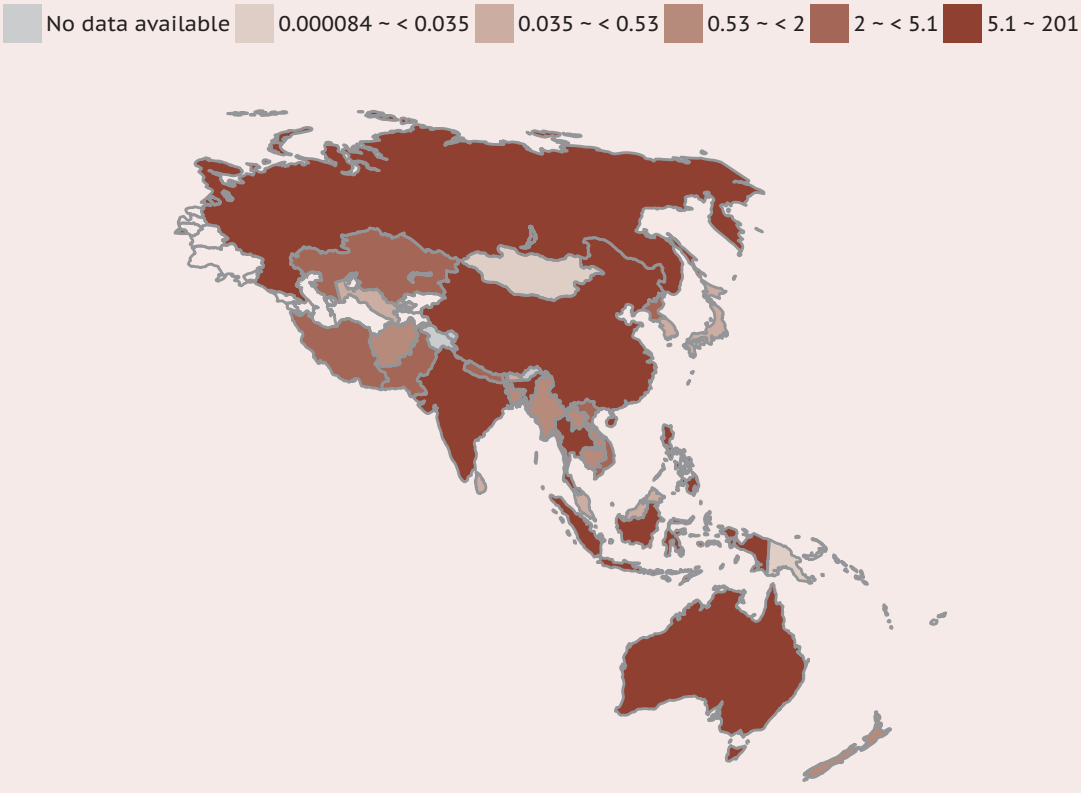
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

MAP 36: **Cereal producing countries (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 37: **Coarse grain producing countries (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

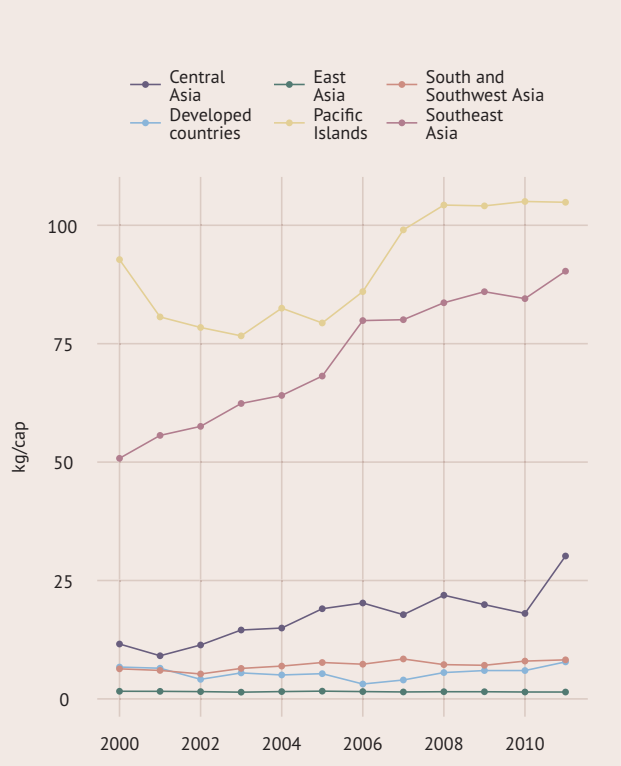
Oil crops have been growing at an even faster rate. Over the 2000-2010 decade alone, the oil crop sector grew by almost 5 percent *per annum* as food consumption increased in developing countries. Most of the oil crops are used in the form of vegetable oil, but direct consumption of soybeans, groundnuts and processed products other than oilseeds is also common. Highest growth in oil crop production was registered in Australia, at 18.6 percent per year over the period. The Marshall Islands increased production by 15.9 percent per year and Kazakhstan by 14.5 percent.

Although the oil crops' sector is increasingly dominated by a small number of crops and countries, the more traditional crops continue to be a major element in the food supply of many countries. Specific examples include groundnuts and sesame seeds in Myanmar, coconuts in the Philippines and Sri Lanka and cottonseed oil in Central Asian countries.

Pulses are important local food crops in the developing world. They are an essential source of protein in the diets of the world's poorest countries. In farming systems, pulses are valuable for their biological fixation of nitrogen, which reduces soil pathogens and the need for chemical fertilizer. For example, a substantial part of the historical growth in Australia's cereal yields is attributed to the introduction of legumes in rotation systems.

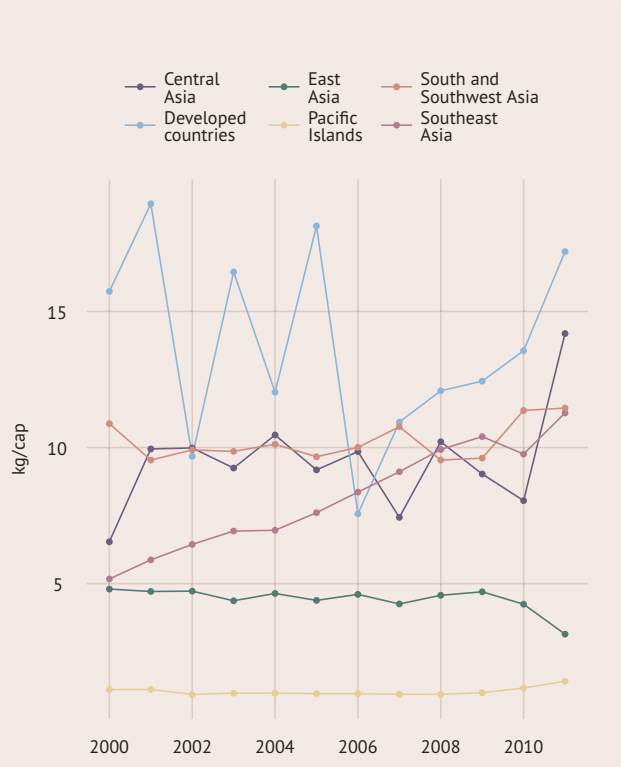
But changes in consumer preferences have led to stagnant or negative production growth, especially in richer economies. Over roughly the last decade, production of pulses dropped in China, ROK and DPRK, Thailand, Bangladesh, Pakistan, Sri Lanka, Japan and New Zealand. But it increased sharply in Cambodia, Kazakhstan and Myanmar.

CHART 60: **Per capita oil crop production (2000-2011)**



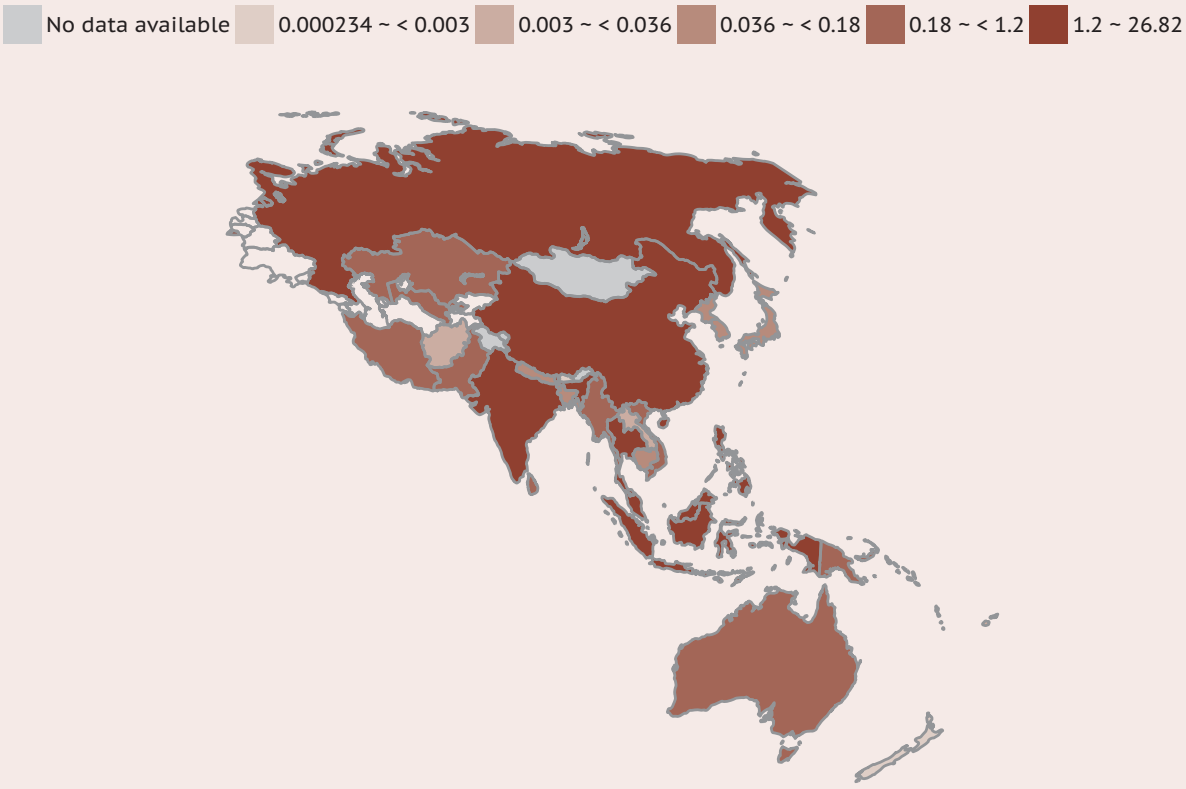
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

CHART 61: **Per capita pulse production (2000-2011)**



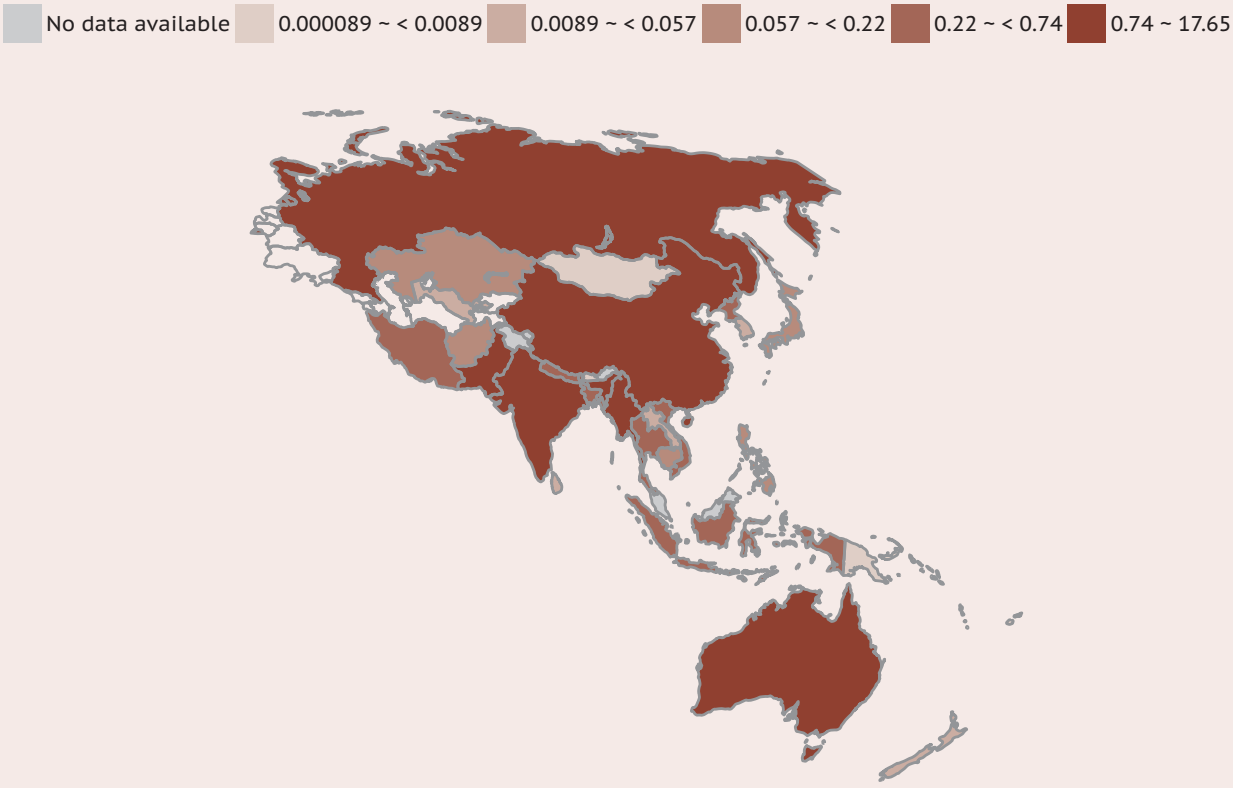
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

MAP 38: **Oil crop producing countries (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 39: **Pulse producing countries (million tonnes, 2011)**



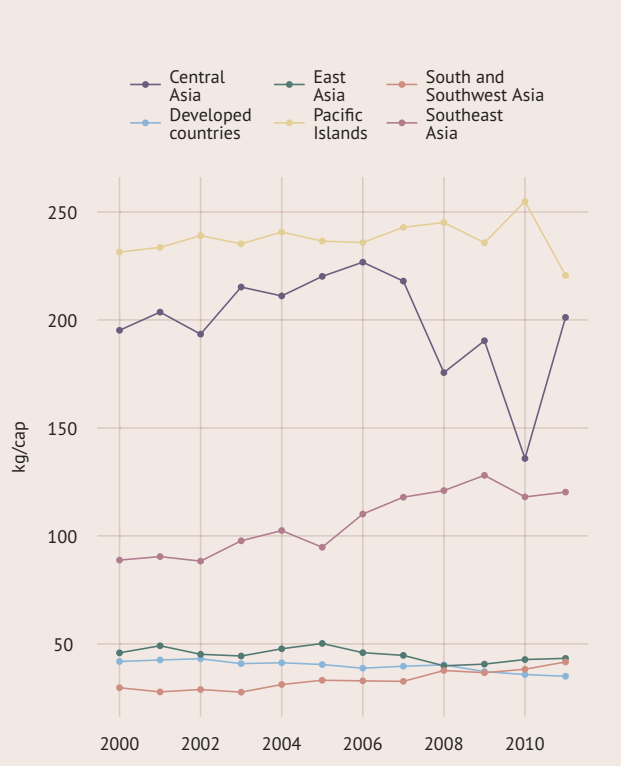
Source: FAO, Statistics Division (FAOSTAT).

Root crops have traditionally been the mainstay of food consumption in some countries. Change in the production of these crops is an important indication of changes in national average food consumption patterns.

Root crops exhibit different trends in production across regions and economies. For instance, whereas per capita production of potatoes in Europe has long been in decline, production in Asia has registered robust growth in the past decade or so, albeit from a much smaller base. Root and tuber crops increased most in some of the lower-income countries of the region – Cambodia, Lao PDR and Myanmar. But production fell in the Russian Federation, China, ROK and Malaysia, among others.

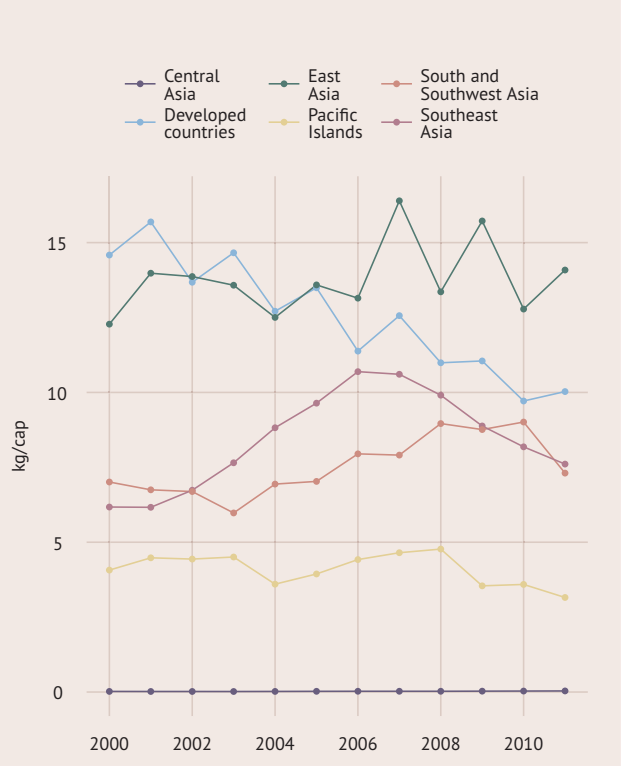
Currently, 166 million tonnes of sugar (raw equivalent) are produced in 120 countries. Most sugar is derived from sugar cane, the cultivation of which has undergone strong growth, leading to a world production level of about 1.7 billion tonnes in 2011. The global expansion of sugar cane, including in Afghanistan and China, has responded to rising demand for sugar for human consumption and as a feedstock for ethanol production.

CHART 62: **Per capita root and tuber production (2000-2011)**



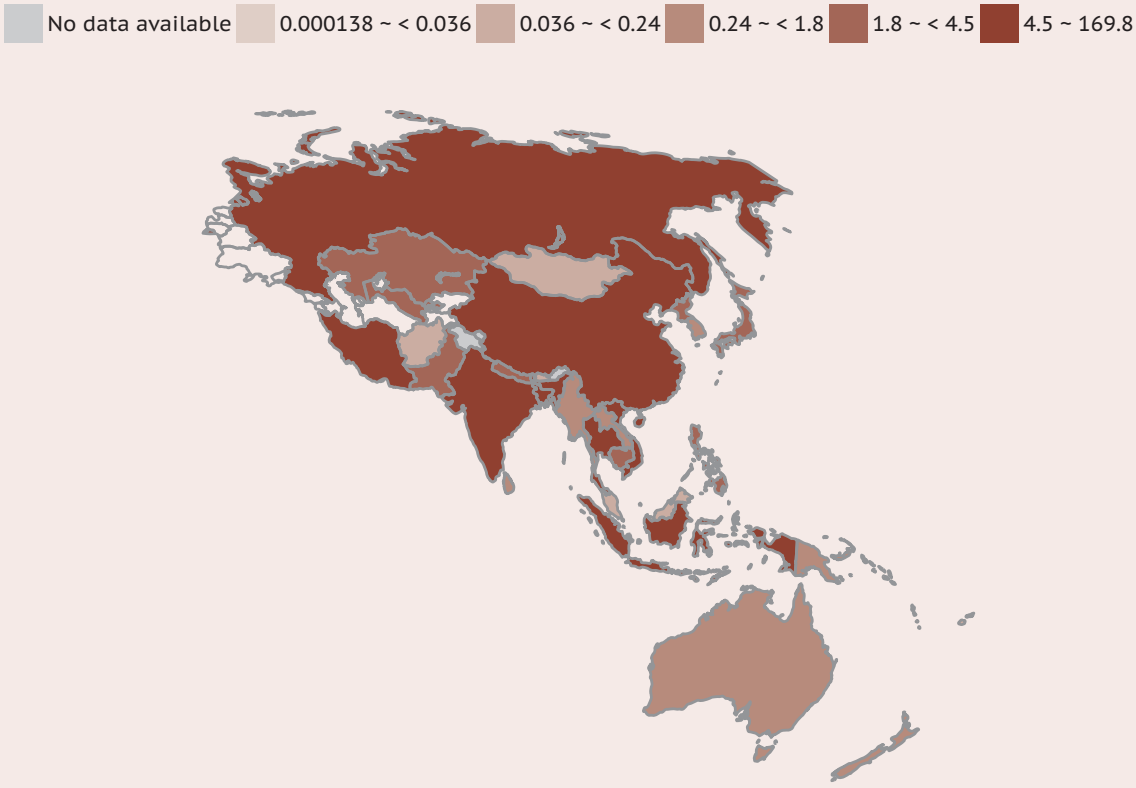
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

CHART 63: **Per capita citrus fruit production (2000-2011)**



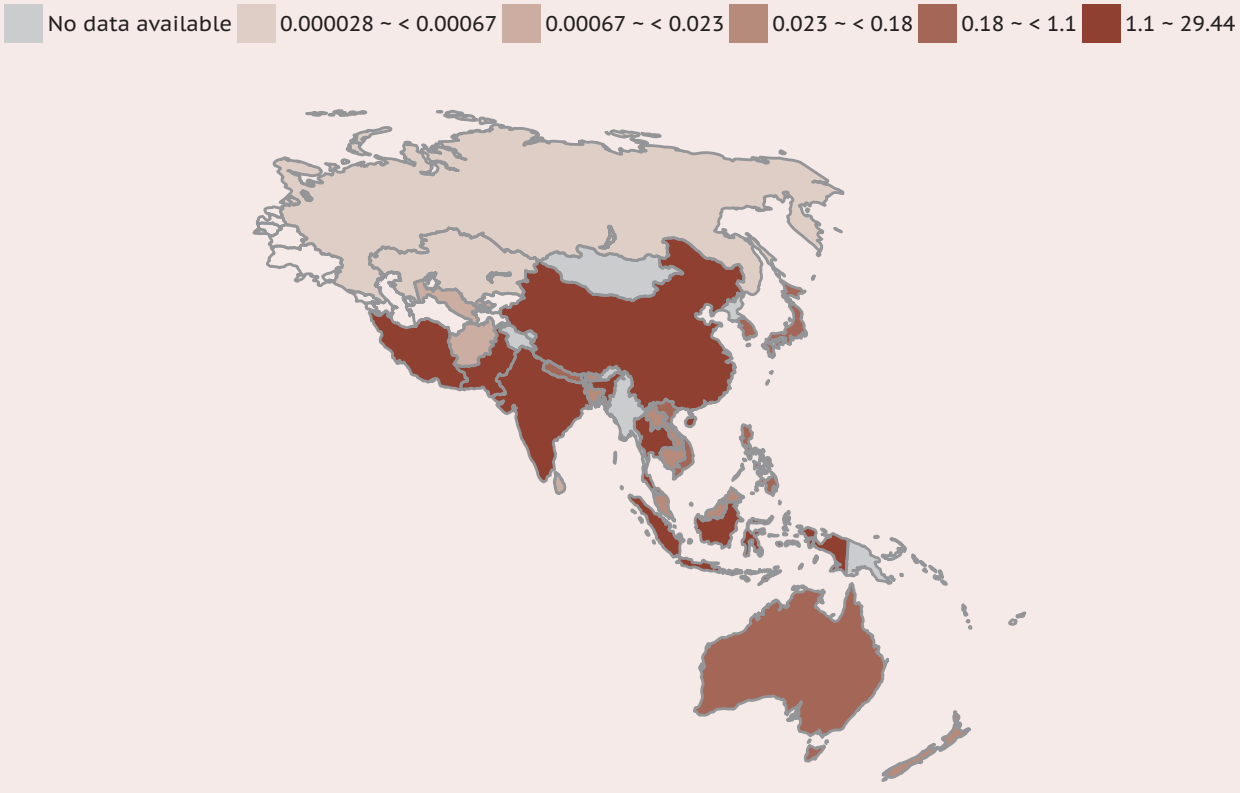
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

MAP 40: **Root and tuber producing countries (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 41: **Citrus fruit producing countries (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

Global fruit and vegetable production has experienced remarkable growth both globally and in the APR, increasing at the rate of some 6 percent *per annum* over the past two decades. The APR now produces nearly half of global fruit production (306 million tonnes) while supplying some 80 percent of the world's vegetables.

In 2011, almost 640 million tonnes of fruit and more than 1 billion tonnes of vegetables were gathered throughout the world.

China has become the world's largest fruit and vegetable producer, with global output shares of about 20 percent for fruit (136 million tonnes) and more than 50 percent for vegetables (562.6 million tonnes).

Strong growth rates in fruit and vegetable cultivation have also been recorded in Southern Asia which produced almost 100 million tonnes of fruit and 144 million tonnes of vegetables in 2011. India was the leading producer in the subregion, with 171 million tonnes of fruit and vegetables – more than the whole of Africa.

Fastest growth in percentage terms over the last decade was registered for fruit in Mongolia (19.6 percent), Timor-Leste (10.4 percent), Lao PDR (9.9 percent) and Bangladesh (9.4 percent). For vegetables, the fastest progress was seen in India (13.7 percent), Uzbekistan (9.4 percent), Malaysia (7.9 percent) and Mongolia (7.6 percent).

Horticultural crop production can generate high economic returns, especially for smallholders and in areas where land is scarce. In addition, horticulture is labour-intensive and can contribute to poverty reduction by providing jobs.

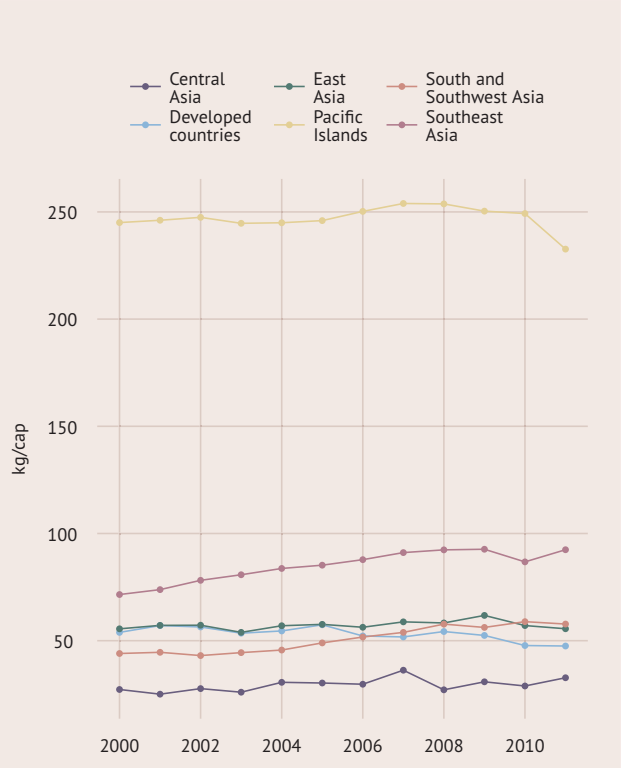
Beyond their monetary value, fruits and vegetables are important dietary sources of micronutrients. The World Health Organization (WHO) estimates that low fruit and vegetable intake contributes to approximately 16 million disability-adjusted life years (DALYs, a measure of the potential life lost through premature mortality and the years of productive life lost through disability); also that 1.7 million deaths worldwide are attributable to low fruit and vegetable consumption.

WHO and FAO recommend a minimum of 400 grams of fruit and vegetables per day – excluding starchy root crops – for the prevention of chronic diseases such as heart disease, cancer, diabetes and obesity, and for the prevention and alleviation of several micronutrient deficiencies, especially in less-developed countries. Meeting the rising global demand for fruits and vegetables can create opportunities for poor farmers in developing countries, but improved supply chain efficiency, reducing post-harvest losses, improving the knowledge base of small farmers and investments in infrastructure will be necessary before farmers in many of these countries can reap the full benefits of cultivating these highly perishable crops.

Further reading

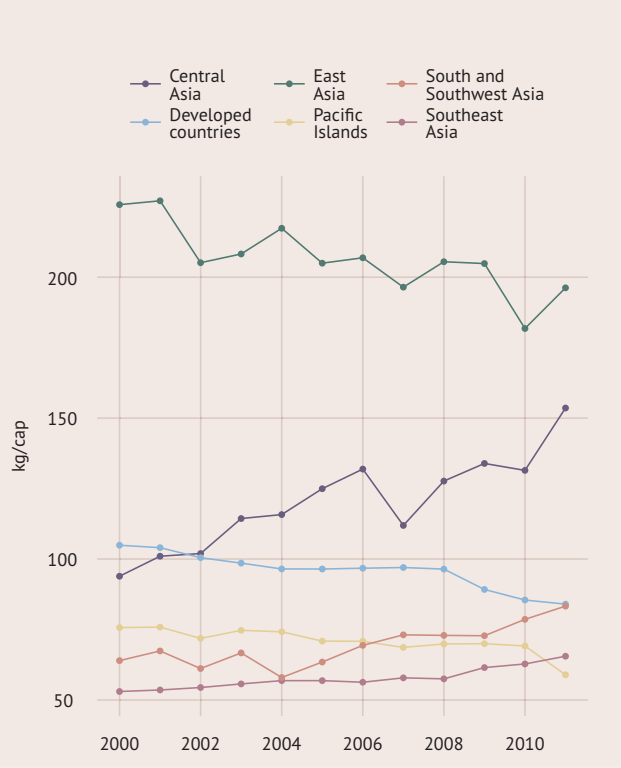
- The State of Food and Agriculture 2012: Investing in agriculture for a better future (www.fao.org/publications/sofa/en/)
- OECD-FAO Agricultural Outlook 2012-2021 (www.oecd.org/site/oecd-faoagriculturaloutlook/)

CHART 64: **Per capita fruit production, excluding melons (2000-2011)**



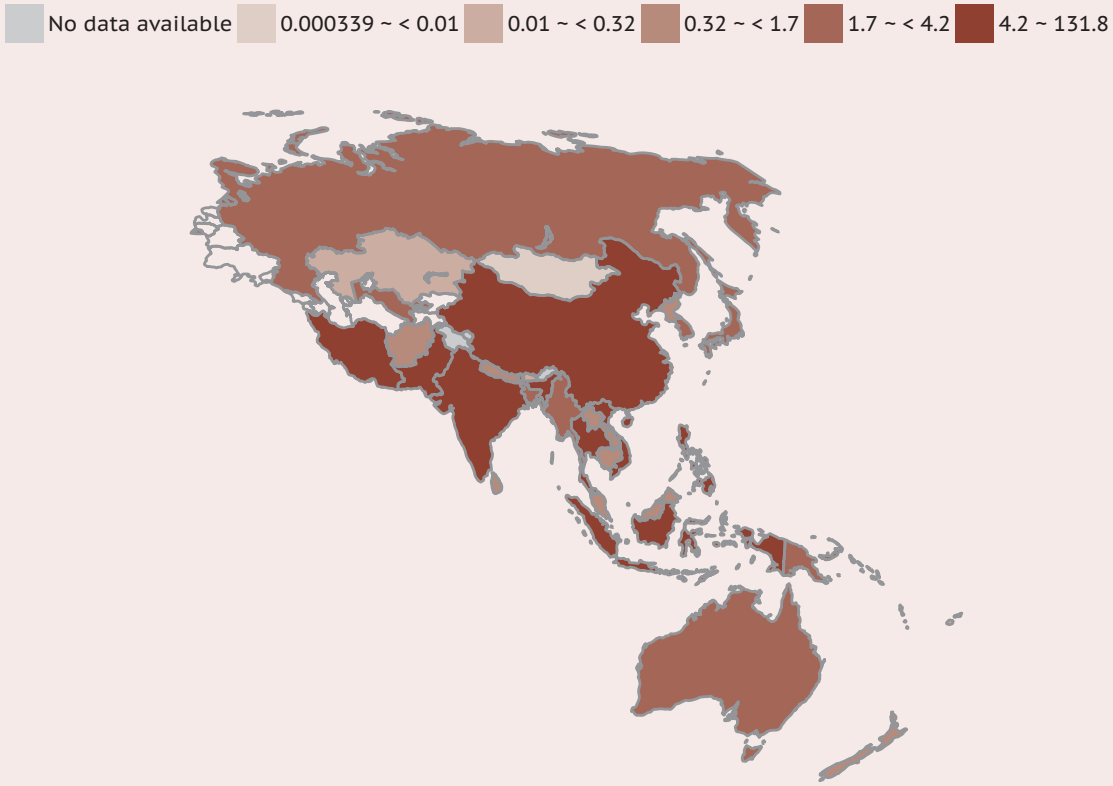
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

CHART 65: **Per capita vegetable production, including melons (2000-2011)**



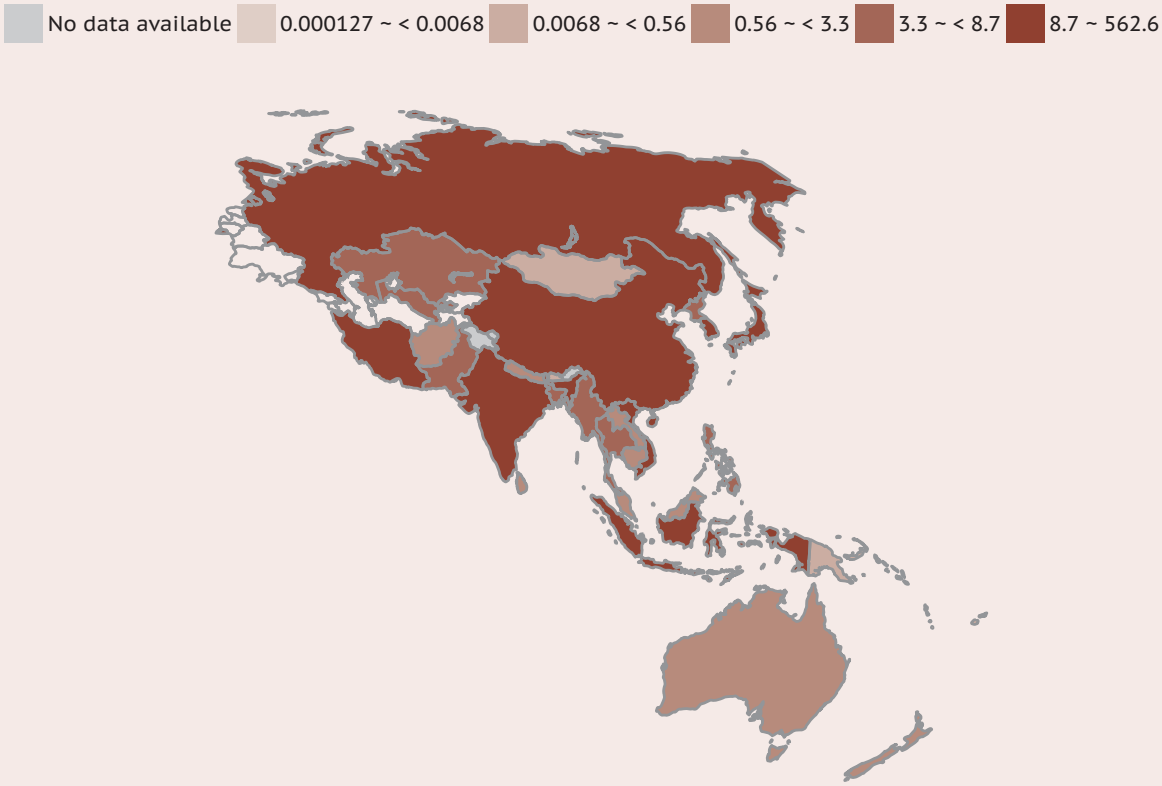
Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

MAP 42: **Fruit producing countries, excluding melons (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 43: **Vegetable producing countries, including melons (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

Trends in the livestock sector

A pronounced shift in diets towards meat and dairy products is driving animal production in Asia. Over the last decade, consumption of meat in the developing countries of Asia – where the bulk of the world population increase has taken place – has been growing by some 3.5 percent *per annum* and dairy product consumption by 4.4 percent.

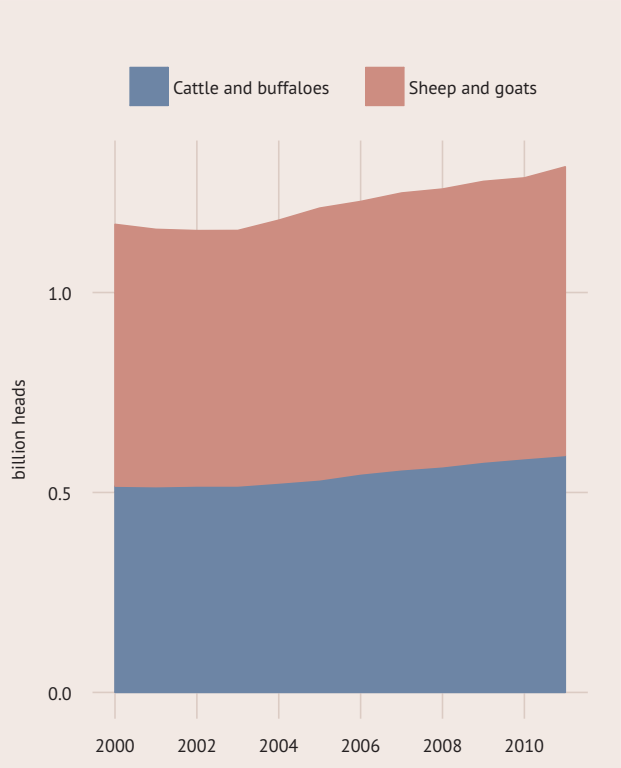
Poultry meat production rose at a rapid 5.3 percent *per annum* in the region in 2000-2011 as against much slower growth in the beef sector (2 percent) and in pig meat (3.4 percent). At the subregional level, expansion was greatest in Southeast Asia at 5.9 percent followed by Southern Asia at 3.1 percent. Currently, the region is home to some 1 billion poultry and about half as many cattle.

Meat production increased most in Myanmar at 14.5 percent *per annum* over the decade. The regional record for poultry growth went to Mongolia, with almost 22 percent per year (although from a very small base), followed by Malaysia at 15.6 percent. Very high poultry growth rates were also registered in the Russian Federation (12.9 percent), Nepal (9.8 percent), India (8.6 percent) and Pakistan (8.0 percent).

Aggregate output in the sector is affected by trends beyond the livestock sector, not only through the increase in livestock production itself, but also through the linkage of livestock production to the crop sector – which supplies feedstuffs, mainly cereals, crop by-products and oilseeds – and the fisheries sector.

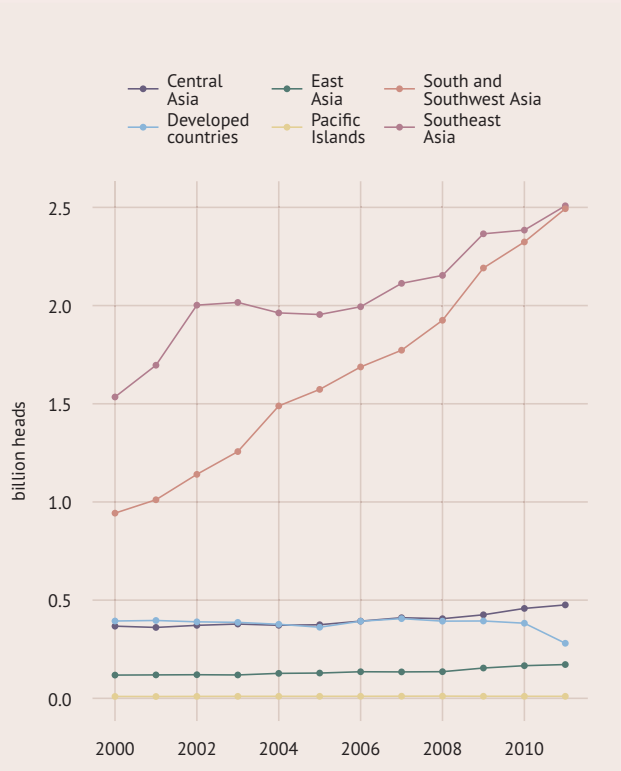
Despite the shift towards diversified diets, annual per capita meat consumption in Asia is still a quarter of that in North America at 30 kilograms/head versus 117 kilograms for Americans and Canadians. In some countries less than 10 kilograms/year are consumed compared with an average of 80 kilograms/year in developed countries. Cultural or religious reasons may sometimes explain this, but low productive capacities are, by and large, the main cause.

CHART 66: **Asia and Pacific stocks of cattle and buffalo, and sheep and goats (2000-2011)**



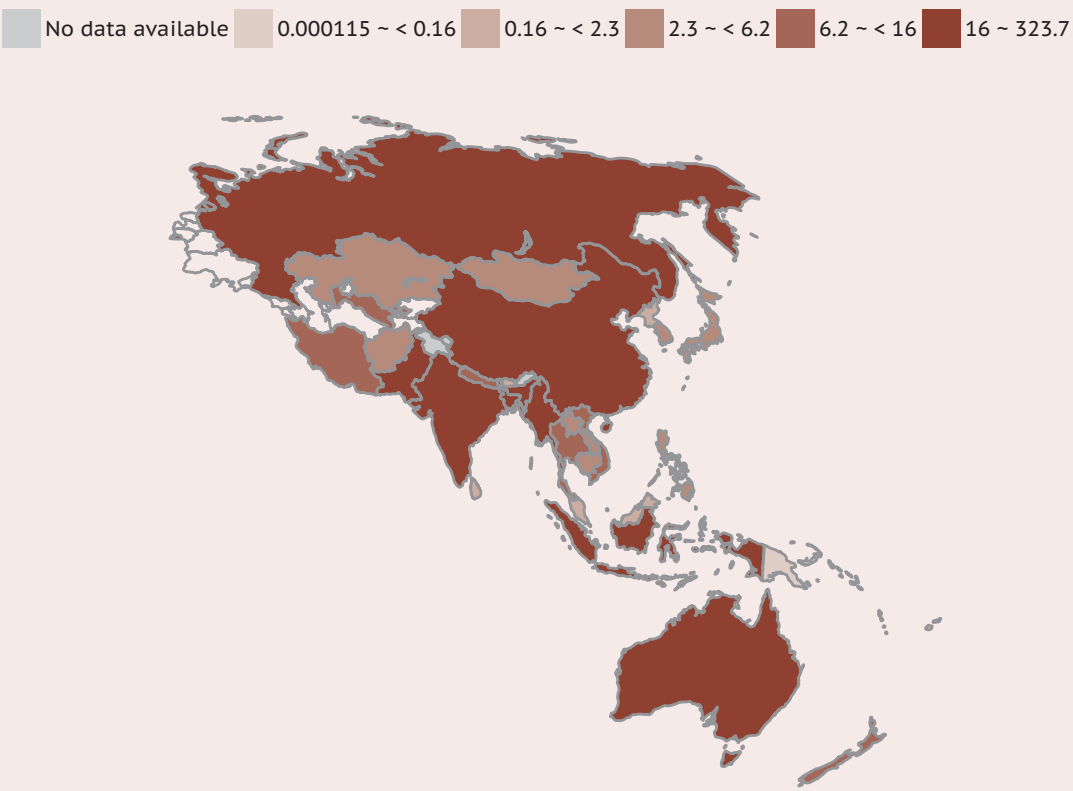
Source: FAO, Statistics Division (FAOSTAT).

CHART 67: **Stock of poultry birds (2000-2011)**



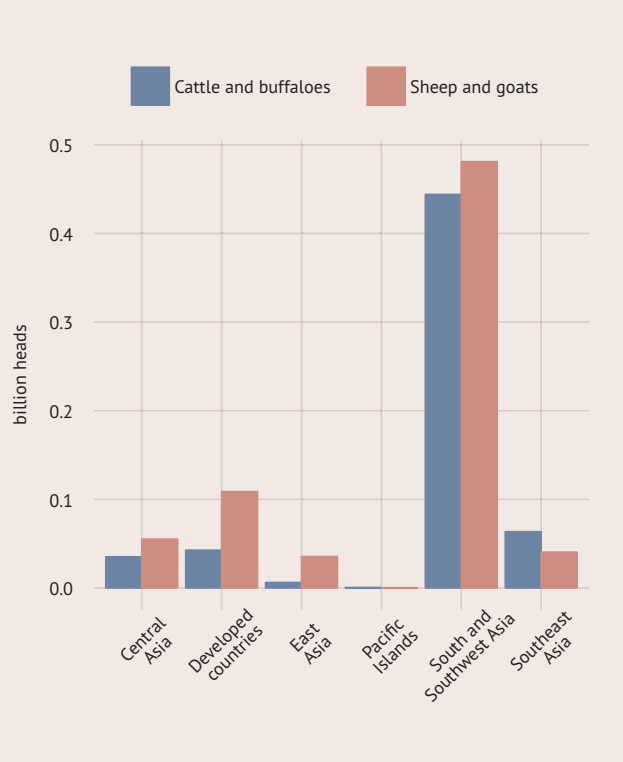
Source: FAO, Statistics Division (FAOSTAT).

MAP 44: **Stock of cattle and buffalo (million head, 2011)**



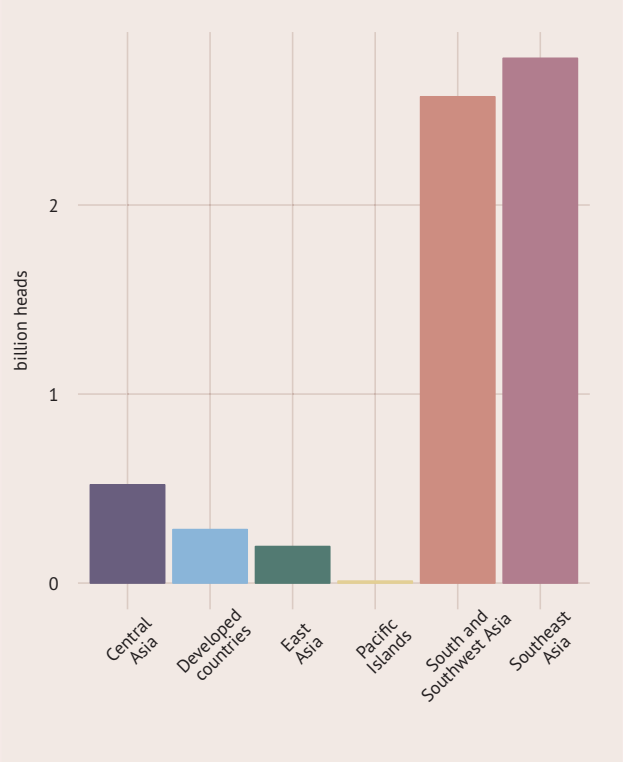
Source: FAO, Statistics Division (FAOSTAT).

CHART 68: **Stocks of cattle and buffalo, and sheep and goats (2011)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 69: **Stock of poultry birds (2011)**



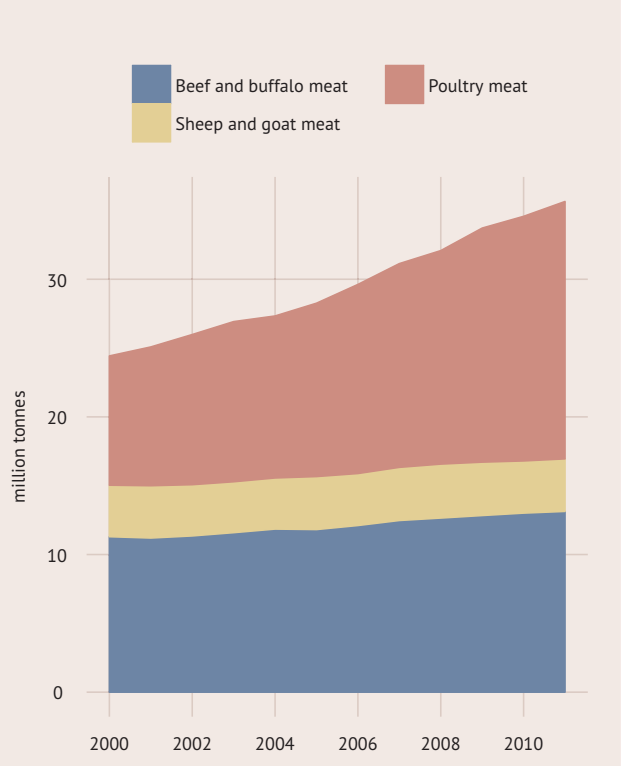
Source: FAO, Statistics Division (FAOSTAT).

The dairy sector has been expanding rapidly in the APR, with milk production increasing at 4.4 percent *per annum* over the last decade – twice the world rate. Milk consumption has doubled in China in the past decade with production in East Asia as a whole growing at 11 percent per year. Southeast Asia's growth rate has been a sustained 7.2 percent *per annum*, with production increasing by more than 13 percent per year in Viet Nam and growing rapidly in Myanmar and Malaysia.

Feed demand for cereals is often considered as a major element in the growth of the sector, especially in developed countries. Recently, however, particularly in developing countries, growth in livestock production has by far outstripped growth in compound feed demand. More meat, milk and eggs are being produced per kilogram of cereal-based feed, which points to productivity gains in livestock production.

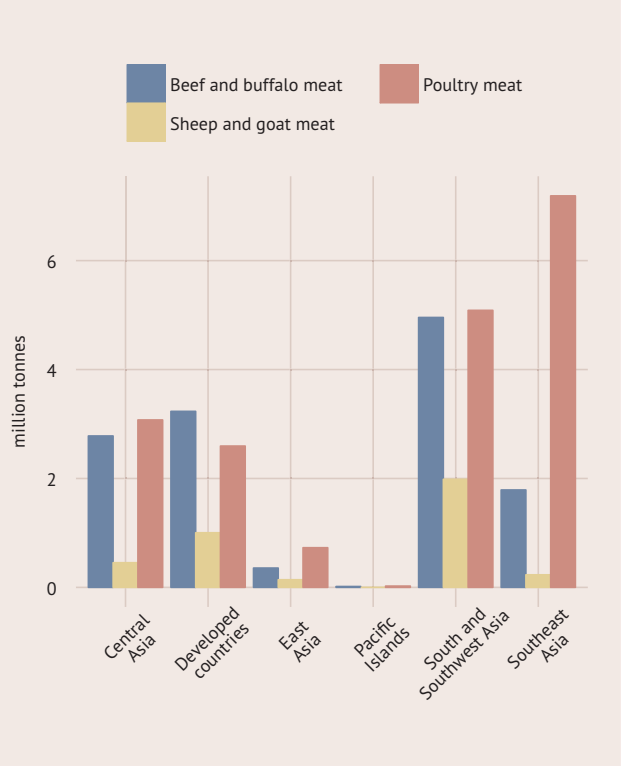
Some of these improvements are linked to changes in the composition of livestock populations; for example poultry require far smaller quantities of feed per kilogram of meat than cattle. Other forces have also led to a reduction in grain-meat ratios. Among these is the growing use of oilmeals in livestock feeding. World output of soybeans, which are mainly processed into oil and high-protein oilmeal, grew by more than 4 percent *per annum* in the last decade and by 5 percent in the 1990s. By implication, the production and consumption of soybean meal as feed has risen by the same levels, suggesting a relative increase in the feed use of oilmeals at the expense of feedgrains.

CHART 70: **Asia and Pacific meat production (2000-2011)**



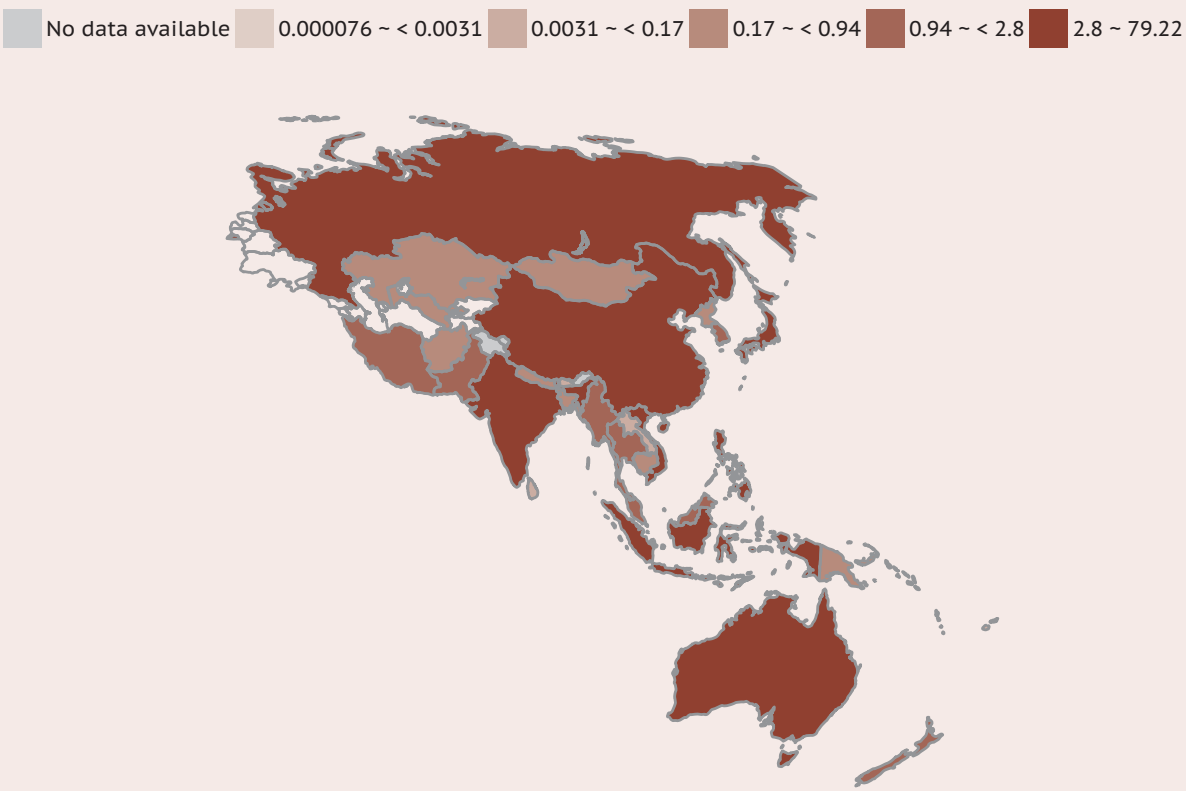
Source: FAO, Statistics Division (FAOSTAT).

CHART 71: **Meat production by type (2011)**



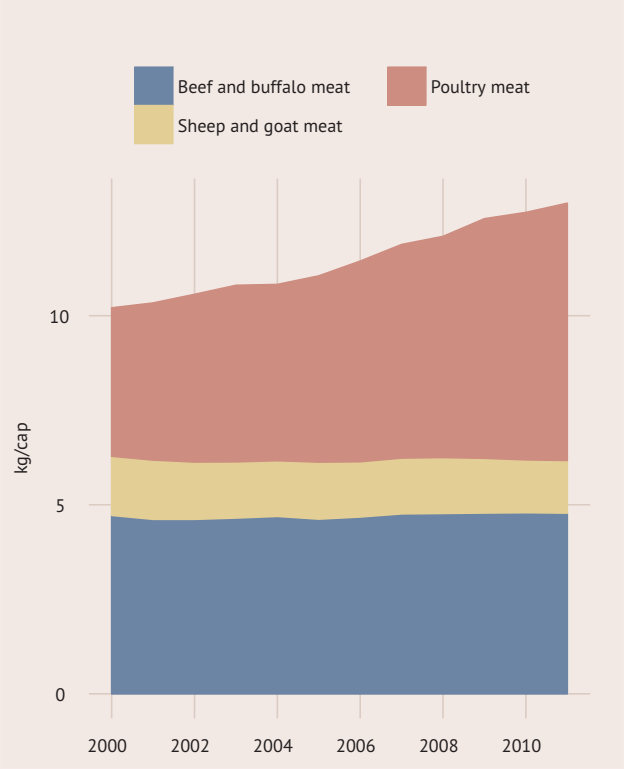
Source: FAO, Statistics Division (FAOSTAT).

MAP 45: **Meat producing countries (million tonnes, 2011)**



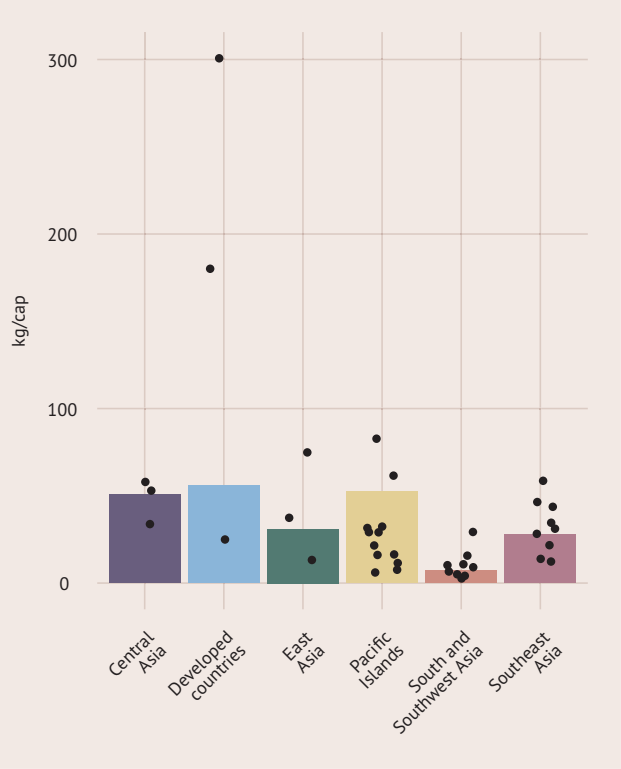
Source: FAO, Statistics Division (FAOSTAT).

CHART 72: **Asia and Pacific per capita meat production (2000-2011)**



Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

CHART 73: **Per capita total meat production (2011)**



Source: FAO, Statistics Division (FAOSTAT) and United Nations Population Division.

There are many key demands on, and challenges for, the livestock systems in the region. The key areas of importance include livestock system intensification, the roles of livestock in vulnerability reduction, the contributions of livestock to climate change and the emerging zoonotic disease threats associated with livestock. Some systems are evolving intensification processes rapidly, particularly in China, Thailand, Viet Nam and India. Other systems are static or struggling, but still providing a lifeline of livestock-associated livelihood support to poorer communities and households, and are unable to capitalize on the innovation and enterprise now widely available in the region.

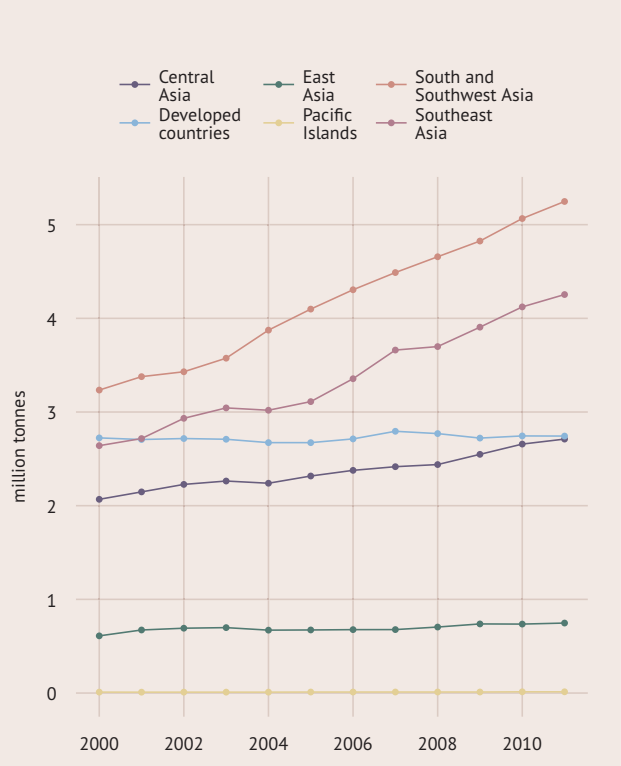
At the same time, the environmental and public health implications of concentrated intensive livestock production systems have come under increased scrutiny. Some of these include the emergence and spread of infectious diseases; the influx of high levels of drug residues into the environment; the emergence of antibiotic-resistant strains of bacteria because of the indiscriminate use of antibiotics; and adverse effects on the environment and local nutrient balance from large concentrations of waste products. There is also a vigorous public debate about livestock's role in greenhouse gas emissions and the role the livestock sector can play in climate change mitigation.

A number of policy forums have called for concerted and coordinated policy response to deal with these challenges but the response to such calls has been extremely inadequate. One reason for a poor policy response lies in the fact that the capacity to analyse livestock-related trade-offs between social, environmental and economic objectives and to design and negotiate smart policies to manage multiple objectives and balance conflicting interests is extremely limited in the region. The APR must therefore focus on the development of sector policy capacity and strategic guidance of public and private investment in the region.

Further reading

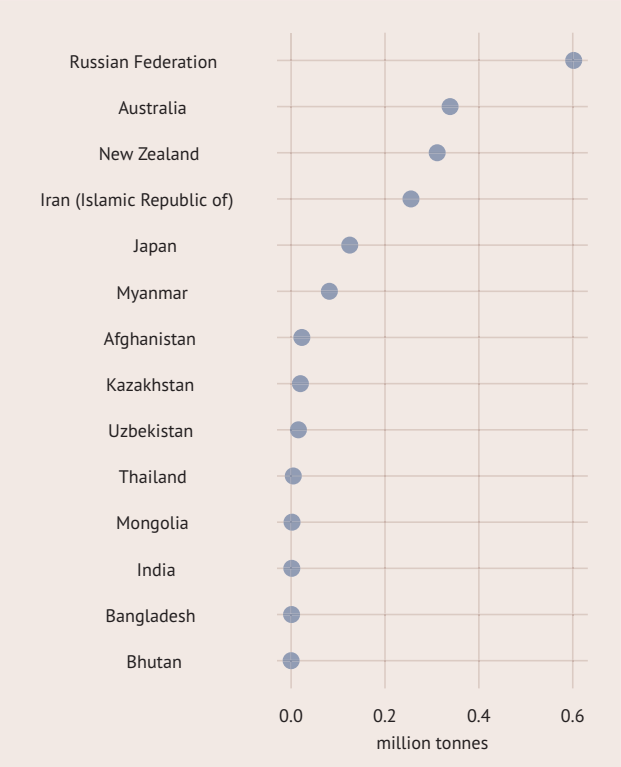
- FAO Animal Production and Health Division (www.fao.org/ag/portal/aga-index/en/)
- The State of Food and Agriculture 2009: Livestock in the balance (www.fao.org/publications/sofa-2009/en/)

CHART 74: **Egg production (2000-2011)**



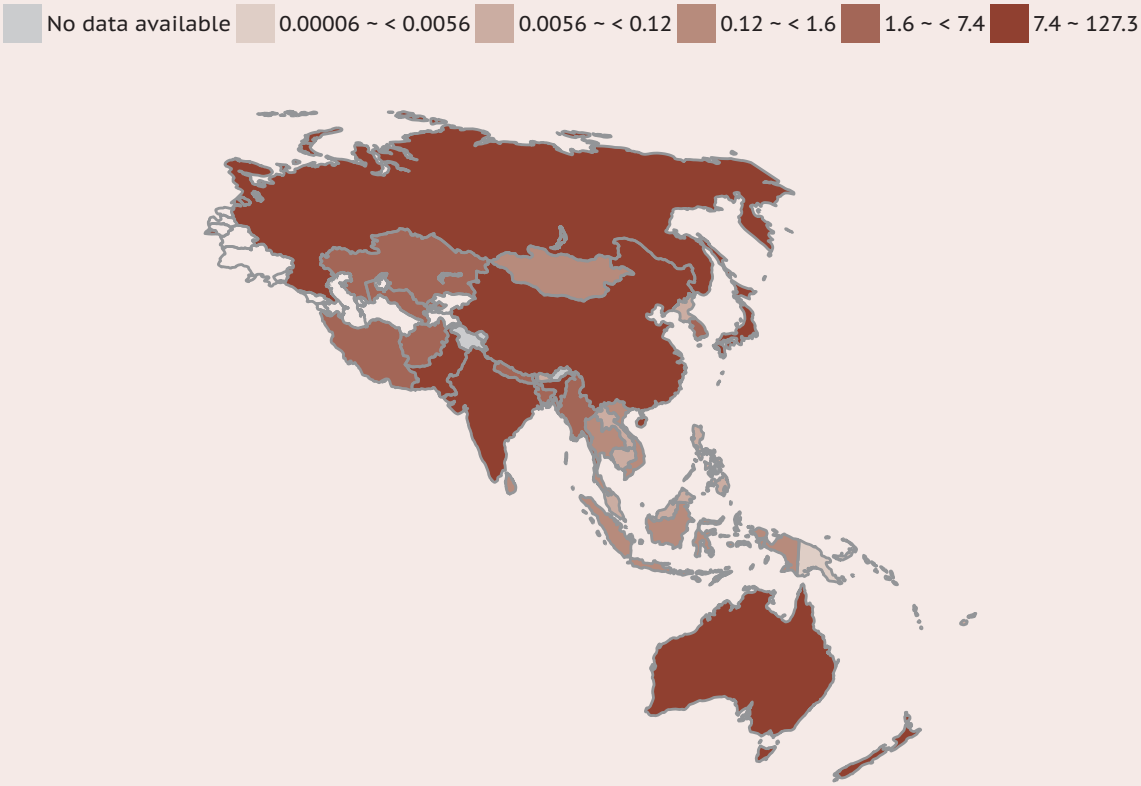
Source: FAO, Statistics Division (FAOSTAT).

CHART 75: **Cheese production (2011)**



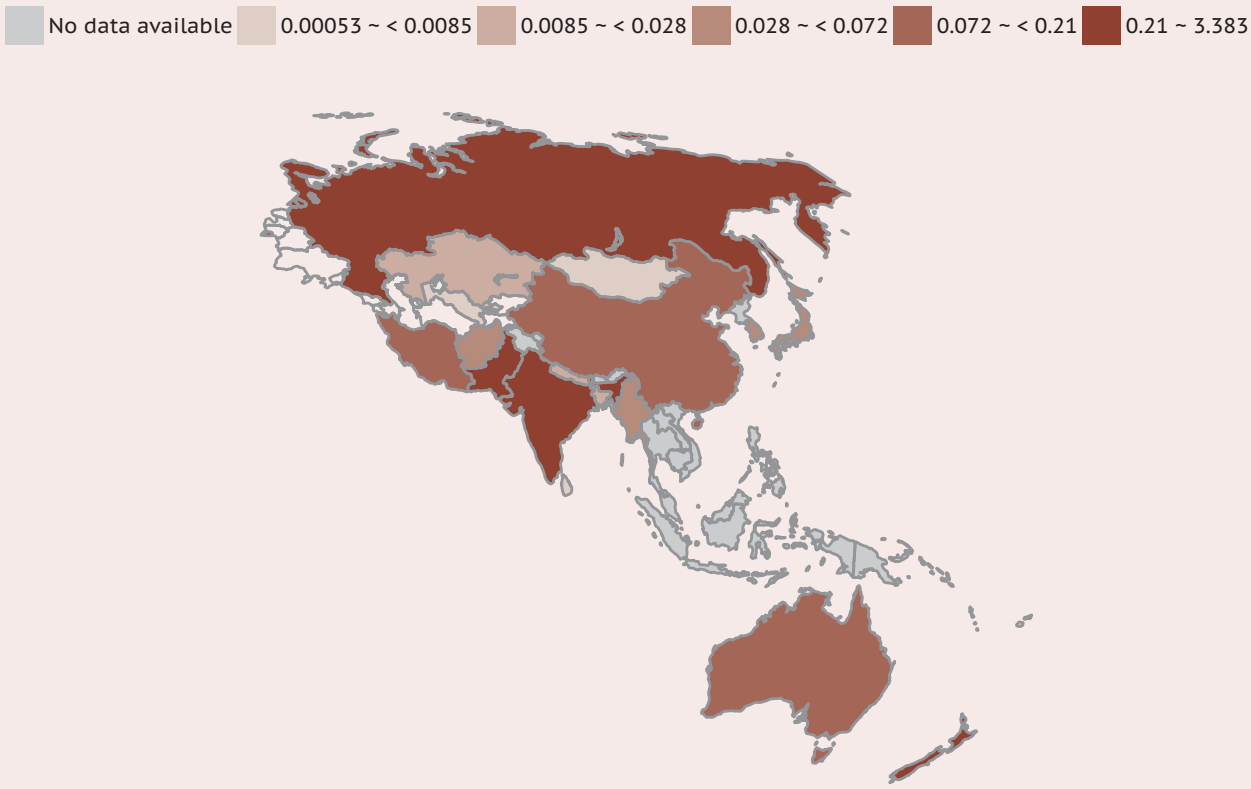
Source: FAO, Statistics Division (FAOSTAT).

MAP 46: **Milk production (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 47: **Butter and ghee production (million tonnes, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

Trends in the fisheries sector

In 2011, capture fisheries and aquaculture supplied the world with 178 million tonnes of fish, crustaceans and molluscs. The APR supplied 72 percent, dominating both world capture fisheries and aquaculture with shares of respectively 55 percent and 91 percent. The region, whose total catch in 2011 was 128.5 million tonnes, also accounted in that year for 69 percent of world inland capture fisheries at 7.6 million tonnes.

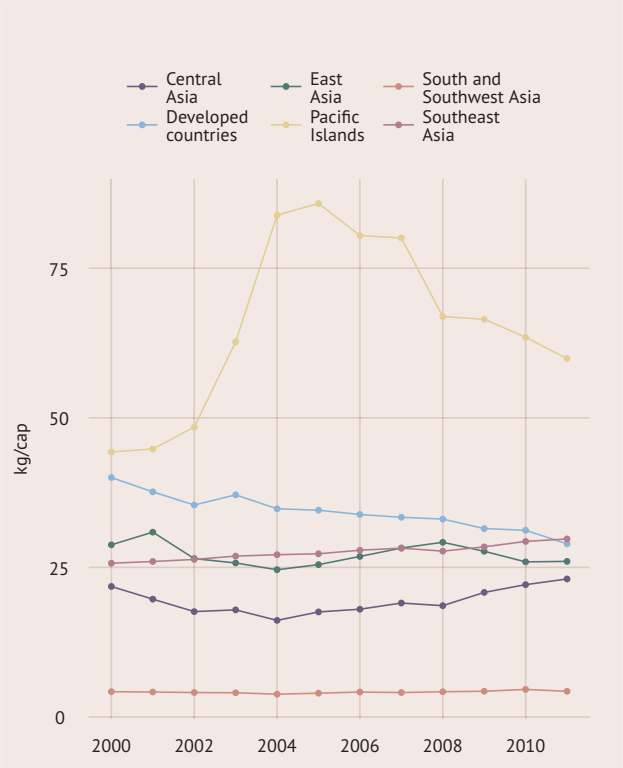
In 2010, four of the world's five top fishing nations were Asian – China, India, Indonesia and Japan – although China alone produced more than all the rest put together with a colossal 66 million tonnes, which was also more than half the entire regional catch.

Asia is the only region in the world that produces more farmed fish than wild fish – 76 million tonnes against 52 million tonnes in 2011. This is largely explained by China's huge fish-farming production of 50 million tonnes – more than twice as much as its capture fisheries. At the world level, aquaculture is the fastest-growing animal-based food production sector, propelled by the rapid growth of Asian aquaculture which expanded at 7 percent *per annum* in the first decade of the twenty-first century. Capture fisheries' production grew at a much more contained rate – 1.7 percent.

China's preponderance makes Eastern Asia the top fisheries producer among subregions, followed by Southeastern Asia, where Indonesia, Viet Nam, the Philippines and Myanmar are all major players. Together, the two subregions account for over 80 percent of the regional total.

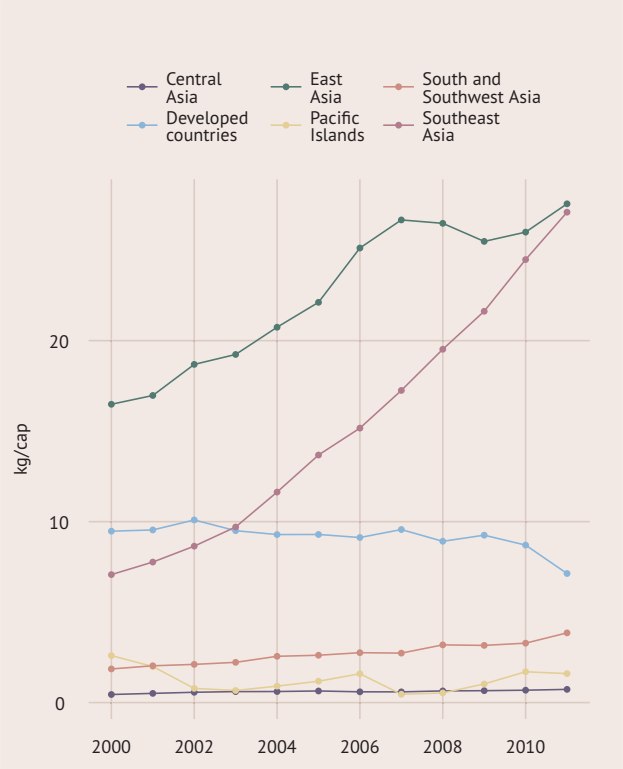
Underlying the aggregate production figures are some striking national success stories, especially regarding aquaculture. While the highest growth rates for capture fisheries among large fishing nations were achieved over the decade by Myanmar (11 percent), Bangladesh (5.6 percent) and Viet Nam (4 percent), double digit growth rates have not been unusual for aquaculture.

CHART 76: **Capture fish production, per capita (2000-2011)**



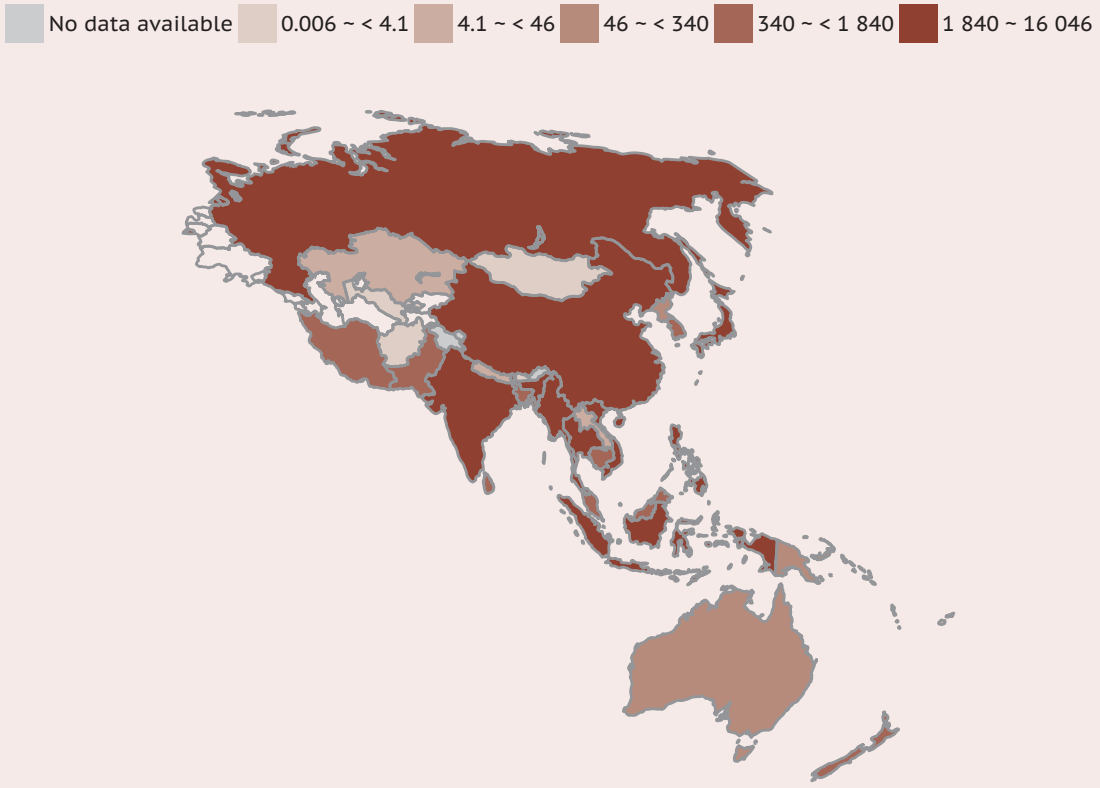
Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics) and United Nations Population Division.

CHART 77: **Aquaculture fish production, per capita (2000-2011)**



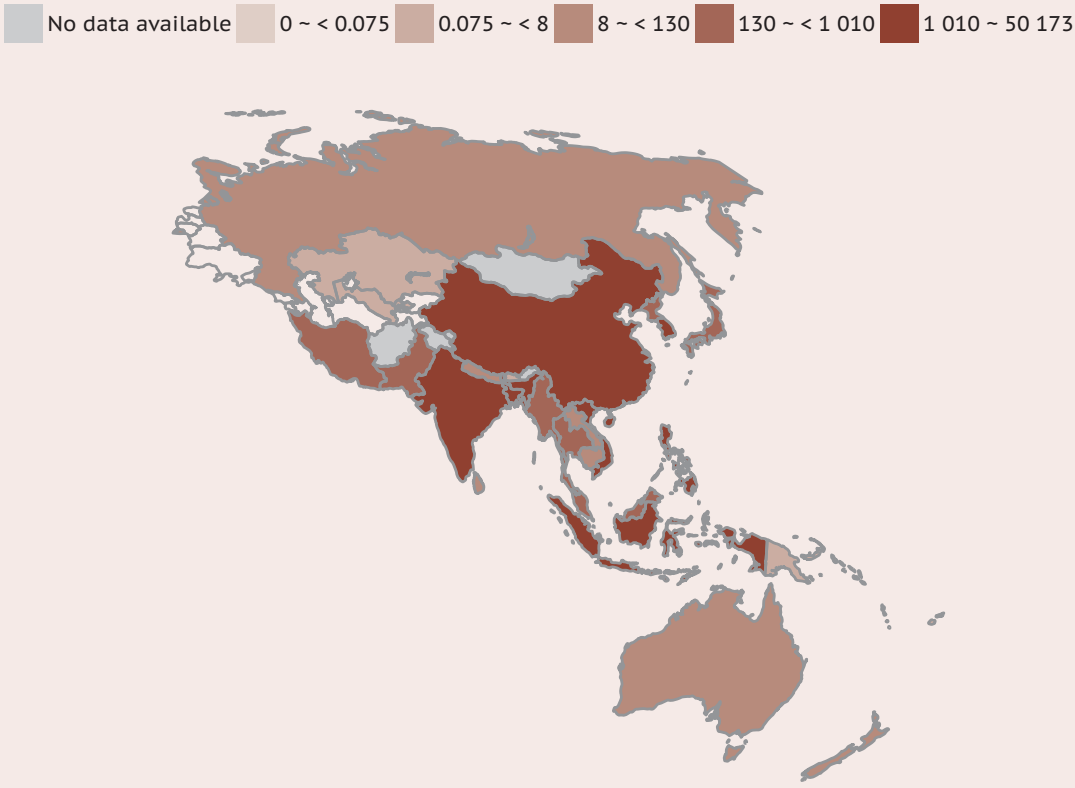
Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics) and United Nations Population Division.

MAP 48: **Capture fish producing countries (thousand tonnes, 2011)**



Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics).

MAP 49: **Aquaculture producing countries (thousand tonnes, 2011)**



Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics).

Aquaculture production grew most in Myanmar. Viet Nam grew at 18.3 percent *per annum* while Indonesia achieved 11.3 percent followed by Malaysia (9.4 percent) and India (9.1 percent). Some other countries such as the Islamic Republic of Iran registered growth rates close to 20 percent but from a much smaller base.

Aquaculture growth continues to outpace population growth. Great strides in breeding technology, system design and feed technology in the second half of the twentieth century enabled the expansion of commercially viable aquaculture across species and in volume. China alone accounts for more than 60 percent of global aquaculture production, while Asia as a whole provides about 90 percent.

Most of the landed fish that are not used for direct human consumption are processed into fishmeal and oil for use as animal feed, mainly for carnivorous aquatic species (such as shrimp, salmon, trout, eels, sea bass and sea bream), but also for pigs, chickens, household pets, cattle, etc.

Of the 126 million tonnes of fish available as human food in 2009 , two-thirds, or 85.4 million tonnes were consumed in Asia, of which 48 million tonnes, or about half, were eaten in China. Per capita intake in Asia is currently 20.7 kilograms *per annum*, largely due to China's annual consumption of 31.9 kilograms per person. This compares with 24.6 kilograms in Oceania, 24 kilograms in North America and 22 kilograms in Europe. Latin America and the Caribbean and Africa respectively consume 9.9 and 9.1 kilograms per capita per year.

China has been responsible for most of the increase in per capita fish consumption owing to the substantial increase in its production. China's share in world production grew from 7 percent in 1961 to 37 percent in 2011.

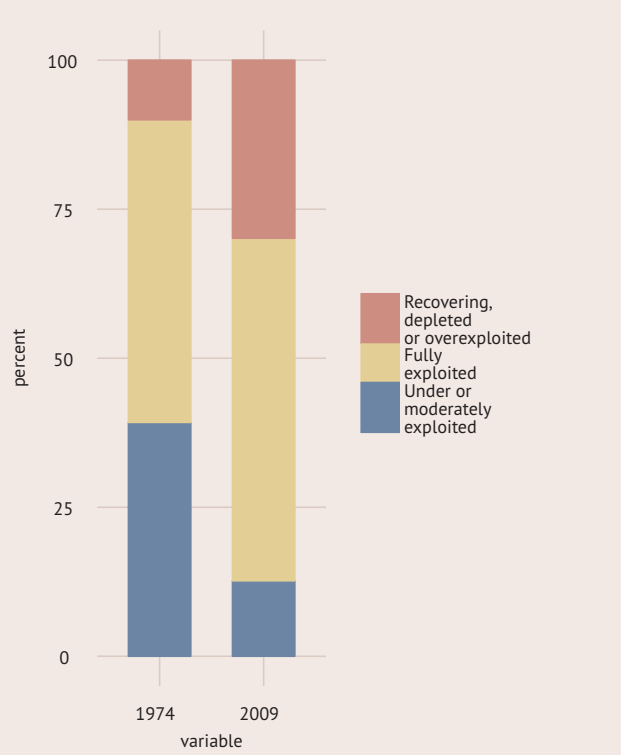
Worldwide, capture fisheries and aquaculture provide a source of income and livelihood for 55 million people through direct employment; overall there are more than 220 million jobs in the fish industry – 85 percent of them[4] in the APR. In Asia, millions of rural dwellers, women in particular, are involved in seasonal or occasional fishing activities and have few alternative sources of income and employment.

Further reading

- FAO The State of World Fisheries and Aquaculture (SOFIA) (www.fao.org/fishery/sofia/en)
- FAO Fisheries and Aquaculture Department (www.fao.org/fishery/en)

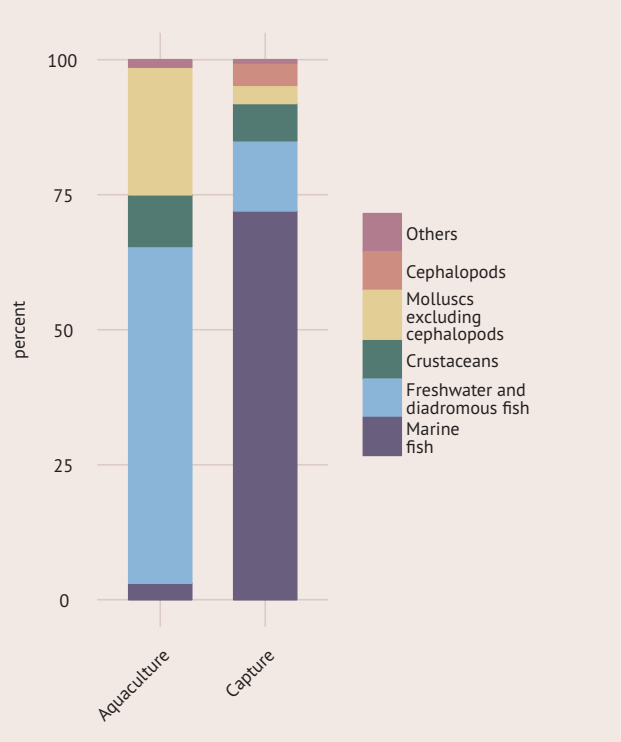
[4] http://www.fao.org/fishery/topic/13827/en

CHART 78: **State of the world's fishery stocks (1974-2010)**



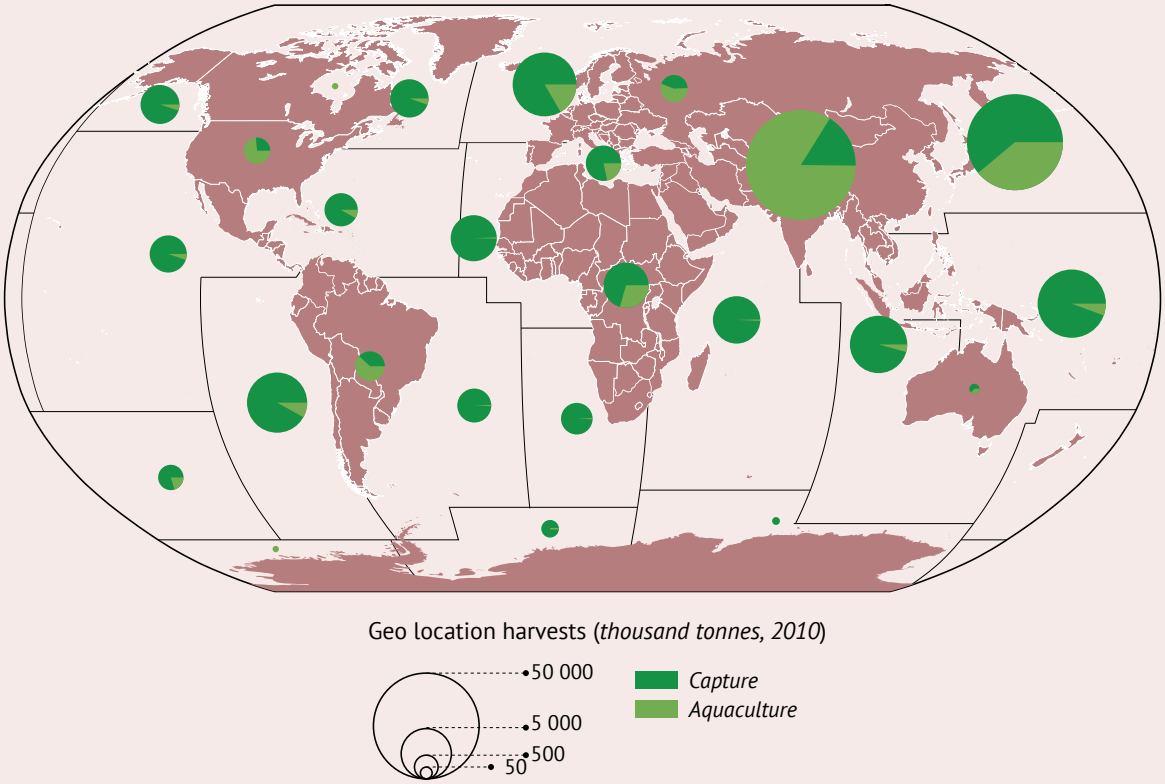
Source: FAO, Fisheries and Aquaculture Department (fishery and aquaculture statistics).

CHART 79: **Composition of fish products (2010)**



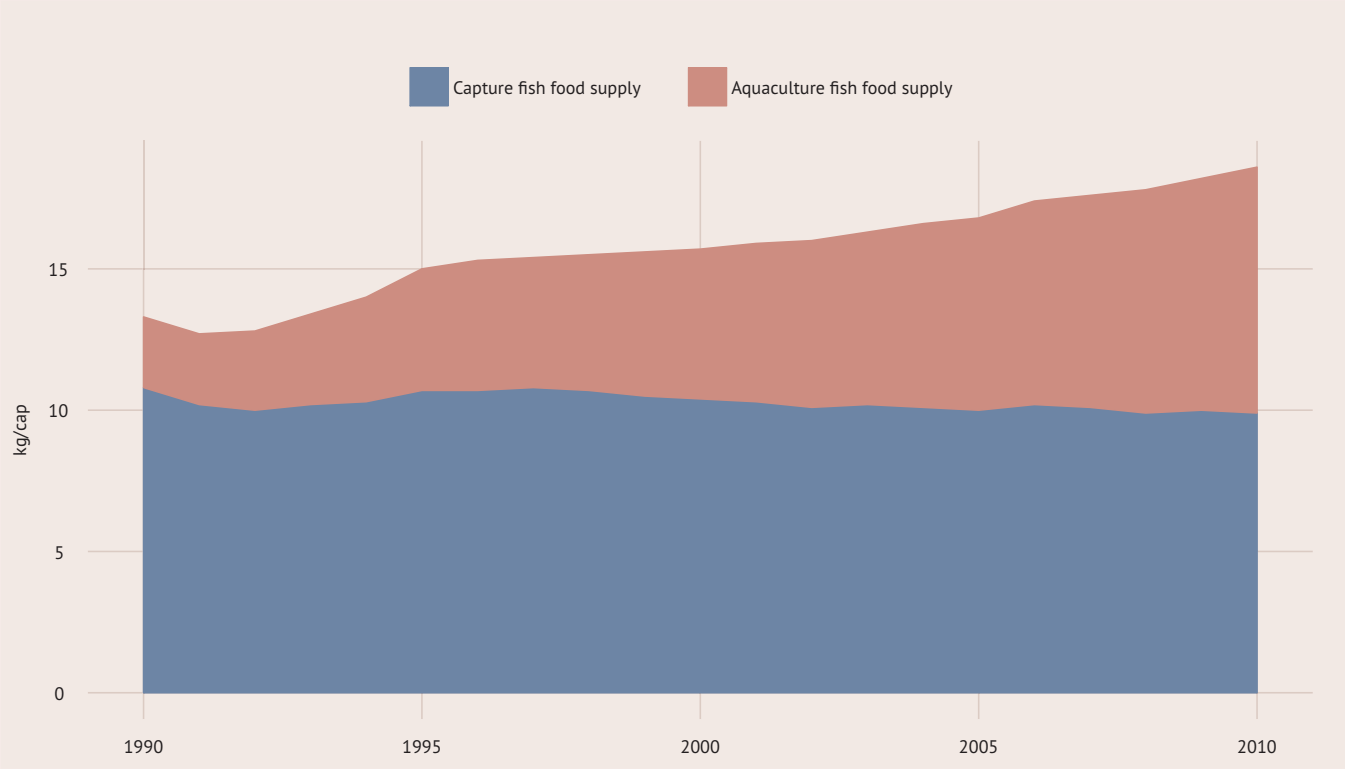
Source: FAO, Fisheries and Aquaculture Department (fishery and aquaculture statistics).

MAP 50: **Geo-location of harvests by capture and aquaculture (thousand tonnes, 2010)**



Source: FAO, Fisheries and Aquaculture Department (fishery and aquaculture statistics).

CHART 80: **Per capita world fish food supply (1990-2011)**



Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics) and United Nations Population Division.

Trends in agricultural trade

The value of international trade flows has increased around five-fold in real terms over the past 50 years, reflecting global trends in the overall volume of trade. However, this expansion has been unevenly distributed across regions. For much of the period, high-income countries outpaced developing regions, although several of the latter have comparative advantages in food and agricultural production.

While agricultural trade is expanding in the APR it only accounted for 20 percent of global agricultural trade in 2009.[5] According to the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) intra-regional agricultural trade in the APR has been growing faster than trade with the rest of the world. In 2008 more than half of APR food exports were within the region followed by the European Union (15 percent) and the United States (10 percent). Asia-Pacific exports within the region rose from about US$66 billion in 2004 to US$118 billion in 2008 but were led by a small number of countries.

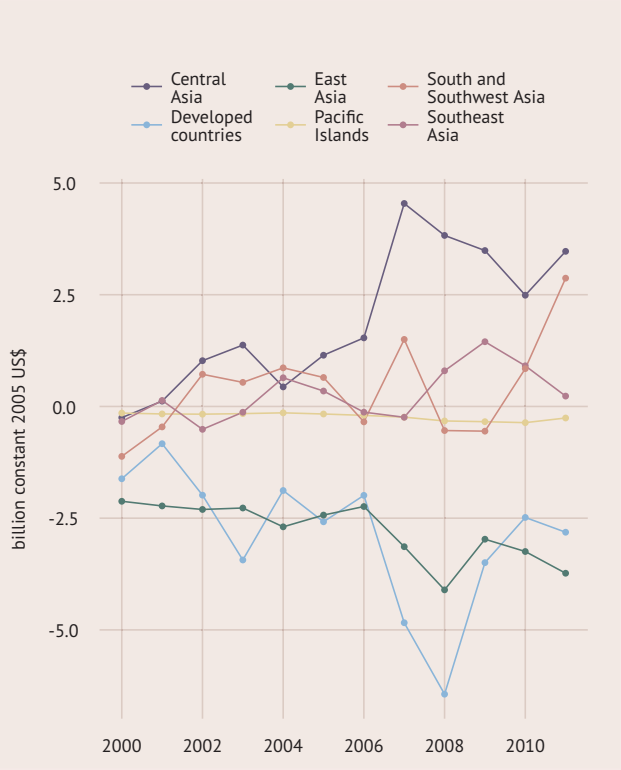
In general, production growth rates in most developing countries of the region have lagged slightly behind demand leading to a growth in agricultural imports and consequent trade deficits. In 2009 the APR as a whole ran a US$63 billion agricultural trade deficit led by Japan with a US$57 billion shortfall. China imported twice as many agricultural commodities that year – US$57.7 billion as against US$29.56 billion.

But some countries in the region have become major exporters of agricultural produce and are running healthy trade surpluses. They include Indonesia, which exported US$21.2 billion of agricultural produce in 2009, Thailand (US$20.5 billion) and Malaysia (US$18.4 billion). China's exports doubled in 1999-2009 – but its imports rose fivefold.

A similar trend is evident with cereals where, in 2010, the region as a whole ran an 18 million tonne deficit. Of the subregions, only Central Asia showed a cereal trade surplus.

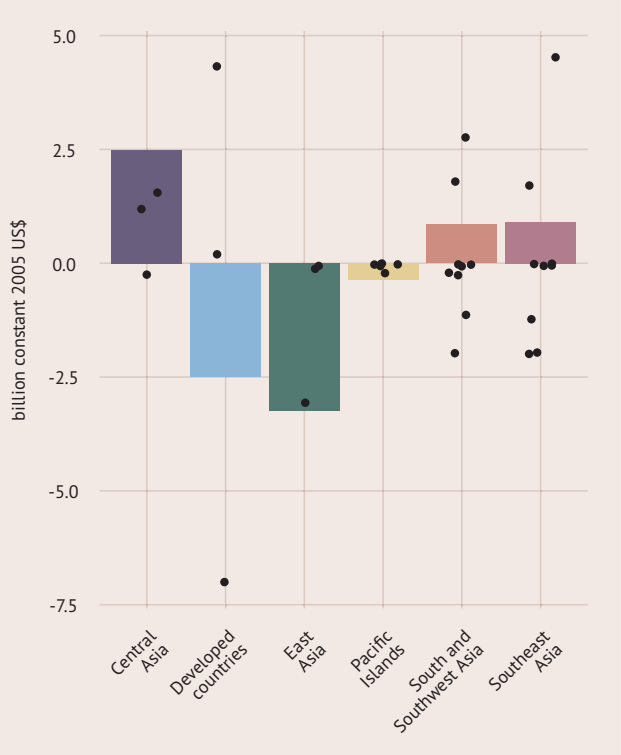
[5] http://www.fao.org/docrep/014/i2371e/i2371e01.pdf

CHART 81: **Cereal net trade (2000-2011)**



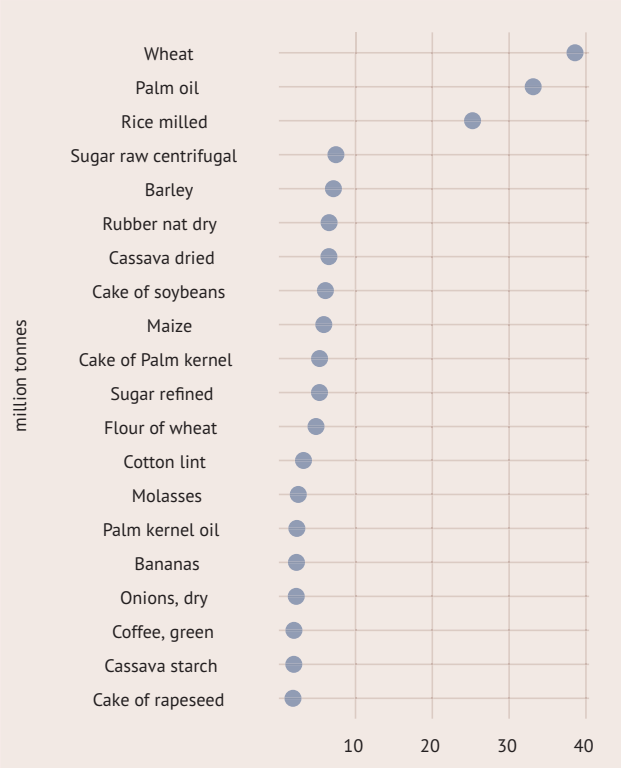
Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 82: **Cereal net trade (2010)**



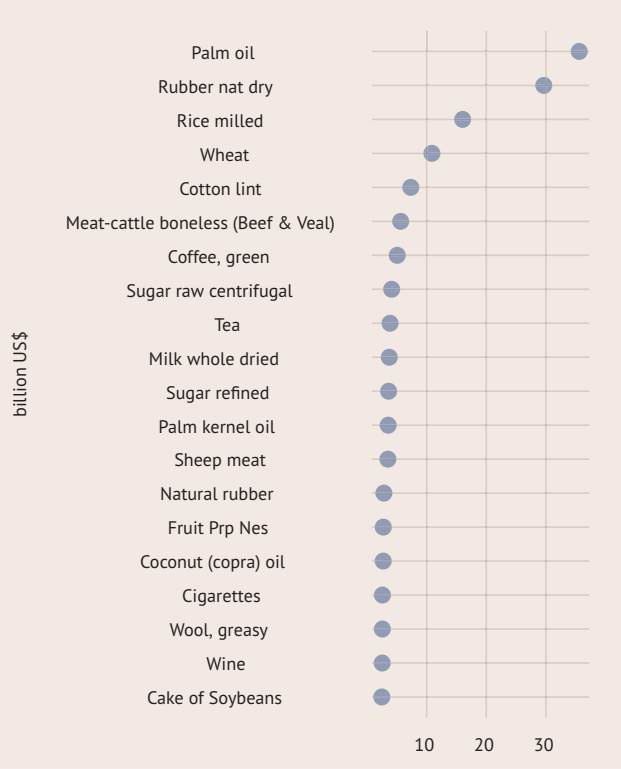
Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 83: **Top 20 exported commodities, quantity (2011)**



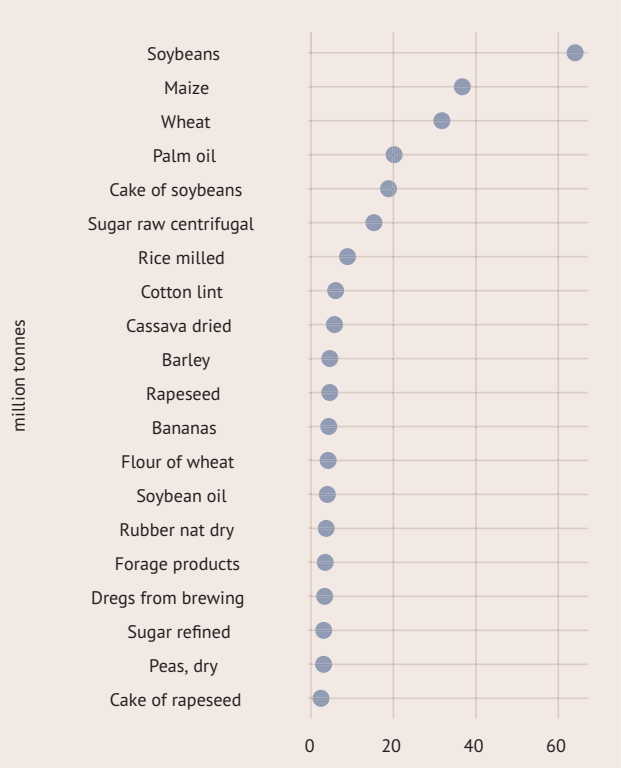
Source: FAO, Statistics Division (FAOSTAT).

CHART 84: **Top 20 exported commodities, value (2011)**



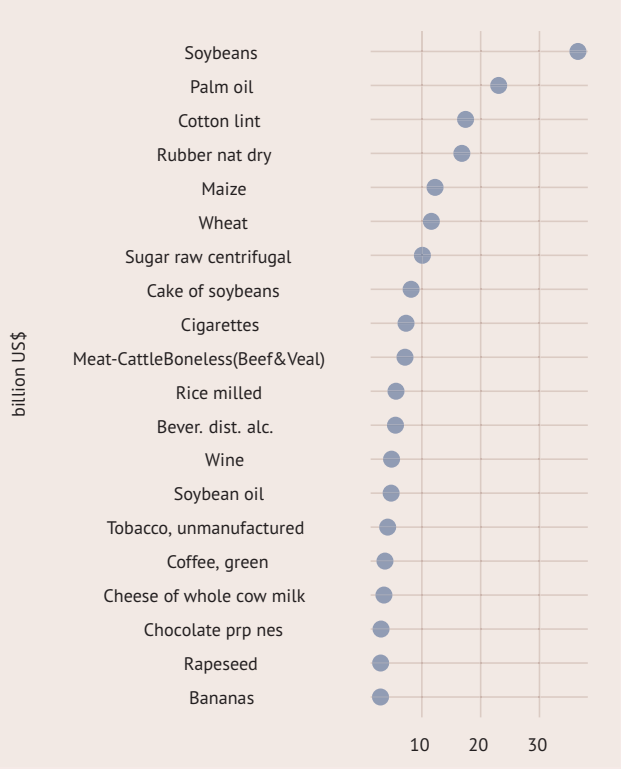
Source: FAO, Statistics Division (FAOSTAT).

CHART 85: **Top 20 imported commodities, quantity (2011)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 86: **Top 20 imported commodities, value (2011)**



Source: FAO, Statistics Division (FAOSTAT).

The only net cereal exporters in the region in 2010 were, in order of importance, Australia, the Russian Federation, Thailand, Kazakhstan, Viet Nam, India and Pakistan. All these countries, apart from Australia, have significantly increased their cereal exports in the last decade. In 2010 all the Asia-Pacific subregions except Central Asia – where the Russian Federation and Kazakhstan are important cereal exporters – ran a deficit in cereal trade.

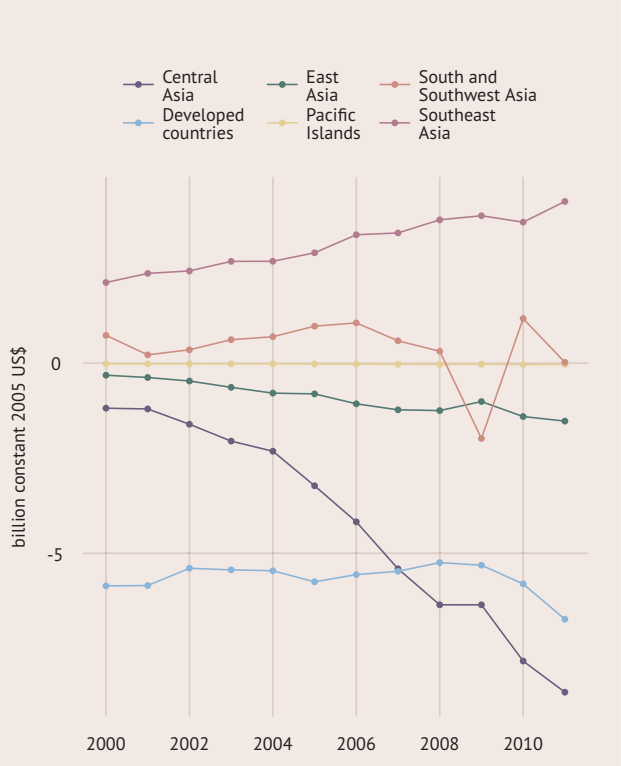
Contributing to the overall net deficit of the region are China and Japan's large-scale imports of agricultural products over the last decade. Japan is a major cereal importer. China, as noted before, is heavily dependent on imports of agricultural products, especially raw materials and primary commodities.

Fruit and vegetables have witnessed consistent increases in the export positions of many countries. This sector has become the most important in value terms. From 2000 to 2010, the fruit and vegetables sector had grown by more than 11 percent per year at the global level and by 17 percent in Asia, where exports were worth US$51 billion in 2011 as against US$12.8 billion in 2000 Europe continues to be the largest exporter, however.

International trade in vegetable oils has also grown rapidly, at 17 percent per year. Asian countries accounted for more than half of global exports in 2010, because of rapidly rising net exports from countries such as Malaysia and Indonesia.

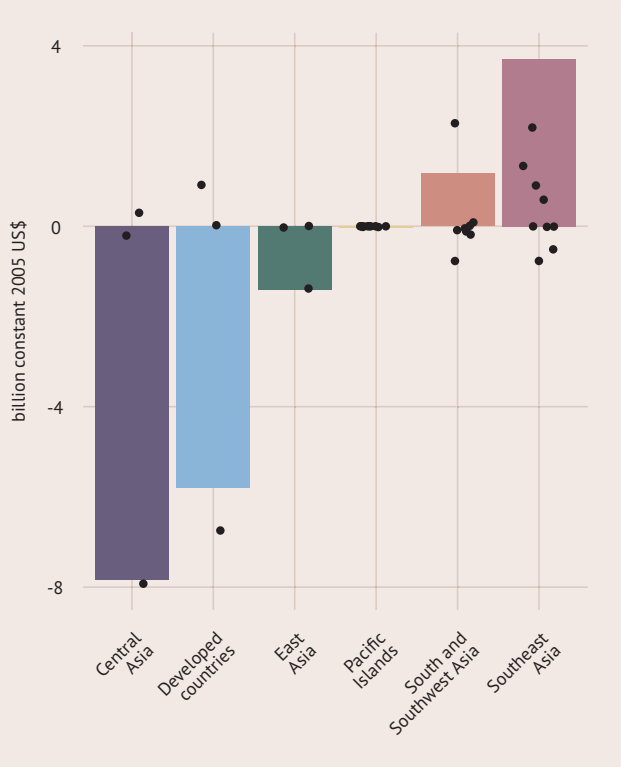
Globally, sugar and honey exports grew by 11 percent over the last decade. Export growth in the APR was only 3 percent – from 13.9 to 14.4 million tonnes in 2000. Oilseed trade also grew very quickly. In 2000 Asia accounted for more than half of world oilseed imports, with much of the demand coming from China, where imports increased from 13 million tonnes in 2000 to 57 million tonnes in 2011, largely reflecting increased demand for animal feed.

CHART 87: **Fruit and vegetables net trade (2000-2011)**



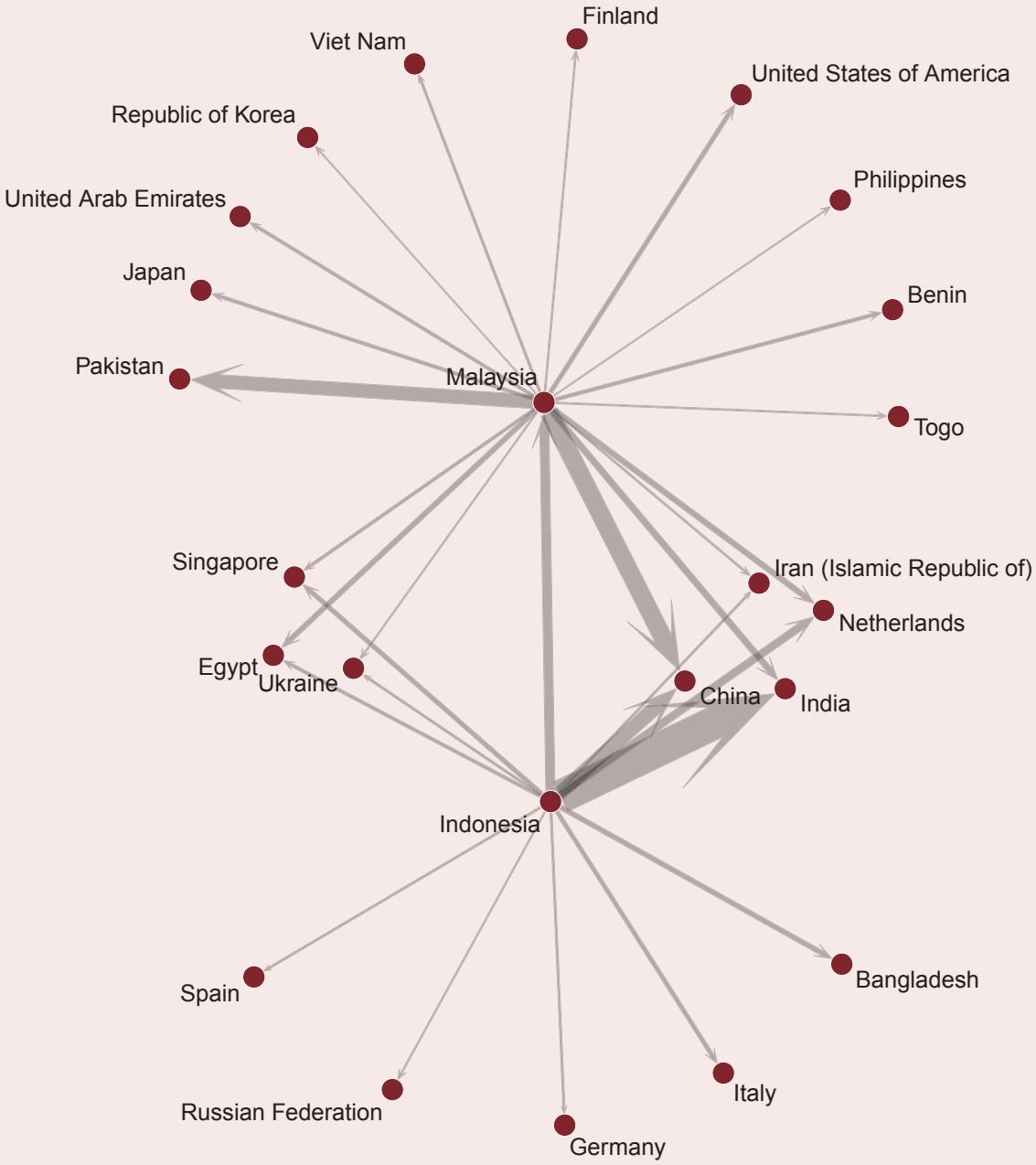
Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 88: **Fruit and vegetables net trade (2010)**



Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 89: **Major export flows of palm oil from Asia and Pacific countries (US$, 2010)**



Ten largest export flows of palm oil

Exporting country	Importing country	Million US$
Indonesia	India	4340.22
Malaysia	China	2380.49
Indonesia	China	1868.34
Malaysia	Pakistan	1808.23
Indonesia	Malaysia	1210.76
Indonesia	Netherlands	1005.52
Malaysia	India	823.18
Malaysia	Netherlands	723.33
Malaysia	Egypt	656.54
Indonesia	Bangladesh	626.73

Source: FAO, Statistics Division (FAOSTAT).

The flows cover eighty-five percent of the exports of palm oil from Asian and Pacific countries.

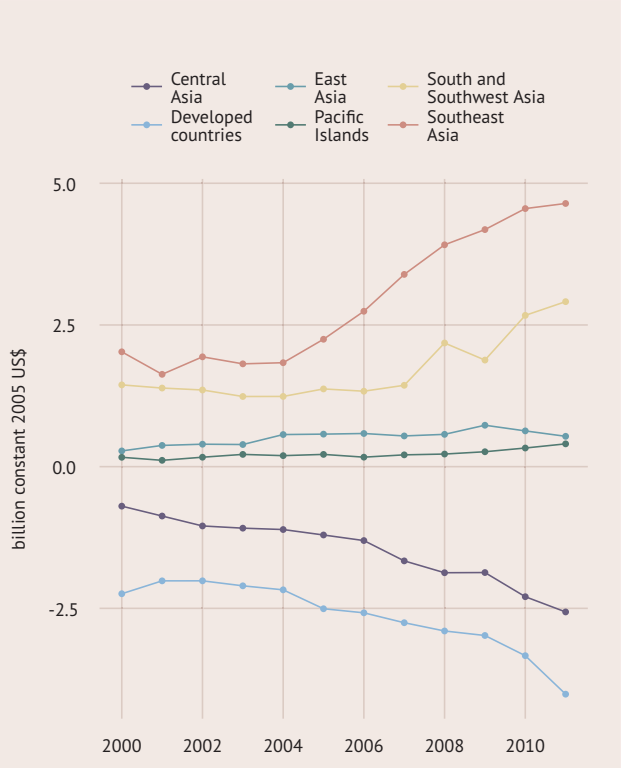
In many emerging economies, agriculture has been gradually moving towards increased commercialization of high-value foods, such as poultry, pork and fish. For poultry and fish, trade expansion has far outpaced domestic consumption. The total value of net fishery exports from the APR – US$51.4 billion in 2011 – now exceeds the total value of traditional mainstays of agricultural exports, such as coffee, tea and sugar.

For meat, regional imports were nearly twice the volume of imports in 2010 – 5 million tonnes against 9 million tonnes, with imports growing significantly faster than exports in the 2000-2010 period. Dairy products told a similar story, although the trade gap was much smaller – 1.5 million tonnes in 2010. Dairy imports rose more than 70 percent during the decade, from 12.5 million tonnes to 22 million tonnes. Exports increased 36 percent from 16 million tonnes to 20 million tonnes.

Asia-Pacific exports of coffee almost quintupled from 2000 to 2011, from US$1.1 billion to US$4.8 billion, reflecting a strong global expansion in the sector. Tea doubled from US$1.8 billion to US$4.1 billion.

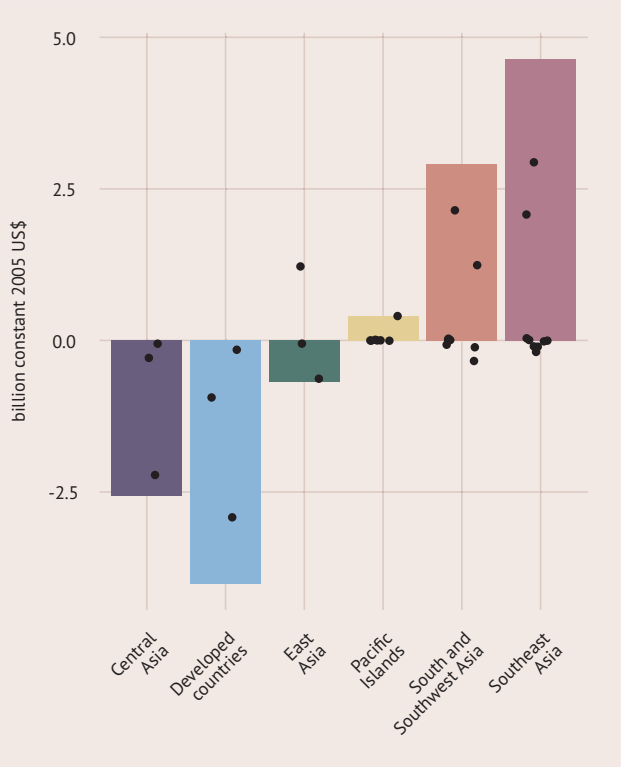
Increased trade integration has provided consumers with a greater variety of products at lower prices, produced through increasingly complex value chains. However, the distribution of benefits along value chains can be quite uneven. In the case of coffee, for instance, in the 1970s it was estimated that only about 20 percent of the total value of the final product was retained by primary producers, while companies from consuming countries retained about 50 percent. In recent years, this asymmetry has increased: the value share retained by primary producers is thought to have dropped to about 10 percent, while that retained by companies in consuming countries surged to more than 75 percent.

CHART 90: **Net trade of coffee, tea, cocoa, and spices (2000-2011)**



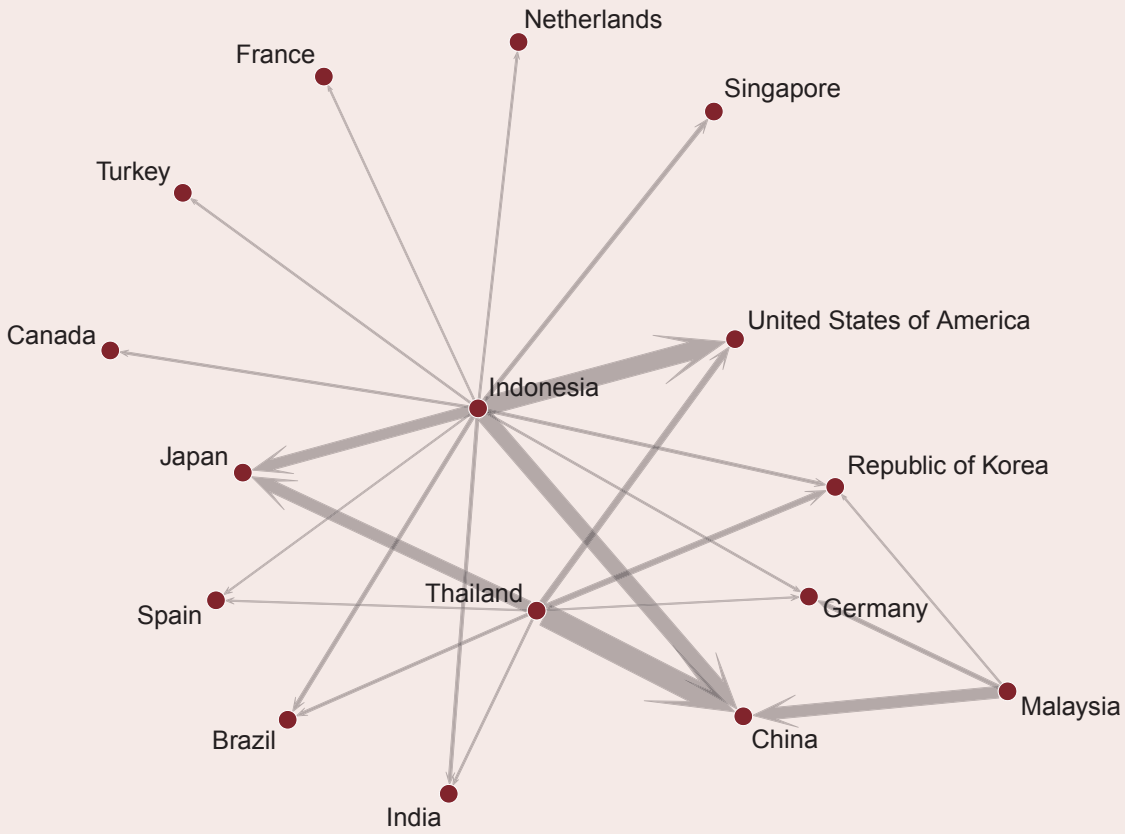
Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 91: **Net trade of coffee, tea, cocoa, and spices (2011)**



Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 92: **Major export flows of rubber nat (dry) from Asia and Pacific countries (US$, 2010)**



Ten largest export flows of rubber nat dry

Exporting country	Importing country	Million US$
Thailand	China	2115.62
Indonesia	United States of America	1695.92
Indonesia	China	1396.37
Malaysia	China	1092.96
Thailand	Japan	1080.46
Indonesia	Japan	972.38
Thailand	United States of America	551.55
Thailand	Republic of Korea	504.6
Malaysia	Germany	372.58
Indonesia	Singapore	359.31

Source: FAO, Statistics Division (FAOSTAT).

The flows cover eighty percent of the exports of rubber nat (dry) from Asia and Pacific countries.

The prospects for Asia-Pacific countries to benefit substantially from international trade depend on several complex factors. Increasing product differentiation, safety requirements and concerns about the carbon footprints of products are likely to bring about significant costs for exporters. For developing countries, access to foreign markets may demand increased investments; and policies for promoting exports will need to look well beyond tariffs and subsidies towards the establishment of standards and producers' networks.

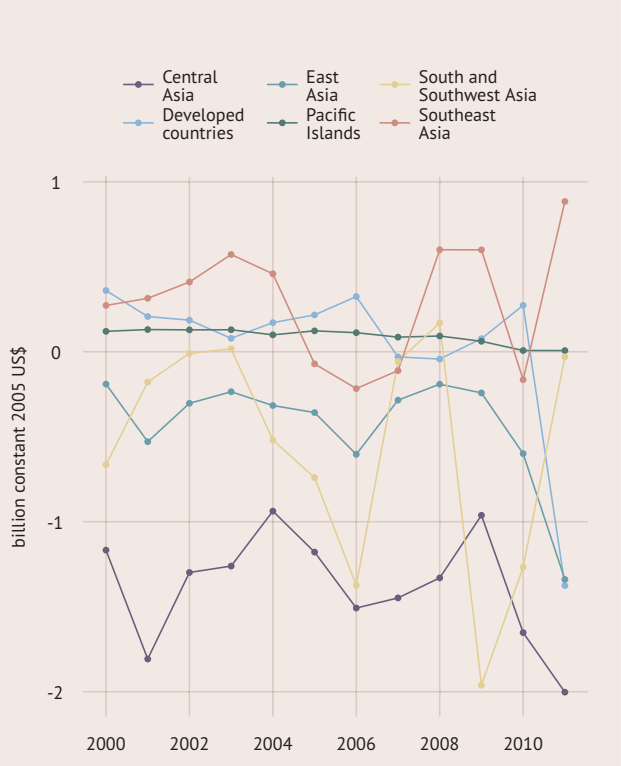
In general, the agricultural trade balance is a poor predictor of economic performance. For some countries, a declining agricultural trade balance is associated with economic development and progress towards more diversification and increased welfare. For example, in the Republic of Korea a growing agricultural deficit has gone hand-in-hand with high growth rates, economic development and increased food consumption. A declining balance can also reflect rapid demand growth, such as in China, where increasing importats of oilseeds and vegetable oils contributed to improved food consumption and was paid for by rapidly growing earnings from exported manufactured products.

On the other hand, a declining agricultural trade balance can also be associated with negative economic and developmental outcomes, such as in countries that depend heavily on shrinking export earnings and are forced to divert scarce foreign exchange to pay for growing food imports bills. In these cases, food imports can contribute to the build-up of unsustainable foreign debts. Even more negative outcomes can be found where increasing food imports are not associated with rising per capita food consumption and improved food security, but are necessary just to sustain minimum levels of food consumption. This is a not an uncommon situation.

Further reading

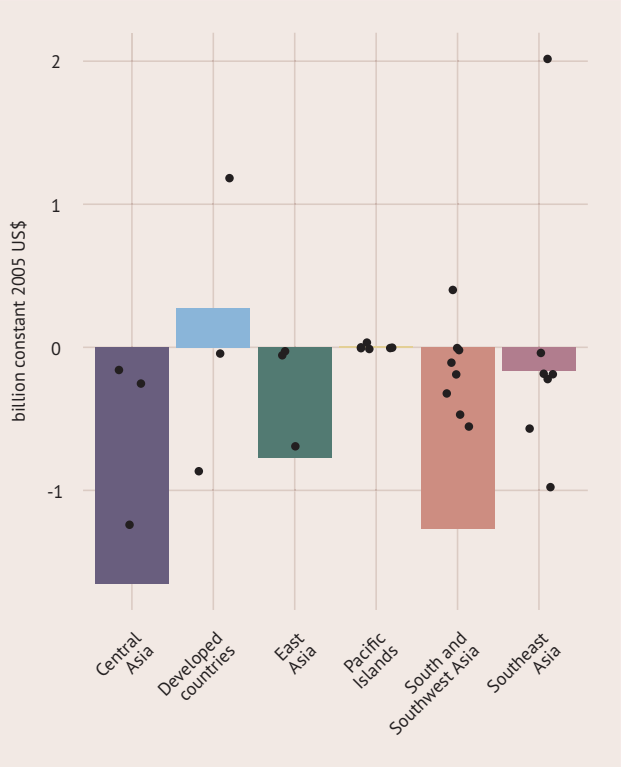
- FAO Trade and Markets Division (www.fao.org/economic/est/)

CHART 93: **Sugar and honey net trade (2000-2011)**



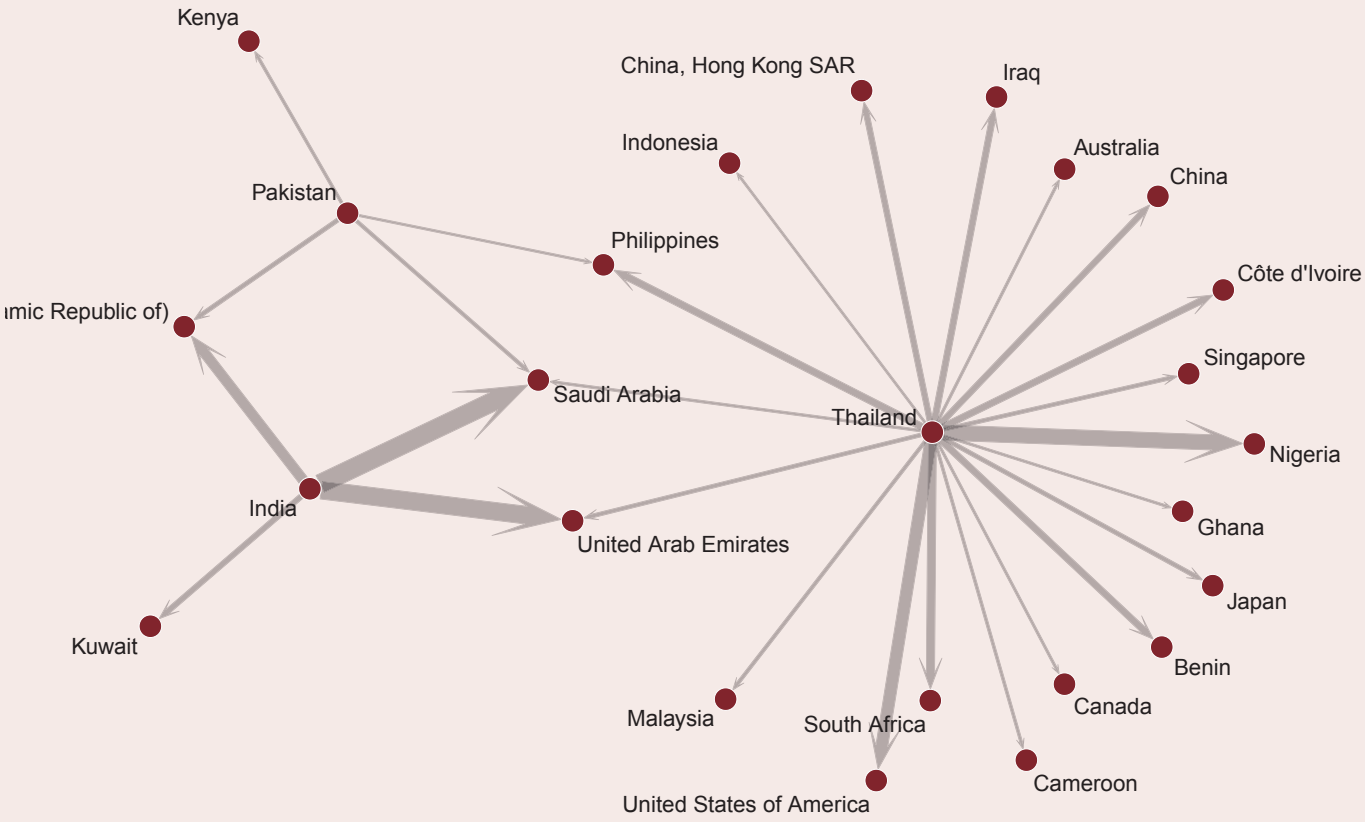
Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 94: **Sugar and honey net trade (2010)**



Source: FAO, Statistics Division (FAOSTAT) and World Bank.

CHART 95: **Major export flows of wheat from Asia and Pacific countries (2011)**



Ten largest export flows of rice milled

Exporting country	Importing country	Million US$
India	Saudi Arabia	686.7
India	United Arab Emirates	642.88
Thailand	Nigeria	553.74
Thailand	United States of America	432.32
India	Iran (Islamic Republic of)	368.9
Thailand	South Africa	299.82
Thailand	Philippines	251.69
Thailand	Benin	237.84
Thailand	Côte d'Ivoire	236.68
Thailand	Iraq	227.4

Source: FAO, Statistics Division (FAOSTAT).

The flows cover eighty of the exports of wheat from Asia and Pacific countries.

TABLE 20: **Cereal producers and their productivity**

	Cereals							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	375 106	0.5	36.4	2.1	1 268 915	1 365 850	1.5	2.5
Developing countries and transition economies	353 989	0.5	37.2	2.4	1 225 162	1 315 511	1.4	2.6
Central Asia	57 889	0.5	21.7	5.4	79 156	125 565		4.4
Kazakhstan	15 796	2.3	16.9	5.4	12 116	26 659		7.9
Russian Federation	40 602	−0.1	22.6	3.4	59 624	91 792		3.3
Uzbekistan	1 491	−0.7	47.7	6.3	7 416	7 114		5.6
East Asia	93 539	0.6	56.8	2.1	508 122	531 072	0.0	2.3
China	91 007	0.6	57.1	1.7	496 891	519 403	0.1	2.3
Democratic People's Republic of Korea	1 307	0.5	36.0	3.8	4 530	4 710	−7.3	4.4
Mongolia	300	4.6	14.9	6.1	355	446	−15.0	10.9
Republic of Korea	925	−2.1	70.4	0.8	6 345	6 513	−1.2	−1.3
Pacific Islands	9	−1.4	33.0	0.9	26	31	3.4	0.2
Cook Islands								
Fiji	3	−4.7	30.8	1.8	9	10	−6.7	−3.0
Kiribati								
Marshall Islands								
Micronesia (Federated States of)	0	0.1	16.2	3.9	0	0		4.1
Nauru								
Niue								
Palau								
Papua New Guinea	3	1.7	44.6	0.7	13	15	10.6	2.5
Samoa								
Solomon Islands	1	1.0	42.1	−0.9	4	5	17.2	0.1
Tonga								
Tuvalu								
Vanuatu	1	−3.0	5.6	1.6	1	1	2.8	−1.5
Southeast Asia	59 423	1.2	40.7	2.1	242 764	241 569	3.3	3.1
Cambodia	3 246	4.7	29.3	2.9	9 019	9 496	4.9	7.7
Indonesia	17 063	1.0	48.9	1.8	84 797	83 370	1.7	2.8
Lao People's Democratic Republic	1 029	2.7	40.4	2.7	4 092	4 162	4.1	5.5
Malaysia	693	−0.4	39.2	2.3	2 512	2 715	1.4	1.9
Myanmar	8 517	1.6	36.5	1.5	34 555	31 088	4.4	3.1
Philippines	7 081	0.7	33.4	2.4	22 149	23 656	1.4	3.1
Thailand	12 958	1.3	30.6	1.1	40 765	39 717	3.7	2.4
Timor-Leste	57	−2.1	22.5	1.4	262	129	0.5	−0.7
Viet Nam	8 778	0.4	53.8	2.5	44 614	47 236	5.7	2.9
South and Southwest Asia	143 129	0.2	29.2	2.6	395 094	417 274	2.2	2.2
Afghanistan	2 820	1.5	16.6	6.8	5 957	4 681	−3.3	8.3
Bangladesh	12 575	0.7	41.9	1.9	51 863	52 629	3.6	2.6
Bhutan	66	−1.1	28.1	6.3	145	184	−1.3	5.1
India	100 516	−0.2	28.6	2.0	267 838	287 860	1.9	1.9
Iran (Islamic Republic of)	9 234	2.5	21.8	1.6	22 247	20 105	−0.6	4.1
Maldives	0	0.3	25.1	3.4	0	0	32.1	3.7
Nepal	3 469	0.4	24.8	1.4	7 763	8 607	2.0	1.7
Pakistan	13 304	0.5	29.5	1.8	34 812	39 191	3.8	2.3
Sri Lanka	1 147	2.6	35.0	0.4	4 470	4 018	1.2	3.0
Developed Countries	21 117	0.6	23.8	−0.2	43 753	50 339	2.6	0.6
Australia	19 069	0.8	21.0	0.6	33 506	39 987	4.1	1.4
Japan	1 904	−0.6	49.1	−2.2	9 246	9 352	−1.2	−2.8
New Zealand	144	0.5	69.5	0.9	1 001	999	−0.2	1.4
Regional Office for Africa	98 311	2.8	12.9	1.5	130 260	126 825	2.3	4.2
Regional Office for Europe and Central Asia	151 096	0.0	36.0	2.9	466 580	543 367		2.4
Regional Office for Latin America and the Caribbean	50 742	0.7	38.0	2.5	193 900	193 029	3.7	3.5
Regional Office for the Near East	38 552	2.3	19.4	10.3	70 083	74 896	1.1	5.4
World	707 328	0.6	36.6	5.0	2 474 122	2 589 143		2.4

TABLE 21: **Coarse grain producers and their productivity**

	Coarse grains							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	103 968	0.5	33.6	2.9	315 063	349 338	0.6	4.0
Developing countries and transition economies	98 269	0.5	34.3	4.3	303 144	336 664	0.4	4.2
Central Asia	17 695	−2.3	21.8	3.6	19 639	38 544		−0.1
Kazakhstan	2 009	−0.9	17.8	2.9	2 104	3 580		1.9
Russian Federation	15 559	−2.5	22.2	2.2	17 056	34 497		−0.4
Uzbekistan	127	−0.2	36.8	4.8	479	467		4.6
East Asia	37 419	2.3	54.3	1.6	188 073	203 272	0.1	4.8
China	36 679	2.3	54.8	2.5	185 949	200 992	0.3	4.9
Democratic People's Republic of Korea	673	0.2	31.3	1.9	1 944	2 104	−12.1	2.2
Mongolia	9	2.2	11.2	8.3	10	10	−30.1	10.6
Republic of Korea	58	−6.5	28.3	−3.3	170	165	−8.2	−9.5
Pacific Islands	5	0.2	31.9	3.2	14	16	9.6	2.3
Cook Islands								
Fiji	0	3.0	21.0	10.6	1	1	−6.6	13.9
Kiribati								
Marshall Islands								
Micronesia (Federated States of)	0	0.2	13.8	1.0	0	0		1.1
Nauru								
Niue								
Palau								
Papua New Guinea	3	0.9	46.5	0.6	12	14	11.7	1.6
Samoa								
Solomon Islands								
Tonga								
Tuvalu								
Vanuatu	1	−2.4	5.6	2.0	1	1	2.8	−0.4
Southeast Asia	10 273	2.1	37.3	4.3	38 275	38 365	3.2	6.4
Cambodia	320	16.9	22.4	−2.1	773	717	6.0	14.5
Indonesia	3 861	1.6	45.7	4.8	18 328	17 629	3.7	6.6
Lao People's Democratic Republic	212	17.1	51.7	7.3	1 021	1 096	5.8	25.6
Malaysia	9	−8.5	55.4	6.2	48	50	6.4	−2.9
Myanmar	855	1.3	22.3	6.9	1 791	1 906	8.0	8.4
Philippines	2 545	0.2	27.4	4.2	6 377	6 972	−0.7	4.4
Thailand	1 327	−0.0	38.6	0.8	5 180	5 127	1.7	0.8
Timor-Leste	22	−9.2	14.1	1.5	149	31	0.3	−7.8
Viet Nam	1 123	4.4	43.1	3.8	4 609	4 838	11.6	8.4
South and Southwest Asia	32 877	−0.4	17.2	6.4	57 144	56 467	−0.5	3.6
Afghanistan	378	6.9	16.4	1.7	753	621	−11.6	8.7
Bangladesh	201	14.6	51.1	11.7	900	1 030	−7.7	28.0
Bhutan	39	−2.9	25.4	6.5	68	99	−0.5	3.5
India	27 477	−0.8	15.7	3.4	43 072	43 086	−0.5	2.6
Iran (Islamic Republic of)	1 689	0.1	25.5	2.0	5 734	4 305	−2.7	2.1
Maldives	0	−0.1	25.1	3.6	0	0	32.1	3.4
Nepal	1 205	0.8	19.9	2.1	2 182	2 400	1.4	2.9
Pakistan	1 832	0.0	26.1	8.1	4 266	4 783	2.2	8.1
Sri Lanka	56	5.9	25.6	9.4	169	143	−1.2	15.8
Developed Countries	5 699	−0.5	22.2	0.3	11 919	12 674	4.3	−0.8
Australia	5 491	−0.6	21.6	−0.3	11 171	11 854	4.8	−0.9
Japan	117	1.2	17.4	−2.6	191	204	−4.1	−1.4
New Zealand	91	−0.5	67.6	1.2	556	616	−2.5	0.7
Regional Office for Africa	85 192	2.6	11.8	1.8	102 648	100 196	2.5	3.9
Regional Office for Europe and Central Asia	65 345	−1.3	39.2	3.6	215 550	255 874		1.0
Regional Office for Latin America and the Caribbean	35 960	0.9	37.7	2.9	137 614	135 733	4.4	3.1
Regional Office for the Near East	19 837	1.1	12.9	5.7	25 377	25 687	1.1	2.2
World	323 286	0.9	36.0	3.3	1 121 168	1 165 188		2.8

TABLE 22: **Rice producers and their productivity**

	Rice							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	144 342	0.5	45.2	2.1	632 301	652 583		1.8
Developing countries and transition economies	142 691	0.5	45.1	2.3	623 622	643 457		1.8
Central Asia	328	0.8	46.3	6.0	1 641	1 522		4.7
Kazakhstan	93	2.4	37.2	2.1	373	347		4.5
Russian Federation	207	1.9	50.9	3.5	1 061	1 056		5.5
Uzbekistan	28	−13.1	42.8	12.5	207	120		−2.3
East Asia	31 482	−0.0	66.6	1.3	204 323	209 784		0.6
China	30 057	0.0	66.9	0.6	195 761	201 001	−0.1	0.6
Democratic People's Republic of Korea	571	0.6	43.4	2.9	2 426	2 479	−0.6	3.5
Mongolia								
Republic of Korea	854	−2.0	73.8	0.9	6 136	6 304	−0.7	−1.2
Pacific Islands	4	−3.2	34.3	1.6	13	15		−1.7
Cook Islands								
Fiji	3	−5.6	32.4	2.4	8	9	−6.7	−3.3
Kiribati								
Marshall Islands								
Micronesia (Federated States of)	0	0.6	18.0	6.7	0	0		7.4
Nauru								
Niue								
Palau								
Papua New Guinea	0	2.1	28.6	1.2	1	1	1.2	3.3
Samoa								
Solomon Islands	1	1.0	42.1	−0.9	4	5	17.2	0.1
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia	49 053	1.2	41.4	1.6	204 304	203 030		2.7
Cambodia	2 926	4.0	30.0	3.2	8 245	8 779	4.9	7.3
Indonesia	13 201	1.0	49.8	1.1	66 469	65 741	1.4	2.2
Lao People's Democratic Republic	817	1.2	37.5	1.9	3 071	3 066	4.0	3.1
Malaysia	684	−0.2	39.0	2.2	2 465	2 665	1.3	2.0
Myanmar	7 567	1.7	38.3	1.1	32 580	29 010	4.3	2.8
Philippines	4 537	1.1	36.8	1.7	15 772	16 684	2.3	2.7
Thailand	11 630	1.5	29.7	1.2	35 584	34 588	4.2	2.7
Timor-Leste	36	6.9	27.6	−0.7	113	98	0.9	6.1
Viet Nam	7 655	−0.0	55.4	2.5	40 006	42 398	5.4	2.4
South and Southwest Asia	61 823	0.1	37.1	2.5	213 340	229 107		2.1
Afghanistan	210	4.5	32.0	4.4	672	672	−2.4	9.0
Bangladesh	12 000	1.0	42.2	1.8	50 061	50 627	3.5	2.7
Bhutan	24	−0.7	32.6	6.1	72	79	−2.2	5.4
India	43 970	−0.2	35.9	2.1	143 963	157 900	1.3	2.0
Iran (Islamic Republic of)	460	−1.4	50.0	2.8	3 013	2 300	−0.0	1.4
Maldives								
Nepal	1 496	−0.4	29.8	0.9	4 024	4 460	1.9	0.5
Pakistan	2 571	0.7	35.8	1.5	7 235	9 194	3.9	2.2
Sri Lanka	1 091	2.5	35.5	0.3	4 301	3 875	1.2	2.8
Developed Countries	1 652	−1.2	55.2	0.1	8 680	9 125		−3.1
Australia	76	−5.0	95.4	1.3	197	723	1.8	−3.7
Japan	1 576	−1.0	53.3	−2.1	8 483	8 402	−1.0	−3.1
New Zealand								
Regional Office for Africa	10 223	4.5	19.9	2.3	21 533	20 368	2.6	6.1
Regional Office for Europe and Central Asia								
Regional Office for Latin America and the Caribbean	5 909	−0.3	49.3	2.4	25 828	29 156	4.6	2.4
Regional Office for the Near East								
World								

TABLE 23: **Wheat producers and their productivity**

	Wheat							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific								
Developing countries and transition economies								
Central Asia								
Kazakhstan	13 694	2.9	16.6	5.7	9 638	22 732		8.7
Russian Federation	24 836	1.4	22.6	3.1	41 508	56 240		4.6
Uzbekistan	1 336	−0.1	48.9	5.9	6 730	6 527		5.7
East Asia								
China	24 270	−0.8	48.4	2.4	115 181	117 410	0.1	1.5
Democratic People's Republic of Korea	63	0.6	20.2	8.2	160	127	−8.1	8.8
Mongolia	291	4.6	15.0	6.1	345	436	−13.6	11.0
Republic of Korea	13	27.3	33.5	2.5	39	44	10.2	30.5
Pacific Islands								
Cook Islands								
Fiji								
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea								
Samoa								
Solomon Islands								
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia								
Cambodia								
Indonesia								
Lao People's Democratic Republic								
Malaysia								
Myanmar	95	1.6	18.1	4.1	184	173	−2.8	5.8
Philippines								
Thailand	1	−0.8	10.5	4.4	1	1	5.7	3.5
Timor-Leste								
Viet Nam								
South and Southwest Asia								
Afghanistan	2 232	0.9	15.2	7.0	4 532	3 388	−1.2	7.9
Bangladesh	374	−7.0	26.0	1.5	901	972	7.5	−5.6
Bhutan	2	−5.9	26.7	9.9	5	6	−1.4	3.4
India	29 069	0.5	29.9	0.7	80 804	86 874	4.4	1.2
Iran (Islamic Republic of)	7 085	3.0	19.1	1.7	13 500	13 500	0.1	4.8
Maldives								
Nepal	767	1.4	22.7	2.2	1 557	1 746	3.3	3.6
Pakistan	8 901	0.5	28.3	1.2	23 311	25 214	3.9	1.6
Sri Lanka								
Developed Countries								
Australia	13 502	1.0	20.3	1.0	22 138	27 410	3.9	2.0
Japan	212	1.3	35.3	−0.6	571	746	−3.2	0.7
New Zealand	53	0.0	72.9	1.5	445	383	5.7	1.5
Regional Office for Africa								
Regional Office for Europe and Central Asia	84 731	0.9	33.2	2.2	245 029	281 512		2.7
Regional Office for Latin America and the Caribbean								
Regional Office for the Near East	17 555	2.2	23.2	2.5	36 999	40 795	0.4	6.6
World								

TABLE 24: **Oilcrop producers and their productivity**

	Oilcrops							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha 2011	percent 2000-11	thousand hg/ha 2011	percent 2000-11	thousand tonnes 2010	thousand tonnes 2011	percent 1990-2000	percent 2000-11
Regional Office for Asia and the Pacific	114 836	1.8	8.1	2.3	85 313	93 018	4.9	5.5
Developing countries and transition economies	111 900	1.8	8.2	2.8	84 395	91 818	4.7	5.5
Central Asia	12 886	6.0	4.4	2.9	3 364	5 636		9.6
Kazakhstan	1 633	10.8	2.5	3.4	299	405		14.5
Russian Federation	9 881	6.2	5.0	3.4	2 745	4 901		9.8
Uzbekistan	1 373	−0.8	2.4	1.3	320	330		0.5
East Asia	27 949	−0.5	6.2	1.1	16 775	17 269	4.5	1.2
China	27 489	−0.5	6.2	1.7	16 669	17 163	4.5	1.2
Democratic People's Republic of Korea	319	−0.3	2.1	0.2	66	66	−2.4	−0.0
Mongolia								
Republic of Korea	142	−1.5	2.8	0.4	39	40	−5.0	−1.1
Pacific Islands	685	1.3	14.2	2.0	955	973	5.8	3.3
Cook Islands	1	−10.0	3.3	1.7	0	0	1.1	−8.5
Fiji	60	1.0	4.3	0.4	27	26	−3.8	1.5
Kiribati	29	1.4	7.6	3.9	21	22	5.0	5.3
Marshall Islands	8	0.0	3.8	15.9	6	3		15.9
Micronesia (Federated States of)	17	0.3	3.8	1.8	6	6		2.0
Nauru	0	−0.2	10.9	2.3	0	0	2.3	2.1
Niue	3	0.8	1.3	1.4	0	0	9.6	2.2
Palau								
Papua New Guinea	362	0.8	20.3	2.6	714	734	7.3	3.4
Samoa	27	1.4	8.4	0.8	22	23	0.2	2.2
Solomon Islands	66	3.3	15.3	−0.0	99	101	4.0	3.3
Tonga	10	0.9	7.4	−0.9	8	8	7.5	0.0
Tuvalu	2	−0.1	1.5	0.8	0	0	1.9	0.7
Vanuatu	98	2.5	4.8	0.9	51	48	−3.5	3.4
Southeast Asia	23 831	3.2	22.5	3.4	49 689	53 683	6.1	7.0
Cambodia	143	6.2	3.6	2.5	57	51	2.7	8.9
Indonesia	10 379	4.6	25.8	4.2	25 024	26 820	7.7	9.0
Lao People's Democratic Republic	56	5.4	5.4	6.7	26	30	4.9	12.5
Malaysia	4 263	2.1	49.7	2.8	19 090	21 206	5.7	5.0
Myanmar	3 621	3.5	3.3	5.4	1 278	1 184	4.2	9.1
Philippines	3 655	1.2	5.7	0.4	2 132	2 093	0.8	1.6
Thailand	1 097	0.4	17.7	5.3	1 718	1 940	4.9	5.8
Timor-Leste	20	13.2	1.4	−11.2	2	3	2.1	0.5
Viet Nam	597	0.4	6.0	2.5	362	357	2.3	2.9
South and Southwest Asia	46 548	1.4	3.1	3.6	13 613	14 257	1.0	4.1
Afghanistan	88	−2.6	2.2	0.1	19	19	0.1	−2.6
Bangladesh	429	−0.4	3.5	1.5	144	148	−1.3	1.1
Bhutan	2	−10.3	5.6	14.9	1	1	0.1	3.0
India	41 103	1.6	3.0	2.7	11 879	12 336	0.9	4.3
Iran (Islamic Republic of)	492	0.5	4.8	6.8	234	238	1.4	7.3
Maldives	1	−9.8	5.2	−1.8	1	1	2.1	−11.5
Nepal	473	1.3	2.6	2.1	107	124	1.8	3.4
Pakistan	3 539	−0.1	3.1	2.6	957	1 111	2.3	2.5
Sri Lanka	421	−0.9	6.6	−0.1	272	278	2.0	−1.0
Developed Countries	2 936	2.2	4.1	−2.1	918	1 201	17.6	1.7
Australia	2 786	2.2	4.1	−0.4	871	1 153	18.6	1.8
Japan	146	0.8	3.2	−1.6	46	46	−1.0	−0.8
New Zealand	4	3.8	4.8	−3.9	2	2	7.2	−0.3
Regional Office for Africa	30 823	2.7	3.1	1.1	9 060	9 448	4.0	4.5
Regional Office for Europe and Central Asia	41 076	4.2	6.5	2.5	22 842	26 526		6.8
Regional Office for Latin America and the Caribbean	55 341	5.3	5.7	2.7	29 614	31 405	4.9	6.7
Regional Office for the Near East	8 721	1.0	2.5	1.5	1 912	2 153	5.8	3.9
World	278 925	2.5	6.4	2.4	169 623	179 676	4.4	5.2

TABLE 25: **Pulse producers and their productivity**

	Pulses							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	43 795	2.9	8.3	0.5	32 612	36 303		3.4
Developing countries and transition economies	41 491	3.0	8.1	1.0	30 536	33 663		3.6
Central Asia	1 609	6.5	16.5	0.8	1 501	2 650		7.4
Kazakhstan	104	15.7	11.2	−0.9	69	117		14.7
Russian Federation	1 494	5.8	16.8	1.2	1 401	2 507		7.1
Uzbekistan	11	3.6	24.4	1.2	31	26		4.9
East Asia	3 016	−1.9	16.0	1.5	4 202	4 837		−0.3
China	2 762	−1.7	16.6	1.6	3 882	4 599	−2.6	−0.2
Democratic People's Republic of Korea	242	−3.5	9.3	0.4	304	224	−0.2	−3.2
Mongolia	1	−1.6	10.0	2.2	1	1	−7.9	0.6
Republic of Korea	10	−6.2	12.1	1.7	14	12	−6.4	−4.6
Pacific Islands	19	9.3	6.3	−3.4	10	12		4.8
Cook Islands								
Fiji	6	19.2	4.0	−7.7	2	2	3.7	9.9
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea	8	4.2	4.3	−1.4	3	3	1.8	2.8
Samoa								
Solomon Islands	6	6.9	11.2	−2.6	5	6	5.6	4.2
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia	5 151	4.0	12.4	2.7	5 461	6 375		9.6
Cambodia	73	11.2	11.4	5.1	71	83	2.3	16.8
Indonesia	299	−1.2	11.4	2.7	293	342	−8.4	1.5
Lao People's Democratic Republic	21	5.4	10.1	−1.9	20	21	1.1	3.3
Malaysia								
Myanmar	4 023	5.0	13.1	5.8	4 492	5 283	14.5	11.1
Philippines	85	0.8	7.9	0.7	61	67	−0.7	1.5
Thailand	236	−3.1	9.4	1.0	213	223	−2.3	−2.1
Timor-Leste	8	5.4	11.9	4.0	8	10	4.1	9.6
Viet Nam	405	1.5	8.5	1.7	303	345	2.9	3.2
South and Southwest Asia	31 695	3.2	6.2	0.0	19 363	19 790		2.1
Afghanistan	72	10.5	9.3	−6.2	53	67	3.2	3.6
Bangladesh	252	−6.0	9.3	1.7	220	235	−2.9	−4.3
Bhutan	4	5.8	8.9	−2.1	4	4	6.5	3.5
India	28 635	3.6	6.2	−1.2	17 236	17 647	0.6	2.3
Iran (Islamic Republic of)	860	−1.5	8.5	4.0	729	729	4.8	2.4
Maldives	0	2.2	7.9	−0.1	0	0	3.6	2.1
Nepal	296	0.3	9.5	1.9	236	281	2.8	2.2
Pakistan	1 558	−0.0	5.2	−1.3	860	806	−1.4	−1.3
Sri Lanka	18	−3.2	11.6	2.2	23	21	−7.0	−1.1
Developed Countries	2 304	0.0	11.5	−1.0	2 077	2 640		1.2
Australia	2 246	0.1	11.3	1.3	1 954	2 527	4.8	1.4
Japan	41	−2.9	17.2	−0.6	78	71	−3.8	−3.4
New Zealand	17	−1.8	24.4	−2.4	44	41	0.2	−4.1
Regional Office for Africa	21 703	4.4	6.0	1.0	14 520	13 033	3.2	5.9
Regional Office for Europe and Central Asia	4 679	0.7	18.3	2.9	8 312	8 578		1.5
Regional Office for Latin America and the Caribbean	6 888	−0.8	9.2	1.0	6 620	6 338	1.9	0.9
Regional Office for the Near East	2 387	0.7	9.7	−2.5	2 171	2 313	2.2	3.5
World	79 399	2.6	8.6	0.7	69 627	68 218		2.9

TABLE 26: **Root and tuber producers and their productivity**

	Roots and tubers							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	19 841	−0.2	182.2	2.3	332 906	361 494	2.7	1.7
Developing countries and transition economies	19 650	−0.2	181.2	2.7	327 423	356 121	2.7	1.8
Central Asia	2 460	−2.9	152.8	4.5	25 325	37 582		0.6
Kazakhstan	184	1.3	167.2	4.2	2 555	3 076		5.6
Russian Federation	2 203	−3.4	148.4	3.2	21 141	32 681		−0.4
Uzbekistan	73	3.1	249.5	5.4	1 630	1 824		8.7
East Asia	9 503	−1.4	182.1	1.2	165 209	173 094	3.0	−1.0
China	9 272	−1.4	183.2	0.4	161 990	169 820	3.0	−1.0
Democratic People's Republic of Korea	171	−1.9	128.4	2.1	2 135	2 195	7.4	0.1
Mongolia	15	6.3	131.1	5.2	168	202	−7.7	11.8
Republic of Korea	45	−0.1	195.7	−1.5	916	878	2.7	−1.6
Pacific Islands	247	1.4	82.2	0.1	2 300	2 033	0.9	1.8
Cook Islands	0	−6.8	236.3	1.6	4	3	−6.1	−5.3
Fiji	17	7.4	63.6	−4.2	125	110	5.6	2.9
Kiribati	1	2.2	75.6	−0.3	12	11	0.6	1.9
Marshall Islands								
Micronesia (Federated States of)	1	−2.7	93.1	−0.2	13	12		−2.8
Nauru								
Niue	1	−0.8	55.6	−1.2	4	3	2.8	−2.0
Palau								
Papua New Guinea	201	0.9	80.7	0.8	1 839	1 624	0.7	1.7
Samoa	5	1.5	54.0	−0.2	28	24	−3.3	1.3
Solomon Islands	13	2.2	134.9	0.2	201	178	2.6	2.3
Tonga	2	−1.3	112.1	−0.3	26	23	−7.0	−1.6
Tuvalu					0	0	0.6	0.5
Vanuatu	5	1.0	80.0	0.0	50	44	0.0	1.1
Southeast Asia	4 136	1.7	172.9	5.2	69 401	71 488	−0.3	5.9
Cambodia	219	21.9	204.7	8.7	4 361	4 487	6.8	32.6
Indonesia	1 479	−0.8	186.4	4.1	27 395	27 577	0.3	3.3
Lao People's Democratic Republic	40	2.0	228.8	11.5	602	906	−3.1	13.7
Malaysia	6	−6.8	119.6	−0.7	63	66	−9.6	−7.5
Myanmar	100	8.7	133.7	3.5	1 230	1 342	5.8	12.5
Philippines	361	−0.2	82.9	1.8	2 916	2 990	−0.7	1.6
Thailand	1 168	0.1	191.6	1.2	22 455	22 373	−0.7	1.3
Timor-Leste	19	−2.7	32.0	−2.6	70	60	1.6	−5.3
Viet Nam	744	3.3	157.1	6.9	10 309	11 685	−1.5	10.5
South and Southwest Asia	3 304	2.8	217.7	2.1	65 187	71 925	4.6	4.9
Afghanistan	20	3.5	100.0	−4.6	246	205	0.5	−1.2
Bangladesh	491	5.1	175.8	3.8	8 237	8 624	7.7	9.1
Bhutan	9	3.6	88.2	1.3	67	77	−1.3	5.0
India	2 198	2.5	234.2	1.8	45 732	51 462	4.4	4.4
Iran (Islamic Republic of)	150	−1.1	300.0	3.0	4 274	4 500	3.8	1.9
Maldives	0	−6.6	47.7	1.4	2	2	−5.8	−5.3
Nepal	214	3.6	124.9	3.0	2 679	2 668	4.9	6.7
Pakistan	188	2.9	212.4	2.1	3 570	3 986	7.3	5.1
Sri Lanka	34	−1.7	115.9	2.9	381	399	−4.3	1.2
Developed Countries	191	−1.5	281.4	0.9	5 483	5 373	−0.9	−1.3
Australia	34	−2.2	345.7	1.8	1 324	1 169	0.4	−0.4
Japan	145	−1.5	252.9	−0.4	3 555	3 668	−2.1	−1.8
New Zealand	12	−0.7	442.7	1.0	604	536	6.6	0.3
Regional Office for Africa	25 251	2.1	98.0	1.6	229 332	247 366	5.5	4.1
Regional Office for Europe and Central Asia	6 836	−2.6	210.1	2.2	121 002	143 608		−0.2
Regional Office for Latin America and the Caribbean	4 247	0.6	133.7	1.0	55 491	56 775	1.0	1.4
Regional Office for the Near East	808	3.0	233.1	2.2	16 864	18 846	4.2	5.7
World	54 933	0.8	147.6	1.7	749 787	810 845	2.8	2.1

TABLE 27: **Vegetable producers and their productivity**

	Vegetables (including melons)							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	40 228	2.6	199.5	1.9	765 575	802 500	8.4	4.0
Developing countries and transition economies	39 721	2.7	198.8	1.6	752 483	789 604	8.7	4.1
Central Asia	1 253	0.7	229.0	4.9	24 509	28 691		5.1
Kazakhstan	194	2.9	213.2	4.0	3 696	4 126		7.0
Russian Federation	838	−0.3	194.1	2.8	13 283	16 275		2.5
Uzbekistan	221	2.6	374.7	6.6	7 529	8 289		9.4
East Asia	24 786	2.7	233.0	2.3	556 484	577 438	10.3	4.1
China	24 213	2.9	232.3	1.3	542 797	562 596	10.7	4.2
Democratic People's Republic of Korea	279	−0.9	121.1	−0.2	3 847	3 380	−1.6	−1.1
Mongolia	8	4.0	117.9	3.4	83	98	0.5	7.6
Republic of Korea	286	−3.8	398.0	3.3	9 757	11 364	2.1	−0.7
Pacific Islands	59	1.4	92.6	−1.1	625	544	3.1	−0.1
Cook Islands	0	4.4	104.1	−3.2	2	2	0.6	1.1
Fiji	2	−1.5	79.2	0.9	23	19	9.0	−0.6
Kiribati	0	0.4	124.1	−0.7	6	6	2.4	−0.3
Marshall Islands								
Micronesia (Federated States of)	0	−1.5	109.4	1.4	4	3		−0.2
Nauru	0	1.4	64.4	−5.2	1	0	5.3	−3.9
Niue	0	2.6	63.5	−5.5	0	0	5.9	−3.0
Palau								
Papua New Guinea	46	1.7	101.5	−1.8	537	468	2.9	−0.1
Samoa	1	−0.2	11.2	2.2	1	1	3.0	2.0
Solomon Islands	1	1.8	140.1	−1.5	8	7	1.6	0.3
Tonga	7	0.9	37.3	−1.6	29	26	4.5	−0.7
Tuvalu	0	3.1	71.8	−0.0	1	1	2.4	3.0
Vanuatu	1	0.1	152.2	0.7	13	11	2.6	0.8
Southeast Asia	3 807	1.8	102.3	1.7	36 913	38 947	5.1	3.4
Cambodia	96	1.5	64.9	0.3	528	622	0.7	1.8
Indonesia	1 049	1.4	96.3	2.0	9 780	10 096	4.3	3.4
Lao People's Democratic Republic	147	2.9	92.8	3.8	1 069	1 368	26.2	6.8
Malaysia	58	5.1	208.3	2.7	1 207	1 213	3.7	7.9
Myanmar	382	2.8	139.7	1.5	5 195	5 332	6.2	4.3
Philippines	714	1.8	86.9	0.2	6 299	6 204	1.3	2.0
Thailand	513	−1.7	73.2	1.1	3 832	3 760	4.5	−0.6
Timor-Leste	12	3.3	26.4	1.5	26	31	−0.2	4.8
Viet Nam	836	3.6	123.5	0.7	8 976	10 321	6.7	4.3
South and Southwest Asia	9 815	3.2	146.7	1.1	133 953	143 984	3.6	4.1
Afghanistan	78	2.0	119.2	0.6	968	935	3.7	2.6
Bangladesh	505	4.8	78.6	2.5	3 689	3 969	3.0	7.4
Bhutan	9	13.5	27.5	0.1	21	24	−5.4	13.7
India	7 571	3.0	139.7	0.5	100 405	105 795	4.0	3.5
Iran (Islamic Republic of)	885	4.3	268.6	2.3	19 994	23 764	1.2	6.7
Maldives	1	15.7	18.2	−15.0	3	2	−1.1	−1.6
Nepal	257	4.8	127.8	2.4	3 077	3 280	4.2	7.3
Pakistan	432	1.8	126.3	−0.7	5 064	5 457	4.2	1.1
Sri Lanka	78	−0.1	97.1	2.5	733	759	−0.2	2.5
Developed Countries	508	−1.2	254.1	0.3	13 091	12 897	−0.4	−1.7
Australia	74	−1.3	243.5	0.6	1 948	1 793	2.7	−0.7
Japan	399	−1.0	257.3	−0.9	10 195	10 279	−1.3	−1.9
New Zealand	35	−3.0	238.9	1.4	948	825	5.4	−1.7
Regional Office for Africa	5 388	2.1	68.4	1.3	36 810	36 846	4.7	3.4
Regional Office for Europe and Central Asia	6 181	−0.2	239.4	2.4	139 088	147 958		1.9
Regional Office for Latin America and the Caribbean	2 644	1.3	163.6	1.8	43 185	43 248	4.8	2.3
Regional Office for the Near East	3 319	2.3	225.3	1.8	70 058	74 755	4.1	4.5
World	56 734	2.1	192.2	1.7	1 048 660	1 090 425	6.7	3.4

TABLE 28: **Sugar producers and their productivity**

	Sugar							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific								
Developing countries and transition economies								
Central Asia								
Kazakhstan	10.6	−4.6	189.1	1.9	152.0	200.4		−2.8
Russian Federation	1 216.2	4.5	391.7	6.9	22 255.9	47 643.3		11.7
Uzbekistan	0.0				0.0	0.0		
East Asia								
China	226.6	−3.3	473.6	6.2	9 296.0	10 731.0	−5.7	2.6
Democratic People's Republic of Korea								
Mongolia								
Republic of Korea								
Pacific Islands								
Cook Islands								
Fiji								
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea								
Samoa								
Solomon Islands								
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia								
Cambodia								
Indonesia								
Lao People's Democratic Republic								
Malaysia								
Myanmar								
Philippines								
Thailand								
Timor-Leste								
Viet Nam								
South and Southwest Asia								
Afghanistan	1.2	17.4	130.0	9.1	15.2	15.2	−4.0	28.1
Bangladesh								
Bhutan								
India								
Iran (Islamic Republic of)	100.0	−4.3	410.0	4.0	4 095.7	4 100.0	1.8	−0.5
Maldives								
Nepal								
Pakistan	0.8	−16.8	261.2	−0.1	53.3	20.9	−7.4	−16.9
Sri Lanka								
Developed Countries								
Australia								
Japan	60.5	−1.2	586.3	0.9	3 090.0	3 547.0	−0.8	−0.3
New Zealand								
Regional Office for Africa								
Regional Office for Europe and Central Asia	3 927.5				169 526.9	213 754.0		
Regional Office for Latin America and the Caribbean								
Regional Office for the Near East								
World								

TABLE 29: **Treenut producers and their productivity**

	Treenuts							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific								
Developing countries and transition economies								
Central Asia								
Kazakhstan	0.5	−5.2	36.0	−0.4	1.3	1.8		−5.6
Russian Federation	14.9	−2.5	8.7	−4.4	12.2	13.1		−6.8
Uzbekistan	13.5	2.9	27.4	2.2	34.2	37.2		5.2
East Asia								
China	785.6	8.6	46.2	3.6	3 120.5	3 626.2	11.5	12.5
Democratic People's Republic of Korea	12.0	2.3	17.5	1.7	20.2	21.0	0.6	4.0
Mongolia	1.7	7.8	46.1	10.4	6.3	7.9		19.0
Republic of Korea	43.8	0.1	19.0	−2.3	90.6	83.4	1.4	−2.2
Pacific Islands								
Cook Islands								
Fiji								
Kiribati	0.4	2.0	6.7	−1.3	0.3	0.3	3.2	0.7
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea	10.0	0.2	5.6	−0.0	5.6	5.6	1.2	0.2
Samoa								
Solomon Islands	0.3	1.7	10.0	0.0	0.3	0.3	0.8	1.7
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia								
Cambodia	2.1	2.6	18.8	1.3	3.7	4.0	6.4	4.0
Indonesia	788.3	0.3	2.9	4.0	260.1	228.7	8.2	4.3
Lao People's Democratic Republic								
Malaysia	7.2	−4.5	21.1	4.2	13.5	15.1	4.8	−0.5
Myanmar								
Philippines	30.5	0.2	46.1	1.7	141.3	140.5	1.3	1.9
Thailand	30.9	−3.3	14.6	0.0	58.7	45.0	9.3	−3.3
Timor-Leste								
Viet Nam	334.4	7.7	37.2	6.5	1 247.2	1 242.6	6.8	14.7
South and Southwest Asia								
Afghanistan	18.8	3.6	41.8	8.9	71.6	78.5	1.7	12.8
Bangladesh								
Bhutan	0.0				0.2	0.5		
India	984.0	2.9	7.2	−0.6	651.0	710.6	6.1	2.3
Iran (Islamic Republic of)	431.3	−0.1	26.6	11.7	1 101.2	1 147.5	2.0	11.6
Maldives	0.4	2.9	49.1	−0.2	2.0	2.1	4.4	2.7
Nepal	1.7	5.0	35.2	−0.7	5.2	6.0	3.2	4.2
Pakistan	16.6	−0.4	22.1	−3.6	37.5	36.5	0.4	−4.0
Sri Lanka	23.1	0.0	3.0	3.7	7.0	6.9	−6.5	3.7
Developed Countries								
Australia	40.5	5.9	17.1	−1.7	63.9	69.1	9.5	4.1
Japan	21.4	−1.9	8.9	−1.1	23.5	19.1	−4.0	−3.0
New Zealand	0.0				0.0	0.0		
Regional Office for Africa								
Regional Office for Europe and Central Asia	1 743.0	0.6	12.0	2.3	2 160.3	2 090.8		1.3
Regional Office for Latin America and the Caribbean								
Regional Office for the Near East	1 005.3	0.7	16.6	10.6	1 565.4	1 664.6	4.6	9.0
World								

TABLE 30: **Fruit producers and their productivity**

	Fruit (excluding melons)							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	26 853	2.7	114.1	0.6	292 685	306 370	6.9	5.2
Developing countries and transition economies	26 297	2.7	113.7	0.7	285 373	299 074	7.2	5.4
Central Asia	816	−2.3	74.8	4.0	5 383	6 111		2.7
Kazakhstan	53	−3.7	44.4	2.7	222	233		−1.1
Russian Federation	462	−5.1	63.2	3.9	2 464	2 917		−1.4
Uzbekistan	302	2.2	97.9	4.6	2 698	2 961		6.9
East Asia	11 983	2.4	113.5	1.6	126 379	136 030	12.1	6.9
China	11 598	2.4	113.7	4.5	122 083	131 827	12.8	7.1
Democratic People's Republic of Korea	216	3.2	72.4	−1.7	1 562	1 559	0.2	1.4
Mongolia	1	14.7	12.2	4.3	1	2	−4.4	19.6
Republic of Korea	168	−0.7	157.2	0.7	2 734	2 642	3.2	0.1
Pacific Islands	233	1.9	92.0	−1.0	2 252	2 146	2.6	1.7
Cook Islands	0	−2.7	28.8	−7.2	1	1	−2.6	−9.7
Fiji	3	3.5	47.8	−5.7	15	14	3.4	−2.4
Kiribati	1	0.7	48.9	−0.6	8	6	1.2	0.1
Marshall Islands								
Micronesia (Federated States of)	1	−2.5	25.1	0.8	4	3		−1.8
Nauru	0	3.0	44.6	−2.8	0	0	2.8	0.1
Niue	1	2.6	5.6	−3.9	1	1	3.7	−1.4
Palau								
Papua New Guinea	209	2.0	96.9	−0.2	2 111	2 023	2.7	1.8
Samoa	9	0.9	46.9	−1.2	51	41	2.0	−0.3
Solomon Islands	2	3.1	145.2	1.7	30	29	1.4	4.9
Tonga	5	1.0	17.6	−1.9	10	9	−2.5	−1.0
Tuvalu	0	1.6	91.9	−1.6	1	1	4.2	0.0
Vanuatu	2	1.1	96.4	−0.7	21	20	1.6	0.4
Southeast Asia	4 343	2.4	126.5	1.4	51 013	54 941	3.5	4.0
Cambodia	62	1.0	60.2	0.4	386	373	3.0	1.4
Indonesia	752	3.8	228.6	2.8	14 598	17 196	4.4	6.7
Lao People's Democratic Republic	40	4.0	136.2	5.7	389	546	4.1	9.9
Malaysia	104	1.8	103.5	−2.6	1 074	1 079	0.7	−0.8
Myanmar	487	4.3	51.0	0.9	2 192	2 480	4.1	5.2
Philippines	1 234	2.5	130.8	1.2	16 182	16 139	1.4	3.7
Thailand	1 153	1.2	92.4	−1.0	9 750	10 660	5.3	0.2
Timor-Leste	2	12.8	91.8	−2.1	15	18	−8.6	10.4
Viet Nam	508	1.1	126.9	2.5	6 428	6 450	3.1	3.6
South and Southwest Asia	8 921	3.9	111.9	0.1	100 346	99 847	4.4	4.4
Afghanistan	115	0.8	67.4	0.1	746	774	0.9	0.8
Bangladesh	416	8.0	88.6	1.4	3 907	3 689	0.2	9.5
Bhutan	13	2.3	82.2	2.6	97	110	0.0	4.9
India	6 284	4.7	119.1	0.5	75 121	74 836	4.5	5.2
Iran (Islamic Republic of)	1 055	−0.6	111.6	0.2	11 981	11 771	5.5	−0.4
Maldives	1	3.4	147.1	−2.4	10	11	4.2	0.9
Nepal	146	4.5	102.3	0.8	1 327	1 494	7.4	5.3
Pakistan	774	2.1	81.9	−0.2	6 370	6 339	2.9	1.8
Sri Lanka	116	0.9	70.8	−0.8	786	824	1.3	0.0
Developed Countries	557	0.8	131.0	−1.6	7 312	7 296	0.2	−0.7
Australia	292	1.9	106.6	−1.8	3 283	3 117	2.6	0.1
Japan	194	−1.6	151.8	−0.7	2 883	2 949	−2.5	−2.3
New Zealand	70	3.2	175.3	−2.2	1 146	1 229	2.7	1.0
Regional Office for Africa	9 646	1.5	72.4	1.7	67 886	69 884	2.6	4.2
Regional Office for Europe and Central Asia	9 517	−0.6	98.1	1.4	89 394	93 318		0.5
Regional Office for Latin America and the Caribbean	7 435	0.7	155.9	1.1	111 886	115 885	3.0	1.7
Regional Office for the Near East	3 891	1.4	107.0	1.0	40 936	41 626	4.6	2.5
World	56 642	1.6	112.6	1.0	612 513	637 576	4.0	3.4

TABLE 31: **Citrus fruit producers and their productivity**

	Citrus fruit							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific	3 864	4.1	125.4	2.3	47 929	48 456		8.1
Developing countries and transition economies	3 777	4.2	124.2	2.9	46 441	46 917		8.4
Central Asia	1	1.3	132.7	3.9	6	7		5.4
Kazakhstan	0	6.5	150.0	3.8	1	1		10.5
Russian Federation	0		33.3		0	0		
Uzbekistan	0	0.9	138.6	4.0	6	6		4.9
East Asia	2 310	5.4	130.4	4.4	26 654	30 122		11.4
China	2 288	5.5	128.7	5.8	26 039	29 440	6.1	11.6
Democratic People's Republic of Korea								
Mongolia								
Republic of Korea	22	−2.0	315.7	3.8	616	682	1.4	1.7
Pacific Islands	2	−1.6	23.5	−1.0	4	4		−1.2
Cook Islands	0	−3.6	36.5	−4.3	0	0	−14.5	−7.7
Fiji	0	1.9	20.1	−8.9	0	0	4.2	−7.2
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue	0	−1.3	34.2	0.4	0	0	−1.1	−0.9
Palau								
Papua New Guinea								
Samoa	0	0.9	47.8	3.0	1	1	−1.8	3.9
Solomon Islands								
Tonga	1	−2.4	20.7	0.9	3	3	−2.5	−1.5
Tuvalu								
Vanuatu								
Southeast Asia	265	−0.4	156.7	3.9	4 419	4 155		4.6
Cambodia	11	0.0	57.7	−1.0	69	61	3.9	−1.0
Indonesia	52	3.1	351.9	6.6	2 029	1 819	9.8	9.9
Lao People's Democratic Republic	11	1.6	86.0	1.1	102	95	4.9	2.7
Malaysia	9	6.7	94.0	3.1	88	89	3.5	10.1
Myanmar								
Philippines	38	0.5	62.7	−1.3	246	236	1.8	−0.8
Thailand	99	−1.9	131.4	1.1	1 128	1 296	3.5	−0.8
Timor-Leste	0	11.6	85.0	4.9	2	2		17.1
Viet Nam	46	−3.8	121.4	6.0	755	557	13.4	2.0
South and Southwest Asia	1 200	2.9	105.2	1.0	15 357	12 630		2.6
Afghanistan	1	−7.1	73.7	−1.0	11	9	2.7	−8.0
Bangladesh	35	9.4	39.3	2.0	136	137	5.8	11.6
Bhutan	9	0.7	94.9	2.3	72	81	0.0	3.1
India	756	4.7	98.8	0.2	9 638	7 464	4.2	4.9
Iran (Islamic Republic of)	164	−2.7	163.5	−0.1	3 078	2 681	4.7	−2.8
Maldives	0		93.3		0	0		
Nepal	24	3.0	111.7	4.4	259	264	0.3	7.4
Pakistan	194	−0.2	101.9	0.6	2 150	1 982	1.7	0.4
Sri Lanka	18	4.6	7.1	−10.5	12	13	2.6	−6.4
Developed Countries	87	−2.4	177.8	−0.4	1 488	1 539		−3.0
Australia	28	−2.0	151.5	−1.6	523	430	0.8	−3.6
Japan	56	−2.9	194.4	−0.1	933	1 079	−3.8	−3.0
New Zealand	3	1.5	112.6	0.6	31	30	−4.8	2.1
Regional Office for Africa	1 191	1.2	78.0	2.0	8 914	9 291	5.2	3.2
Regional Office for Europe and Central Asia								
Regional Office for Latin America and the Caribbean	2 122	0.1	178.9	1.6	36 330	37 950	3.8	0.1
Regional Office for the Near East	702	1.4	173.2	1.0	11 646	12 163	3.7	2.5
World								

TABLE 32: **Fibre crop producers and their productivity**

	Fibre crops							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific								
Developing countries and transition economies								
Central Asia								
Kazakhstan	154.1	0.1	7.7	1.8	92.5	118.0		1.9
Russian Federation	65.4	−6.1	14.7	5.8	78.1	96.0		−0.7
Uzbekistan	1 321.8	−0.8	7.6	0.9	1 155.9	1 002.3		0.1
East Asia								
China	5 155.8	1.7	13.4	1.3	6 297.6	6 892.4	−1.2	3.0
Democratic People's Republic of Korea	39.0	0.5	6.3	−0.3	24.5	24.6	2.7	0.2
Mongolia								
Republic of Korea	0.0	−24.9	16.7	−1.1	0.0	0.0	−18.9	−25.7
Pacific Islands								
Cook Islands								
Fiji								
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea								
Samoa					0.4	0.4	1.4	−4.7
Solomon Islands								
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia								
Cambodia	1.0	8.8	40.2	−5.2	3.8	4.1	−2.3	3.2
Indonesia	148.3	−2.2	4.0	−2.7	61.5	59.3	2.9	−4.9
Lao People's Democratic Republic	2.7	−5.8	15.1	2.2	3.8	4.1	0.5	−3.8
Malaysia	0.0				0.0	0.0		
Myanmar	345.0	−0.4	5.7	7.5	146.9	196.9	5.5	7.1
Philippines	147.5	2.2	5.2	−3.1	73.5	76.1	2.0	−1.0
Thailand	40.6	−7.2	10.3	−0.3	48.3	41.9	−9.0	−7.5
Timor-Leste								
Viet Nam	24.6	−2.8	39.9	4.9	98.9	98.0	−1.1	2.0
South and Southwest Asia								
Afghanistan	33.0	−3.7	3.3	−1.0	10.9	10.9	7.1	−4.7
Bangladesh	727.6	4.1	21.2	1.6	941.6	1 543.1	−0.4	5.7
Bhutan	0.1	−2.6	39.7	0.3	0.4	0.3	1.3	−2.3
India	13 230.5	3.0	6.1	4.7	7 588.5	8 017.6	0.4	7.8
Iran (Islamic Republic of)	115.0	−6.7	6.4	−0.2	72.0	73.4	3.0	−6.8
Maldives								
Nepal	10.7	−3.5	13.5	3.0	21.0	14.5	−0.6	−0.6
Pakistan	2 839.7	−0.3	8.1	2.5	1 869.6	2 312.4	1.1	2.2
Sri Lanka	0.0				0.0	0.0		
Developed Countries								
Australia	588.3	2.2	14.3	−1.0	386.8	843.6	9.3	1.2
Japan	0.0				0.0	0.0		
New Zealand	4.6	−2.4	6.1	2.1	2.8	2.8	12.3	−0.3
Regional Office for Africa	4 089.9	1.1	3.1	1.1	1 197.8	1 264.1	3.7	0.2
Regional Office for Europe and Central Asia	3 451.7				2 998.3	3 162.5		
Regional Office for Latin America and the Caribbean	2 985.1	4.6	9.8	0.9	1 948.2	2 911.1	−1.7	6.4
Regional Office for the Near East								
World								

TABLE 33: **Jute and jute-like producers and their productivity**

	Jute and jute-like							
	area		yield		production			
	total	p.a. growth	total	p.a. growth	total		p.a. growth	
	thousand ha	percent	thousand hg/ha	percent	thousand tonnes	thousand tonnes	percent	percent
	2011	2000-11	2011	2000-11	2010	2011	1990-2000	2000-11
Regional Office for Asia and the Pacific								
Developing countries and transition economies								
Central Asia								
Kazakhstan								
Russian Federation	13.2	−4.2	38.7	5.5	41.3	51.0		1.1
Uzbekistan	1.8	−1.0	105.5	0.5	19.8	18.9		−0.5
East Asia								
China	19.3	−8.4	39.0	4.2	69.3	75.2	−16.1	−4.6
Democratic People's Republic of Korea								
Mongolia								
Republic of Korea								
Pacific Islands								
Cook Islands								
Fiji								
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea								
Samoa								
Solomon Islands								
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia								
Cambodia	0.8	13.2	4.3	−6.2	0.3	0.3	−19.6	6.2
Indonesia	2.1	−2.6	15.8	−4.3	3.3	3.4	−2.2	−6.8
Lao People's Democratic Republic								
Malaysia								
Myanmar	19.0	−6.0	10.1	1.0	13.8	19.2	0.2	−5.1
Philippines								
Thailand	3.1	−18.1	15.0	0.3	4.5	4.7	−13.8	−17.9
Timor-Leste								
Viet Nam	3.9	−3.2	21.6	0.4	12.4	8.3	−7.2	−2.8
South and Southwest Asia								
Afghanistan								
Bangladesh	711.2	4.2	21.4	1.5	926.5	1525.4	−0.4	5.8
Bhutan	0.1	−2.6	39.7	0.3	0.4	0.3	1.3	−2.3
India	1052.5	0.3	19.3	0.4	1905.5	2033.6	1.0	0.7
Iran (Islamic Republic of)	0.0				0.0	0.0	−100.0	
Maldives								
Nepal	10.6	−2.9	13.7	2.5	21.0	14.4	−0.6	−0.5
Pakistan	1.2	−8.3	3.7	−5.7	0.6	0.4	−6.0	−13.5
Sri Lanka								
Developed Countries								
Australia								
Japan	0.0				0.0	0.0		
New Zealand								
Regional Office for Africa								
Regional Office for Europe and Central Asia								
Regional Office for Latin America and the Caribbean								
Regional Office for the Near East								
World								

TABLE 34: **Meat producers**

	Total meat production									
	total		beef and buffalo		pig		sheep and goat		poultry	
	thousand tonnes 2011	p.a. growth percent 2000-11	thousand tonnes 2011	p.a. growth percent 2000-11	thousand tonnes 2011	p.a. growth percent 2000-11	thousand tonnes 2011	p.a. growth percent 2000-11	thousand tonnes 2011	p.a. growth percent 2000-11
Regional Office for Asia and the Pacific	129 303	3.5	19 608	2.0	63 596.5	3.4	7 753.5	2.2	35 422.1	5.3
Developing countries and transition economies	120 746	3.7	16 375	2.3	61 935.7	3.5	6 749.5	2.8	32 826.0	5.5
Central Asia	9 444	4.9	2 781	1.2	2 665.2	4.1	453.5	3.4	3 075.2	12.8
Kazakhstan	939	3.8	393	2.3	213.6	4.4	149.5	4.2	102.0	10.7
Russian Federation	7 566	5.0	1 625	−1.4	2 427.6	4.0	189.0	2.8	2 942.5	12.9
Uzbekistan	938	5.8	763	6.3	24.0	4.7	115.0	3.4	30.7	6.1
East Asia	81 561	3.1	6 830	2.2	51 477.2	3.1	4 078.3	3.6	17 449.1	3.2
China	79 216	3.2	6 475	2.4	50 530.0	3.2	3 937.0	3.7	16 720.0	3.1
Democratic People's Republic of Korea	324	2.2	22	0.8	110.0	−2.2	15.6	3.0	42.7	3.1
Mongolia	210	−2.8	54	−6.6	0.2	−12.1	124.3	0.3	0.4	21.6
Republic of Korea	1 811	0.9	280	−0.8	837.0	−0.8	1.4	−5.8	686.0	4.6
Pacific Islands	482	2.0	17	−0.3	85.7	1.3	0.4	−7.3	24.5	4.5
Cook Islands	1	−1.2	0	−3.6	0.6	−0.7	0.0	−11.9	0.0	−7.7
Fiji	28	2.3	8	−0.4	4.0	0.4	0.2	−12.4	15.5	5.9
Kiribati	2	4.0			0.9	1.6			0.7	8.2
Marshall Islands										
Micronesia (Federated States of)	1	0.2	0	0.5	0.9	0.0	0.0	0.7	0.1	0.3
Nauru	0	0.4			0.1	0.4			0.0	0.0
Niue	0	1.3	0	1.1	0.1	1.0			0.0	2.6
Palau										
Papua New Guinea	432	2.0	3	1.6	67.6	1.4	0.0	1.2	5.8	0.6
Samoa	6	1.5	1	0.9	4.1	1.5			0.6	3.1
Solomon Islands	3	1.2	1	1.8	2.3	1.0			0.3	1.4
Tonga	2	0.3	0	0.3	1.6	0.6	0.0	0.5	0.3	−1.2
Tuvalu	0	0.7			0.1	0.5			0.0	1.2
Vanuatu	7	0.1	2	−3.6	3.5	1.9	0.0	4.7	1.2	7.9
Southeast Asia	16 635	5.9	1 789	3.9	7 358.3	6.0	232.0	6.1	7 189.5	6.6
Cambodia	198	−0.1	73	0.5	97.5	−0.7			28.0	0.6
Indonesia	2 985	5.3	503	2.4	721.1	5.2	115.6	3.6	1 642.8	6.5
Lao People's Democratic Republic	136	5.9	46	3.1	64.0	7.9	1.7	13.1	24.8	6.9
Malaysia	1 691	6.0	30	4.9	231.3	3.4	2.0	7.8	1 427.6	6.5
Myanmar	2 112	14.5	254	9.6	619.1	15.8	47.5	13.7	1 191.1	15.3
Philippines	2 957	3.3	302	1.3	1 649.3	2.8	54.8	4.5	934.9	4.8
Thailand	2 403	1.5	193	−0.4	867.3	2.1	1.8	7.1	1 340.2	1.4
Timor-Leste	33	1.8	2	−0.7	9.9	4.0	0.5	6.5	0.7	−3.3
Viet Nam	4 120	6.9	387	6.9	3 098.9	7.4	8.1	4.8	599.4	4.6
South and Southwest Asia	12 624	3.4	4 957	2.4	349.3	−2.9	1 985.3	0.7	5 087.7	7.7
Afghanistan	333	0.4	138	0.8			157.5	−0.7	25.6	6.2
Bangladesh	625	3.0	198	1.1			203.1	4.0	207.8	4.4
Bhutan	7	−0.1	5	0.3	1.0	−2.6	0.2	−0.6	0.4	3.0
India	6 228	3.1	2 589	1.3	329.0	−3.1	890.0	2.3	2 245.0	8.6
Iran (Islamic Republic of)	2 189	3.2	238	−1.4	0.0		234.5	−5.5	1 697.7	6.9
Maldives	1	−0.6								
Nepal	329	3.0	219	2.3	17.9	1.9	55.5	3.1	36.3	9.8
Pakistan	2 774	4.5	1 536	5.1			443.0	−0.5	771.9	8.0
Sri Lanka	139	3.1	33	0.3	1.4	−2.2	1.5	−2.0	103.0	4.5
Developed Countries	8 557	0.6	3 233	0.4	1 660.8	−0.0	1 004.0	−1.8	2 596.0	2.8
Australia	4 070	0.9	2 110	0.5	343.4	−0.5	537.2	−2.3	1 053.7	4.6
Japan	3 159	0.5	500	−0.5	1 267.3	0.1	0.2	−2.4	1 382.0	1.3
New Zealand	1 328	0.3	623	0.8	50.2	0.6	466.6	−1.2	160.3	3.8
Regional Office for Africa	12 271	3.4	4 532	2.8	1 266.8	5.8	2 089.0	2.8	2 804.0	5.3
Regional Office for Europe and Central Asia	63 842	1.8	13 132	0.5	27 807.7	1.2	2 200.7	0.6	19 312.9	5.3
Regional Office for Latin America and the Caribbean	47 166	3.6	17 021	2.1	6 884.8	2.9	446.2	0.9	22 242.2	5.5
Regional Office for the Near East	9 809	3.0	2 239	2.7			1 823.3	0.8	5 269.5	4.9
World	298 871	2.7	66 334	1.4	110 270.2	2.6	13 407.0	2.0	102 249.0	4.3

TABLE 35: **Eggs, milk, and processed milk**

	Production							
	eggs		milk		butter and ghee	cheese	evaporat and condensed milk	skim milk and buttermilk
	thousand tonnes 2011	p.a. growth percent 2000-11	million tonnes 2011	p.a. growth percent 2000-11	thousand tonnes 2011	thousand tonnes 2011	thousand tonnes 2011	thousand tonnes 2011
Regional Office for Asia and the Pacific	43 830	2.7	304.7	4.4				
Developing countries and transition economies	41 087	2.9	270.2	4.8				
Central Asia	2 711	2.8	43.6	1.2				
Kazakhstan	208	7.4	5.2	3.1	14.6	19.8	15.5	2.9
Russian Federation	2 305	1.8	31.6	−0.2	220.0	602.0	193.9	77.7
Uzbekistan	197	9.8	6.8	5.9	4.5	15.6	12.2	1.8
East Asia	28 861	2.3	43.9	11.2				
China	28 114	2.3	41.5	11.9	107.3	266.2	134.6	
Democratic People's Republic of Korea	120	0.8	0.1	0.6				
Mongolia	0	2.6	0.4	−0.6	0.6	2.0	0.4	
Republic of Korea	626	2.1	1.9	−1.7	59.0		4.2	31.5
Pacific Islands	13	3.6	0.1	0.8				
Cook Islands	0	−14.4						
Fiji	6	5.4	0.1	0.8	2.0			
Kiribati	0	3.9						
Marshall Islands								
Micronesia (Federated States of)	0	0.4						
Nauru	0	0.0						
Niue	0	2.6	0.0	−2.6				
Palau								
Papua New Guinea	5	0.0	0.0	2.0				
Samoa	0	3.0	0.0	−0.1				
Solomon Islands	1	3.8	0.0	0.4				
Tonga	0	−1.0	0.0	0.4				
Tuvalu	0	3.3						
Vanuatu	1	12.1	0.0	0.3				
Southeast Asia	4 254	4.8	4.3	7.2				
Cambodia	22	3.7	0.0	1.2				
Indonesia	1 427	5.6	1.3	4.9			21.8	
Lao People's Democratic Republic	15	3.8	0.0	1.4				
Malaysia	554	3.0	0.1	6.7			255.9	
Myanmar	412	11.7	1.6	9.2	28.6	81.5		
Philippines	481	3.9	0.0	4.4			0.0	
Thailand	996	1.9	0.9	4.7		4.7	104.2	
Timor-Leste	1	−0.6	0.0	3.6				
Viet Nam	345	5.8	0.4	13.3			8.0	
South and Southwest Asia	5 248	4.6	178.3	4.0				
Afghanistan	17	1.3	1.7	0.4	32.6	22.9		
Bangladesh	284	4.3	3.4	4.3	25.9	1.0		
Bhutan	0	−2.2	0.0	−0.7		0.1		
India	3 490	5.0	127.3	4.4	3 383.0	1.5	0.8	132.6
Iran (Islamic Republic of)	741	2.3	7.3	2.0	187.4	255.4	3.3	
Maldives								
Nepal	36	3.9	1.6	3.1	23.7			
Pakistan	612	5.2	36.7	3.3	669.7		1.9	2.7
Sri Lanka	67	2.3	0.2	3.2	0.5		4.1	
Developed Countries	2 743	0.1	34.5	1.2				
Australia	205	3.3	9.1	−1.6	122.5	338.7	10.2	183.5
Japan	2 483	−0.2	7.5	−1.2	62.8	125.0	41.7	155.6
New Zealand	56	1.8	17.9	3.5	385.0	311.2	1.7	468.0
Regional Office for Africa	1 844	4.4	29.2	5.0				
Regional Office for Europe and Central Asia	12 239	1.6	249.8	0.6	2 599.7	10 609.2	2 079.9	1 411.8
Regional Office for Latin America and the Caribbean	7 495	3.6	81.8	3.4				
Regional Office for the Near East	2 384	3.2	30.4	2.8	411.3	1 386.9		
World	70 616	2.5	739.4	2.8				

TABLE 36: **Fish production**

	Fish production									
	capture					aquaculture				
	total		inland	marine	p.a. growth	total		inland	marine	p.a. growth
	thousand tonnes 2010	thousand tonnes 2011	thousand tonnes 2011	thousand tonnes 2011	percent 2000-11	thousand tonnes 2010	thousand tonnes 2011	thousand tonnes 2011	thousand tonnes 2011	percent 2000-11
Regional Office for Asia and the Pacific	52 193	52 427	7 584	40 831	2	71 079	76 070	40 620		8
Developing countries and transition economies	47 415	47 984	7 548	36 424	2	69 746	74 975	40 574		8
Central Asia	4 123	4 309	296		1	128	137	126		5
Kazakhstan	43	43	43		1	0	0	0		−10
Russian Federation	4 076	4 262	249		1	121	130	119		5
Uzbekistan	4	4	4		2	7	7	7		2
East Asia	17 615	18 013	2 248	15 765	1	49 715	52 181	25 965		5
China	15 664	16 046	2 233	13 813	1	47 830	50 173	25 939	24 234	5
Democratic People's Republic of Korea	205	205	5	200	−0	508	508	4	505	1
Mongolia	0	0	0		−14					
Republic of Korea	1 746	1 762	10	1 752	−0	1 377	1 499	22	1 478	8
Pacific Islands	578	557	16	541	8	15	15	2		41
Cook Islands	10	4	0	4	14	0	0	0		
Fiji	42	41	3	39	−0	1	1	0	0	−19
Kiribati	45	65	0	65	6	5	4	0	4	−8
Marshall Islands	60	93	0	93	25					
Micronesia (Federated States of)	31	36	0	36	4	0	0		0	
Nauru	1	1		1	4	0	0	0		
Niue	0	0	0	0	−27					
Palau	1	1	0	1	−2	0	0		0	25
Papua New Guinea	226	185	14	172	5	2	2	2		20
Samoa	13	12	0	12	3	0	0	0	0	
Solomon Islands	37	51	0	51	9	8	8	0	8	77
Tonga	2	2	0	2	−6					
Tuvalu	11	8	0	8	29	0	0		0	
Vanuatu	99	56	0	56	−2	0	0	0		
Southeast Asia	17 250	17 686	2 596	15 090	4	14 392	16 109	7 980		17
Cambodia	490	490	405	85	5	60	72	70	2	16
Indonesia	5 384	5 714	369	5 346	3	6 278	7 937	2 692	5 245	21
Lao People's Democratic Republic	31	31	31		1	82	86	86		7
Malaysia	1 438	1 383	6	1 377	1	581	527	190	337	11
Myanmar	3 063	3 333	1 163	2 170	11	851	817	814	3	21
Philippines	2 616	2 367	192	2 175	2	2 546	2 608	618	1 990	8
Thailand	1 811	1 862	228	1 634	−4	1 286	1 008	853	155	3
Timor-Leste	3	3	0	3	22	2	2	0	2	
Viet Nam	2 414	2 502	202	2 300	4	2 707	3 052	2 658	394	18
South and Southwest Asia	7 849	7 420	2 392	5 028	2	5 495	6 534	6 501		9
Afghanistan	1	1	1		0					
Bangladesh	1 727	1 601	1 055	546	4	1 309	1 524	1 524		8
Bhutan	0	0	0		−4	0	0	0		9
India	4 689	4 302	1 061	3 241	1	3 790	4 578	4 545	33	8
Iran (Islamic Republic of)	444	488	76	412	2	220	247	247		18
Maldives	123	121	0	121	0					
Nepal	22	22	22		2	28	31	31		7
Pakistan	453	453	118	335	−3	140	142	142	0	25
Sri Lanka	391	433	60	374	3	8	12	12	0	9
Developed Countries	4 778	4 443	36	4 407	−3	1 333	1 095	45		−2
Australia	175	165	1	165	−2	71	71	5	66	8
Japan	4 167	3 850	34	3 815	−3	1 151	907	39	867	−3
New Zealand	436	428	1	427	−2	111	117	1	117	3
Regional Office for Africa	5 901	6 011	2 441	3 570	2	497	541	397		23
Regional Office for Europe and Central Asia	14 139	13 648	470		−1	2 666	2 825	578		4
Regional Office for Latin America and the Caribbean	12 196	16 669	508	16 161	−1	1 933	2 397	1 009		11
Regional Office for the Near East	3 096	3 029	453	2 576	2	1 208	1 306	1 296		12
World	89 957	94 497	11 054	79 034	1	78 067	83 705	43 995		

TABLE 37: **Volume of total cereal trade**

	Cereals							
	imports				exports			
	thousand tonnes 2000	thousand tonnes 2005	thousand tonnes 2009	thousand tonnes 2010	thousand tonnes 2000	thousand tonnes 2005	thousand tonnes 2009	thousand tonnes 2010
Regional Office for Asia and the Pacific	85 147	80 128	86 287	90 411	58 784	68 026	74 750	71 967
Developing countries and transition economies	57 828	53 341	60 700	64 182	36 462	49 143	55 782	51 321
Central Asia	5 740	2 185	2 115	1 990	7 360	15 907	29 089	22 566
Kazakhstan	18	40	182	53	6 091	3 332	6 700	8 492
Russian Federation	4 851	1 494	431	450	1 263	12 508	22 315	14 001
Uzbekistan	872	651	1 501	1 486	7	67	74	74
East Asia	18 490	20 617	15 590	19 731	13 884	10 235	1 423	1 316
China	3 153	6 271	3 130	5 686	13 831	10 220	1 404	1 295
Democratic People's Republic of Korea	2 283	1 622	589	441	0	0	0	0
Mongolia	253	265	299	160	0	0	0	0
Republic of Korea	12 801	12 458	11 573	13 444	54	16	19	22
Pacific Islands	544	584	628	683	12	24	25	33
Cook Islands	1	1	2	1				
Fiji	138	154	127	135	11	24	25	33
Kiribati	11	15	14	14				
Marshall Islands								
Micronesia (Federated States of)	3	10	7	8				
Nauru	0	1	0	0				
Niue	0	0	0	0				
Palau								
Papua New Guinea	321	319	370	394	1	0	0	0
Samoa	15	14	33	36	0	0	0	0
Solomon Islands	31	40	49	66	0	0	0	0
Tonga	7	7	6	8	0	0	0	0
Tuvalu	1	2	1	0				
Vanuatu	16	20	18	20	0	0	0	0
Southeast Asia	17 018	18 079	21 180	24 899	10 276	13 566	16 895	17 012
Cambodia	117	68	35	100	7	25	367	60
Indonesia	6 863	5 479	6 152	8 116	32	252	106	126
Lao People's Democratic Republic	16	27	53	52	1	47	232	225
Malaysia	4 099	5 481	4 956	5 426	140	89	53	65
Myanmar	121	143	87	212	399	240	400	156
Philippines	3 799	4 006	5 311	4 572	4	11	16	22
Thailand	1 100	1 407	1 629	2 390	6 207	7 649	9 752	9 465
Timor-Leste	45	34	15	12	0	0	0	0
Viet Nam	859	1 433	2 940	4 019	3 486	5 253	5 969	6 893
South and Southwest Asia	16 035	11 876	21 187	16 878	4 929	9 411	8 350	10 393
Afghanistan	1 178	1 254	2 106	1 435	0	0	0	0
Bangladesh	2 496	2 950	3 050	4 591	1	5	5	4
Bhutan	57	30	71	68	9	1	0	1
India	55	69	200	207	2 822	5 433	5 090	4 909
Iran (Islamic Republic of)	9 928	4 615	11 195	8 878	7	16	88	653
Maldives	35	38	49	48	0	0	0	0
Nepal	203	72	150	254	0	3	54	6
Pakistan	1 054	1 481	3 174	261	2 087	3 851	2 978	4 422
Sri Lanka	1 029	1 367	1 192	1 137	2	102	135	398
Developed Countries	27 319	26 787	25 587	26 229	22 322	18 883	18 968	20 646
Australia	55	113	226	208	21 826	18 465	18 678	20 321
Japan	27 012	26 193	25 000	25 604	472	415	275	311
New Zealand	253	481	361	417	24	3	15	15
Regional Office for Africa	17 537	26 029	31 902	30 039	1 399	2 772	2 643	3 136
Regional Office for Europe and Central Asia	64 609	70 235	85 544	84 545	82 249	102 244	144 819	131 168
Regional Office for Latin America and the Caribbean	43 984	40 638	46 539	49 686	26 007	30 814	33 720	43 686
Regional Office for the Near East	61 417	62 497	77 898	79 128	1 548	2 769	2 696	3 415
World	271 020	285 823	328 859	336 408	273 088	291 390	330 193	340 306

TABLE 38: **Volume of total oilseeds, and sugar and honey trade**

	Oilseeds				Sugar and honey			
	imports		exports		imports		exports	
	thousand tonnes 2000	thousand tonnes 2010	thousand tonnes 2000	thousand tonnes 2010	thousand tonnes 2000	thousand tonnes 2010	thousand tonnes 2000	thousand tonnes 2010
Regional Office for Asia and the Pacific	28 712	73 760	5 406	3 417	18 284	21 330	13 966	14 369
Developing countries and transition economies	20 919	67 582	3 101	2 167	16 041	19 392	9 732	10 896
Central Asia	227	1 239	1 348	254	5 818	3 320	200	242
Kazakhstan	33	13	27	72	369	436	5	24
Russian Federation	120	1 214	1 285	174	5 047	2 379	193	218
Uzbekistan	74	12	35	8	401	505	2	0
East Asia	15 155	58 558	805	604	3 500	4 562	962	1 736
China	13 404	57 062	804	602	1 102	1 864	585	1 246
Democratic People's Republic of Korea	53	26	0	0	74	106	0	0
Mongolia	3	0	0	0	27	38	0	0
Republic of Korea	1 695	1 470	1	2	2 297	2 555	377	489
Pacific Islands	5	5	125	96	28	48	448	208
Cook Islands	0	0	0	0	0	0		
Fiji	1	1	0	0	5	13	448	208
Kiribati	0	0	7	4	3	4		
Marshall Islands								
Micronesia (Federated States of)			0	1	2	2		
Nauru					0	0		
Niue	0	0	0	0	0	0	0	0
Palau								
Papua New Guinea	4	5	68	43	3	9	0	0
Samoa	0	0	4	1	7	8	0	0
Solomon Islands	0	0	15	31	2	6	0	0
Tonga	0	0	0	0	2	3	0	0
Tuvalu	0	0	0	0	0	0		
Vanuatu	0	0	30	17	3	3		
Southeast Asia	3 864	5 188	293	367	3 521	5 810	5 936	5 991
Cambodia	9	0	2	8	90	430	0	14
Indonesia	1 438	1 992	55	192	1 720	2 039	168	524
Lao People's Democratic Republic	0	0	1	6	22	31		
Malaysia	764	726	52	39	1 223	1 828	287	343
Myanmar	1	0	46	59	58	67	6	16
Philippines	294	299	3	0	344	551	253	169
Thailand	1 357	1 899	17	17	15	251	5 142	4 844
Timor-Leste			2	1	3	9		
Viet Nam	1	271	116	45	45	603	81	81
South and Southwest Asia	1 669	2 592	529	845	3 175	5 652	2 185	2 719
Afghanistan			0	15	54	260	0	0
Bangladesh	435	330	1	14	253	1 079	0	0
Bhutan	0	1	0	0	6	8	0	0
India	7	42	498	786	68	1 214	780	2 210
Iran (Islamic Republic of)	604	950	3	4	1 105	1 946	114	68
Maldives	0	0	0	0	7	12		
Nepal	76	76	2	0	31	58	19	1
Pakistan	537	1 184	10	17	1 075	527	1 271	440
Sri Lanka	10	9	15	9	577	549	0	0
Developed Countries	7 792	6 178	2 305	1 250	2 243	1 938	4 234	3 474
Australia	201	33	2 304	1 247	38	177	4 161	3 384
Japan	7 548	6 122	0	0	1 912	1 499	15	22
New Zealand	44	22	1	2	294	262	59	68
Regional Office for Africa	268	371	1 056	1 323	2 855	5 885	4 123	2 909
Regional Office for Europe and Central Asia	26 913	35 190	10 010	15 194	20 141	22 409	14 318	14 298
Regional Office for Latin America and the Caribbean	7 883	7 598	18 652	49 450	1 836	4 943	16 387	36 102
Regional Office for the Near East	1 701	5 653	339	250	6 967	13 207	1 327	1 859
World	68 961	125 087	67 741	124 869	49 828	70 189	51 314	73 185

TABLE 39: **Volume of total meat and dairy products trade**

	Total meat				Dairy products (milk equivalent)			
	imports		exports		imports		exports	
	thousand tonnes 2000	thousand tonnes 2010	thousand tonnes 2000	thousand tonnes 2010	thousand tonnes 2000	thousand tonnes 2010	thousand tonnes 2000	thousand tonnes 2010
Regional Office for Asia and the Pacific	6 191	8 770	4 121	4 973	12 510	21 689	15 810	20 233
Developing countries and transition economies	3 414	5 759	1 660	2 439	10 445	19 394	1 557	2 037
Central Asia	1 330	2 361	21	29	1 231	3 205	689	188
Kazakhstan	32	128	1	0	160	394	2	16
Russian Federation	1 280	2 226	20	28	1 007	2 796	686	172
Uzbekistan	18	7	0	0	64	15	1	0
East Asia	1 581	1 678	830	931	2 068	6 197	166	123
China	1 043	873	779	890	1 563	5 461	159	106
Democratic People's Republic of Korea	2	0	0	0	1	10		
Mongolia	0	5	17	15	4	5	0	0
Republic of Korea	536	800	34	26	500	721	8	18
Pacific Islands	76	84	2	3	82	113	0	3
Cook Islands	1	2			2	2		
Fiji	16	9	1	2	35	65	0	3
Kiribati	1	1			2	2		
Marshall Islands								
Micronesia (Federated States of)	3	5			1	0		
Nauru	0	0			1	0		
Niue	0	0			0	0		
Palau								
Papua New Guinea	37	39	0	0	26	25	0	0
Samoa	9	12	0	0	6	7		
Solomon Islands	0	3			2	3	0	0
Tonga	7	11	0	0	5	4	0	0
Tuvalu	0	1			0	1		
Vanuatu	1	2	2	1	2	5	0	0
Southeast Asia	390	1 292	494	734	5 970	7 391	548	861
Cambodia	0	0	0	0	27	13	9	0
Indonesia	54	120	6	6	1 092	2 075	248	177
Lao People's Democratic Republic	0	0	0	0	13	14		
Malaysia	172	223	10	37	1 293	1 455	132	255
Myanmar	0	24	0	0	126	83		
Philippines	157	303	1	11	1 714	1 575	58	232
Thailand	2	8	403	670	1 140	986	98	182
Timor-Leste	5	5			8	6		
Viet Nam	0	609	74	11	559	1 184	3	15
South and Southwest Asia	37	343	312	742	1 093	2 488	153	861
Afghanistan	0	41			2	82	0	0
Bangladesh	0	0	0	0	286	558	0	0
Bhutan	0	5	0	0	8	20	0	0
India	0	1	300	676	61	390	137	333
Iran (Islamic Republic of)	31	281	7	26	175	519	10	447
Maldives	3	10	0	0	18	31	0	0
Nepal	0	0	0	1	4	30	4	4
Pakistan	0	4	4	36	81	289	1	75
Sri Lanka	3	2	0	3	458	569	1	1
Developed Countries	2 776	3 011	2 461	2 534	2 065	2 296	14 253	18 196
Australia	45	177	1 599	1 620	337	644	5 580	3 422
Japan	2 696	2 782	5	14	1 677	1 540	16	16
New Zealand	35	52	857	900	52	112	8 658	14 758
Regional Office for Africa	543	1 328	117	182	2 110	3 333	287	276
Regional Office for Europe and Central Asia	10 782	18 362	11 028	17 617	37 380	54 004	50 663	67 893
Regional Office for Latin America and the Caribbean	1 812	3 174	2 418	7 839	6 862	6 377	2 029	3 620
Regional Office for the Near East	1 174	3 135	49	208	6 638	10 821	541	3 813
World	23 347	36 957	24 457	39 767	69 182	100 370	72 773	104 380

TABLE 40: **Value of fish trade**

	Fish							
	imports				exports			
	million US$ 2000	million US$ 2009	million US$ 2010	million US$ 2011	million US$ 2000	million US$ 2009	million US$ 2010	million US$ 2011
Regional Office for Asia and the Pacific	20 976	28 094	32 446	38 952	19 834	35 430	42 662	51 369
Developing countries and transition economies	4 890	13 675	16 181	20 027	17 363	32 121	38 702	47 615
Central Asia	211	2 059	2 433	2 808	1 535	2 405	2 946	3 365
Kazakhstan	20	66	56	87	12	86	93	80
Russian Federation	190	1 991	2 373	2 715	1 523	2 317	2 848	3 281
Uzbekistan	1	2	4	5	0	2	5	3
East Asia	3 194	7 765	9 439	11 590	5 078	11 655	14 932	19 033
China	1 796	4 976	6 157	7 589	3 603	10 246	13 268	16 960
Democratic People's Republic of Korea	13	94	88	77	87	60	63	62
Mongolia	0	1	3	5	0	0	0	0
Republic of Korea	1 385	2 694	3 191	3 918	1 388	1 349	1 601	2 012
Pacific Islands	34	87	114	182	208	447	470	675
Cook Islands	0	1	1	1	0	6	6	6
Fiji	8	38	59	128	34	87	131	242
Kiribati	0	1	1	1	4	15	1	1
Marshall Islands	0	2	3	2	3	54	73	135
Micronesia (Federated States of)	2	4	5	7	27	24	24	25
Nauru								
Niue								
Palau	0	1	1	1	0	0	0	0
Papua New Guinea	11	28	28	25	58	160	128	165
Samoa	8	5	6	7	8	8	13	8
Solomon Islands	0	3	4	4	12	19	23	42
Tonga	1	2	3	2	4	4	10	5
Tuvalu	0	0	0	0	0	0	0	0
Vanuatu	1	3	3	5	59	69	59	45
Southeast Asia	1 323	3 508	3 890	5 014	8 407	14 523	16 765	19 790
Cambodia	3	5	4	5	34	30	40	60
Indonesia	95	230	316	402	1 584	2 248	2 562	3 182
Lao People's Democratic Republic	2	4	4	6	0	0	0	0
Malaysia	297	672	777	981	349	655	825	911
Myanmar	2	6	11	15	184	483	495	555
Philippines	109	192	134	184	407	569	639	649
Thailand	782	1 979	2 133	2 711	4 367	6 236	7 095	8 189
Timor-Leste		1	3	5		0	0	0
Viet Nam	34	419	508	706	1 481	4 301	5 109	6 243
South and Southwest Asia	128	257	305	433	2 135	3 092	3 589	4 753
Afghanistan			0					
Bangladesh	3	17	22	18	343	516	492	588
Bhutan		2	3	4			0	0
India	16	59	54	124	1 417	2 015	2 433	3 383
Iran (Islamic Republic of)	36	34	68	86	50	76	155	175
Maldives		8	11	28	41	75	71	81
Nepal	0	3	3	6	0	0	0	0
Pakistan	0	2	3	4	150	228	266	331
Sri Lanka	73	131	141	162	135	181	172	196
Developed Countries	16 085	14 418	16 264	18 925	2 471	3 309	3 960	3 753
Australia	518	1 058	1 251	1 474	1 003	824	942	998
Japan	15 513	13 258	14 892	17 341	802	1 583	1 945	1 860
New Zealand	54	102	122	110	666	902	1 072	895
Regional Office for Africa	743	2 643	2 825	3 686	1 639	3 150	3 246	3 255
Regional Office for Europe and Central Asia	21 968	46 172	49 714	56 548	18 232	35 792	40 470	45 603
Regional Office for Latin America and the Caribbean	1 062	3 020	3 544	4 098	6 821	11 241	11 546	14 437
Regional Office for the Near East	598	1 790	2 152	2 479	1 359	2 389	2 632	2 747
World	60 089	99 896	111 138	128 985	55 760	96 373	109 630	128 161

PART

4

Sustainability dimensions

Agriculture is the biggest user of the world's natural resources, occupying almost 40 percent of the earth's total land area and annually withdrawing some 70 percent of its renewable freshwater resources. This gives farming (and forestry and fisheries) an environmental footprint larger than that of any other human activity.

Where farming is practised as an extractive industry, with the environment as a mine of resources for production of food and feed from the soil, agriculture's impact on biodiversity and ecosystems can be devastating. But if farmers, using new and more sustainable farming systems, act as custodians and stewards of the environment, agriculture can become a powerful force for our collective efforts towards environmental protection.

As we continue to ramp up global food production to feed more than 9 billion people in 2050, we must intensify our collective efforts towards environmental protection or risk extremely hazardous consequences.

Asia and the Pacific, with some 60 percent of the world's population and nearly 30 percent of the world's land area, will clearly have a key role to play. The statistics contained in the following pages explain the region's potential to impact the environment beneficially or otherwise.

The Asia-Pacific Region (APR), for example, holds 40 percent of the world's forest reserves and represents humankind's greatest (and most imperiled) storehouse of biodiversity; it uses more water than any other part of the world, hosts three of the world's top ten organic-farming countries but is also the largest source of greenhouse gas (GHG) emissions on earth.

The future of farming and those practising the farming profession in the APR, as elsewhere, lies in producing more food without destroying vast areas of natural forest and grasslands. Our objective must be to not only produce more food, feed, fibre and fuel and but also to maintain and protect biodiversity and rural landscapes for maintaining supplies of collective ecosystem services such as clean air, water storage and purification, and carbon sequestration.

Emissions of GHGs from agriculture, forestry and other land uses contribute significantly to the threat of global warming. These sectors are responsible for nearly 30 percent of all human-induced GHG emissions into the atmosphere, a contribution comparable to that of the energy sector and far exceeding transportation emissions.

The increasing trend of intensive farming practices with indiscriminate use of fertilizers and other chemicals, and use of heavy machinery that compacts the earth, can potentially not only harm the productive capacity of soils and ecosystems but also lead to significant pollution of air, water and soils, putting at risk terrestrial and marine ecosystems downstream as well as human health.

Such negative environmental impacts have, in turn, negative consequences on agricultural production and human well-being. Increased soil salinity, aquifer depletion and land degradation reduce yields and jeopardize food security. Deforestation and unsustainable forest management lead to ecosystem degradation, with far-reaching repercussions.

Increased demand for agricultural produce adds to the pressure on scarce agricultural resources of land and water which face competing and expanding demand from urban settlements and industrial zones.

It follows that if adequate and nutritious food for all of us is to be ensured along with clean air and water and healthy soils, more responsible use of natural resources, and consequent adoption of fully sustainable agriculture systems needs to be promoted.

Destroying the environment in order to feed ourselves is simply not an option. The farmers of the APR, who spearheaded the green revolution of the 1960s, should rightly play a leading role in ushering in the new agriculture era of the twenty-first century.

Land and forestry

With its 1.6 billion hectares of forests, the APR is the wealthiest of FAO's regions in terms of forest resources, accounting for 40 percent of the world's forest reserves.

The region is home to five of ten countries with the most forest cover – the Russian Federation, China, Australia, Indonesia and India. And while it has three countries in the top ten nations with the highest rate of forest loss[6] it also has four countries among the top ten with greatest forest gains.[7]

The status of Asia's forests has improved significantly since 1990 when the region was losing forest cover at the rate of some 0.6 million hectares *per annum*. Asia reported an average net gain of more than 2.2 million hectares *per annum* between 2000 and 2010, gaining 0.39 percent annually. This was primarily the result of large-scale afforestation in China, which has been adding 3 million hectares of forests per year since 2000, but another positive factor has been a significant reduction in the rate of deforestation in Indonesia. The Russian Federation's entry to FAO in 2006 also contributed to this demonstrable growth of forests in the region.

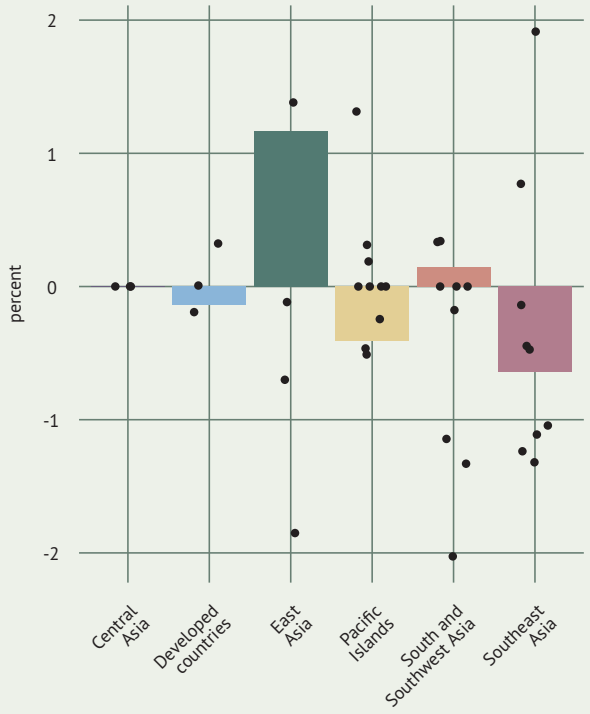
Among subregions, Central Asia is the richest in forests owing to the Russian Federation's 800 million hectares. East Asia showed the best improvement in 1990-2011, adding 48 million hectares of forests, largely due to afforestation in China. The Pacific Islands lost 3 million hectares over the two decades, mostly because of deforestation in Papua New Guinea.

Southeast Asia lost 32 million hectares in 1990-2011 although the rate of forest loss has diminished during the last decade. South and Southwest Asia gained some 2 million hectares, principally due to the 4.6 million hectares of new forests in India. The developed countries in the region lost some 5 million hectares primarily because of drought and fires in Australia.

Forests play an essential role in mitigating climate change and in providing ecosystem services essential to humankind. Globally, deforestation has decreased from an estimated 16 million hectares per year in the 1990s to about 13 million hectares per year in the last decade.

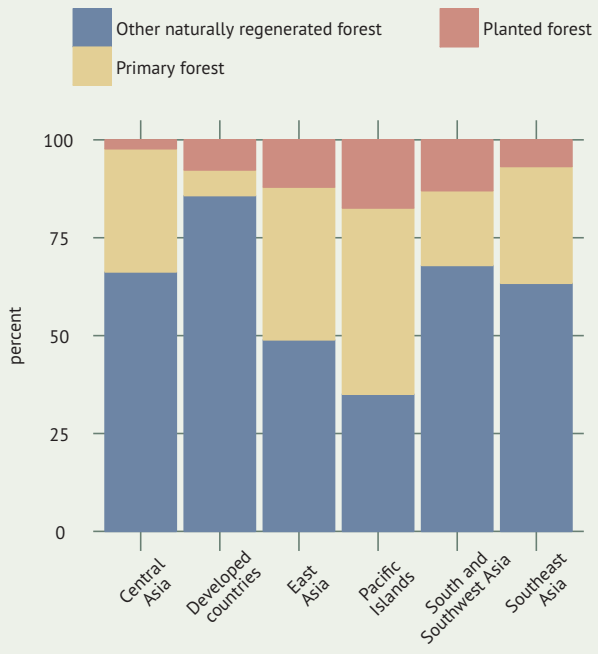
[6] Australia, Indonesia and Myanmar.
[7] China, Viet Nam, India and the Philippines.

CHART 96: **Annual growth rate in forest area (1990-2011)**



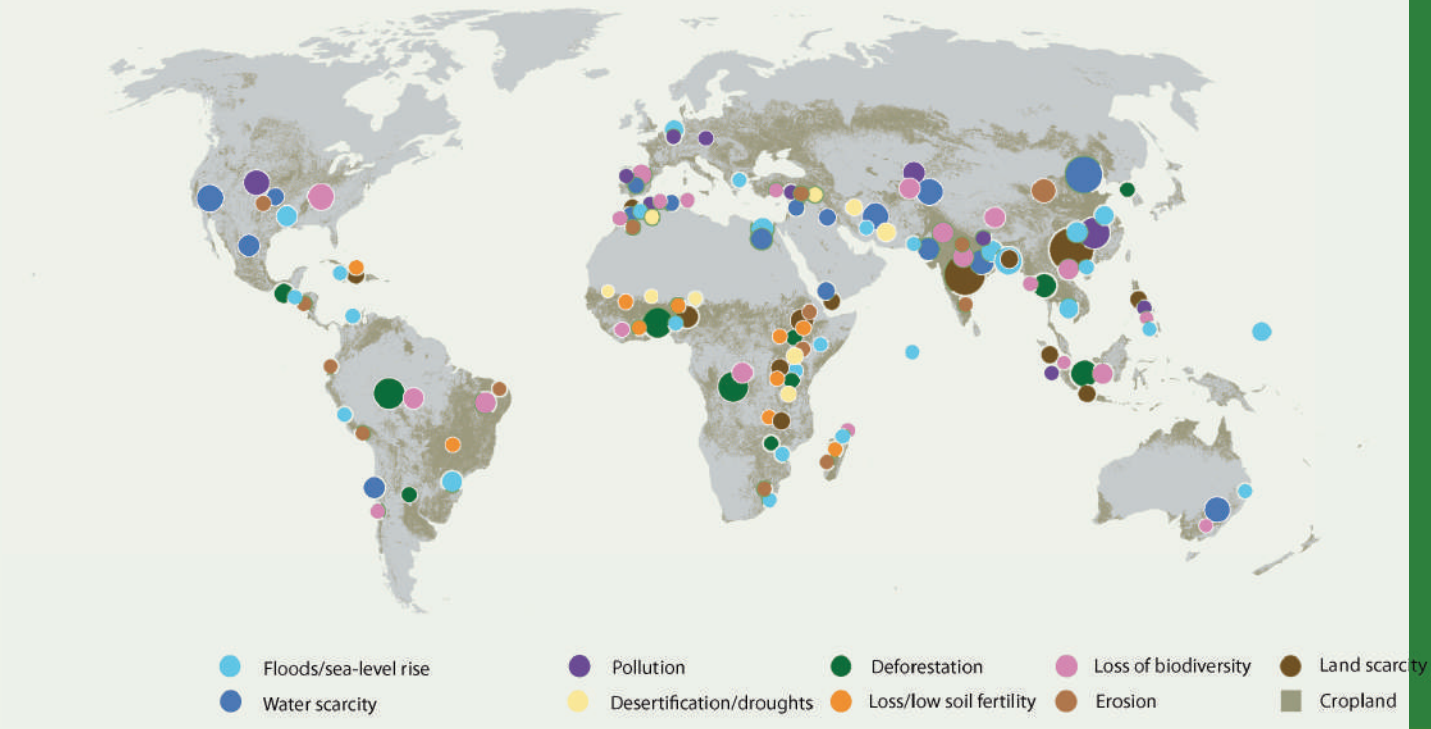
Source: FAO, Statistics Division (FAOSTAT).

CHART 97: **Forest characteristics (2010)**



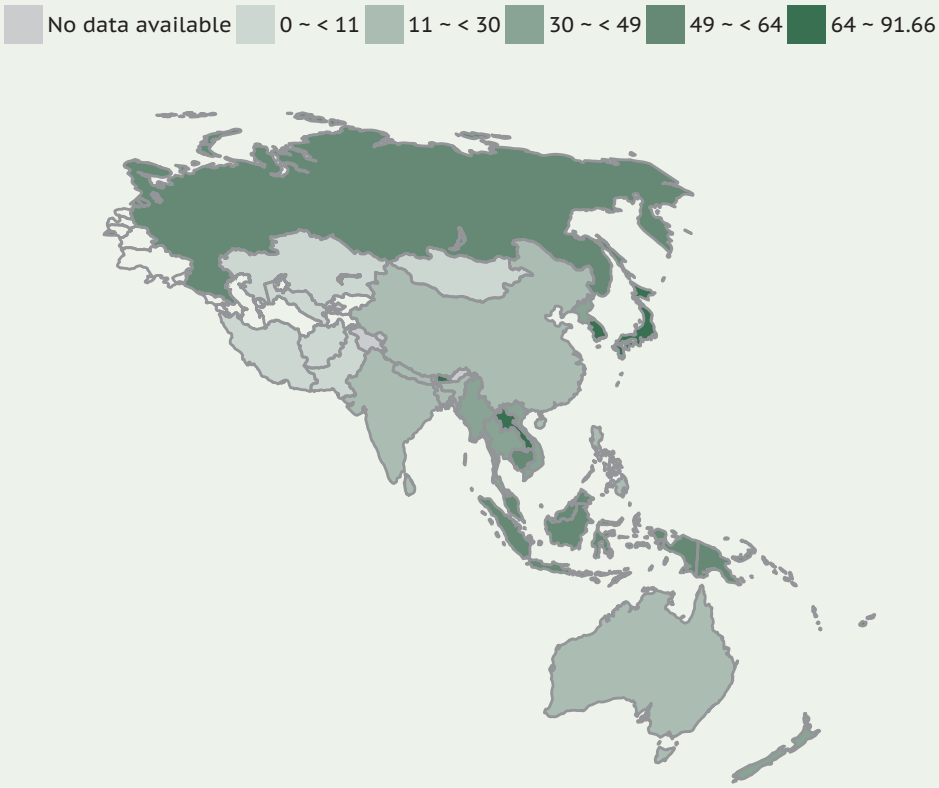
Source: Global Forest Resources Assessment.

MAP 51: **Global distribution of risks associated with main agricultural production systems**



Source: FAO, Fisheries and Aquaculture Department (fishery and aquaculture statistics).

MAP 52: **Forest area as share of total land area (percent, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

Forests and wooded areas are important in economic and social terms. Indicating that the region is emerging from recession, its output of key forest products rose significantly between 2010 and 2012.

For example Asian production of sawnwood climbed from 87 million cubic metres (m^3) to 106 million m^3 during the period – a 20 percent increase. Similarly output of wood-based panels climbed 11 percent from 143million m^3 to 159 million m^3. And while pulp and paper production generally declined in Europe and North America in 2007-2012, it increased significantly in the APR during the same period.

Assuming a fast-growing role in the market for forest products, China has become the world's second largest producer sawnwood after the United States, with Canada in third place. It is also the world's leading producer of wood-based panels, paper and paperboard. In 2012 China produced 13 percent of the world's sawnwood, 39 percent of panels and 26 percent of paper.

China also plays a key role in international trade of forest products. Despite its own greatly increased production, it is the fifth largest importer of paper and paperboard. In 2011 China imported US$40 billion of forest products – 16 percent of the world total.

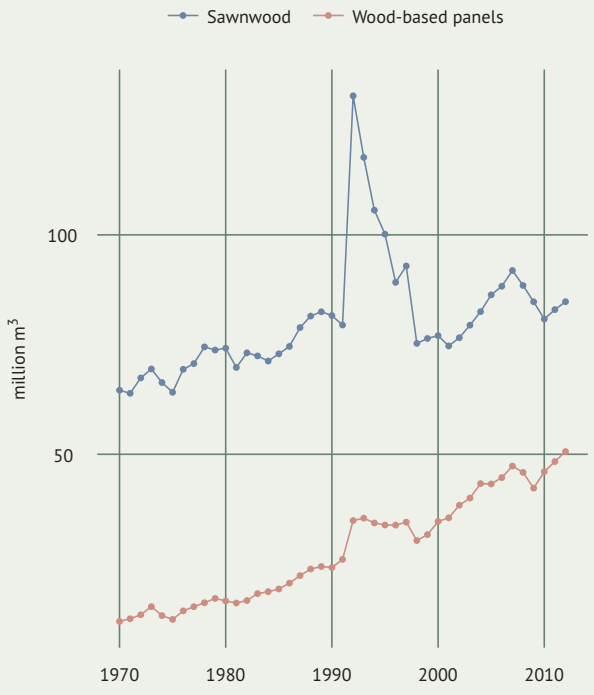
The Russian Federation, the most forested country in the world, changed the structure of its production and trade between 2007 and 2012. Its industrial roundwood exports declined by 31 million m^3, or 64 percent, while its sawnwood production and exports increased by respectively 10 and 17 percent .

Starting in 2006, the Russian Federation imposed a series of export restrictions on log exports, which hit China in particular as the largest importer of Russian industrial roundwood. However Chinese roundwood imports have now recovered as several other major producers including the United States, Canada and New Zealand have expanded their exports to China.

Further reading

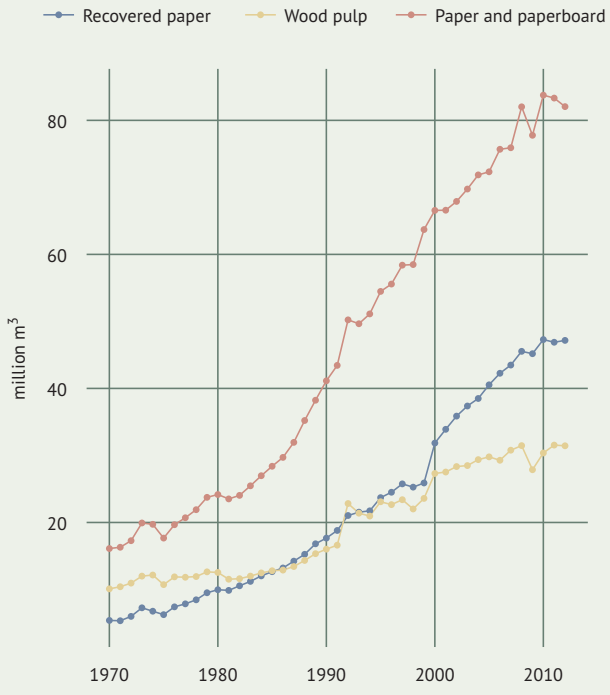
- FAO The State of the World's Land and Water Resources for Food and Agriculture (SOLAW) - Managing Systems at Risk 2011 (www.fao.org/nr/solaw/solaw-home/en/)
- UN International Year of Forests 2011 (www.fao.org/forestry/iyf2011/en/)
- FAO Land degradation assessment (www.fao.org/nr/land/degradation/en/)
- Global Forest Resources Assessment 2010 (www.fao.org/forestry/fra/fra2010/en/)

CHART 98: **Asia and Pacific production of selected forest products (1970-2012)**



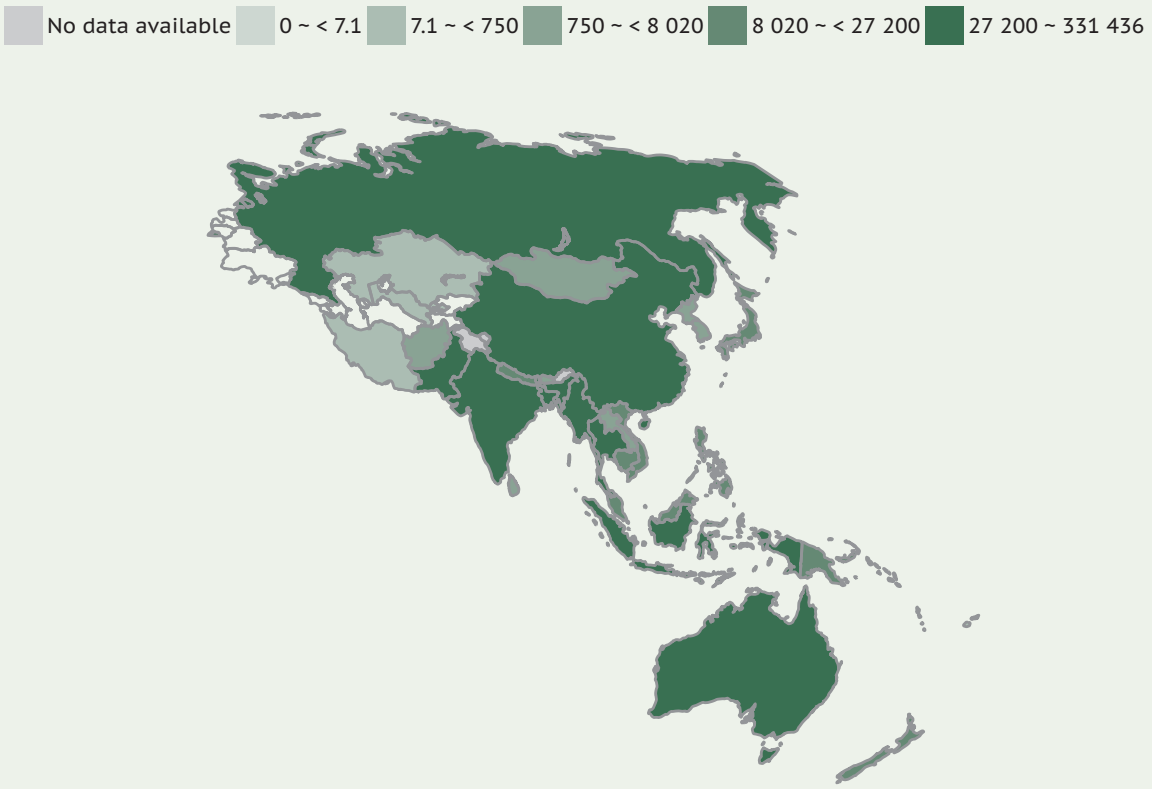
Source: FAO, Statistics Division (FAOSTAT).

CHART 99: **Asia and Pacific production of selected forest products (1970-2012)**



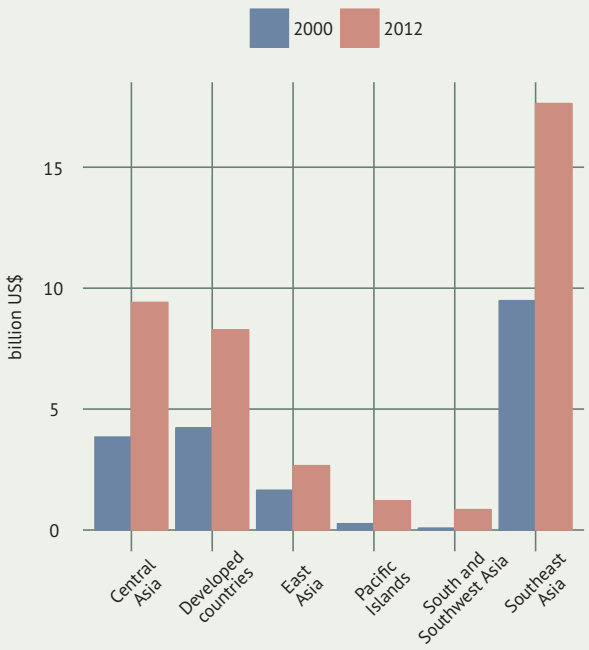
Source: FAO, Statistics Division (FAOSTAT).

MAP 53: **Roundwood production (thousand m^3, 2012)**



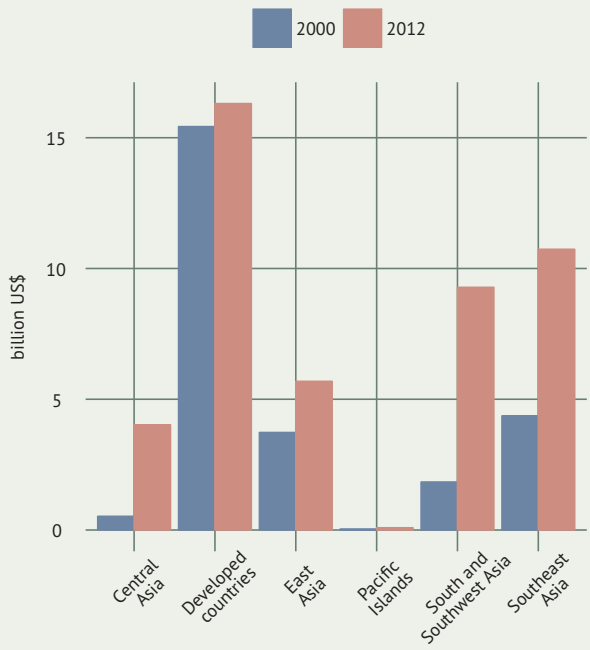
Source: FAO, Statistics Division (FAOSTAT).

CHART 100: **Exports of forest products (2000 and 2012)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 101: **Imports of forest products (2000 and 2012)**



Source: FAO, Statistics Division (FAOSTAT).

Water

Water security is an increasingly important issue in the APR, where demand for water is rising fast, driven by growing populations and rapid urbanization and industrialization.

Overall, the region is relatively well endowed with water resources: for a total area representing 16 percent of the world's land surface,[8] it receives 22 percent of its precipitation and produces 25 percent of its water. However, as the region is home to almost 60 percent of the world's population, the amount of water resources per person in 2009 was 2 970 m^3/year – less than half the world's average of 6 236 m^3/year and 25 percent less than the 3 455 m^3 available in 1999.

Asia and the Pacific also have the highest annual water withdrawal of the world's regions due to its size and population and extensive irrigation. South and Southwest Asia and North and Central Asia (excluding the Russian Federation) have the highest relative water withdrawals.

At the country level, Uzbekistan had the highest rate of water withdrawal[9] in 2010, with almost 120 percent of its total renewable freshwater resources withdrawn (the figure means Uzbekistan was also using water from outside its borders). Of that amount, 108 percent went on agriculture. Pakistan was second with 74 percent and the Islamic Republic of Iran third with almost 68 percent.

More water being used by industry and urban populations means that there is proportionately less available for agriculture, traditionally the heaviest water user with a 70 percent share of all withdrawals. This implies that APR countries need to make more efficient use of agricultural water, and water in general.

Together with population and urbanization, another factor influencing water resources in the region is the high relative incidence of climate change-related extreme weather events such as the floods, droughts and cyclones that have afflicted Australia, China, Myanmar, Pakistan, Thailand and the Philippines in recent years. Climate change is also responsible for rising sea levels leading to increased salinization in river deltas and lakes, thus further reducing freshwater availability.

Data related to water availability are regrettably scarce, however. In face of the APR's growing water problem, the need for more reliable statistics is vital in order to achieve better water governance.

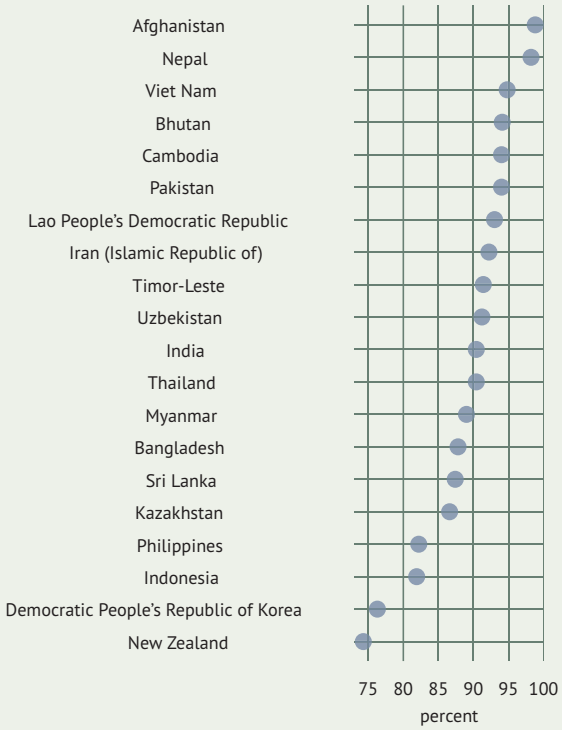
Further reading

- General summary Middle East region Explanatory notes(http://www.fao.org/nr/water/aquastat/regions/meast/index.stm#a15)
- FAO The State of the World's Land and Water Resources for Food and Agriculture (SOLAW) - Managing Systems at Risk 2011 (www.fao.org/nr/solaw/solaw-home/en/)
- FAO Water (www.fao.org/nr/water/)
- FAO AQUASTAT (www.fao.org/nr/aquastat/)

[8] Source : AQUASTAT, available at http://www.fao.org/nr/water/aquastat/countries_regions/asia_southeast/index.stm#a4.

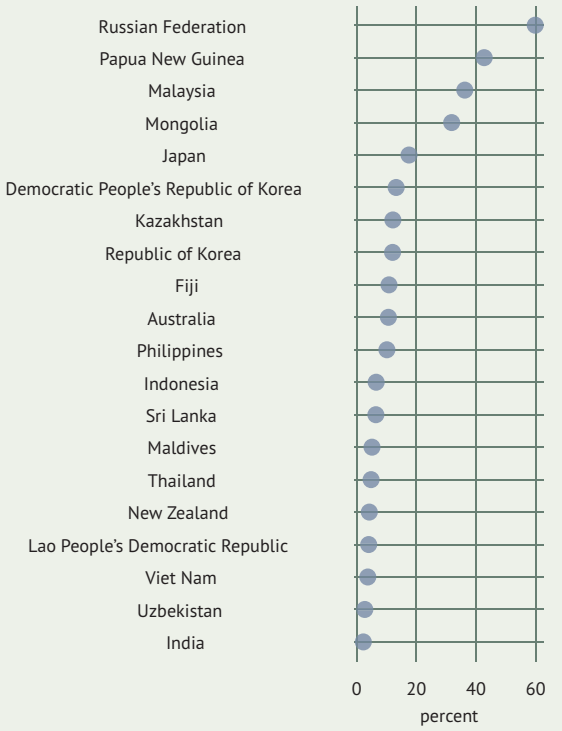
[9] Source : UNESCAP, available at http://www.unescap.org/publications/detail.asp?id=1459.

CHART 102: **Freshwater withdrawal by agriculture sector, shares of total (2000-2010*)**



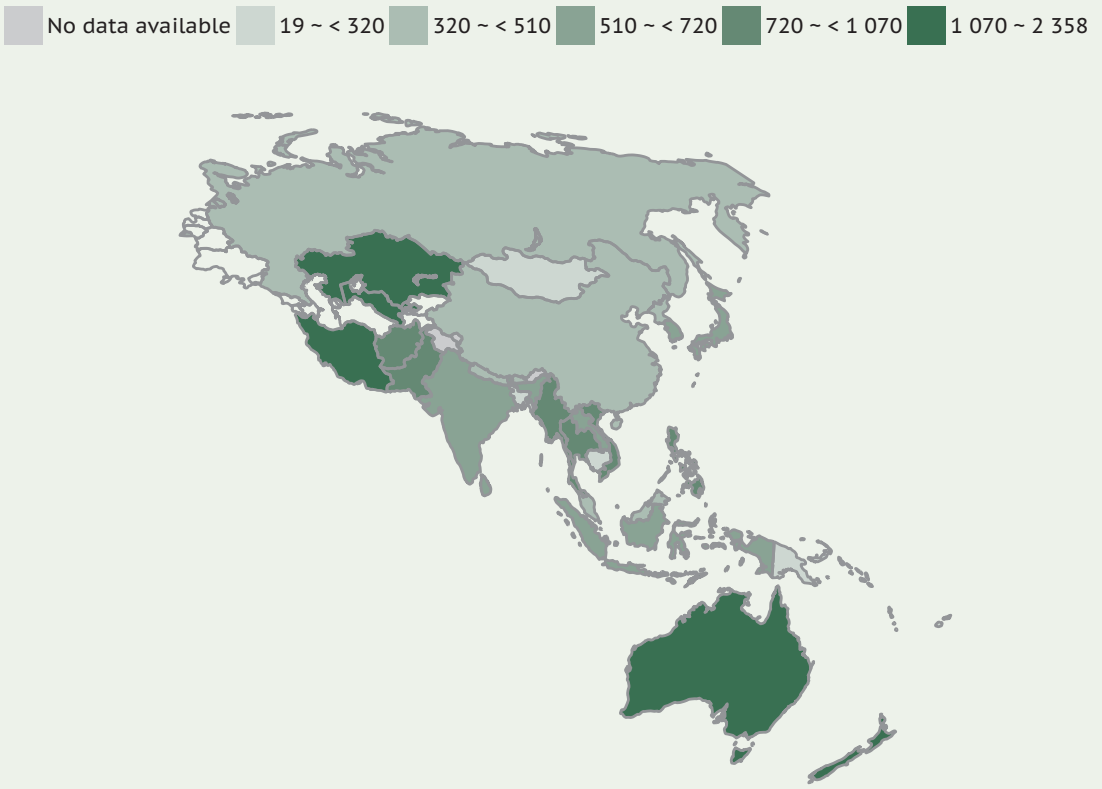
Source: Land and Water Division (AQUASTAT).

CHART 103: **Freshwater withdrawal by the industrial sector, shares of total (2000-2010*)**



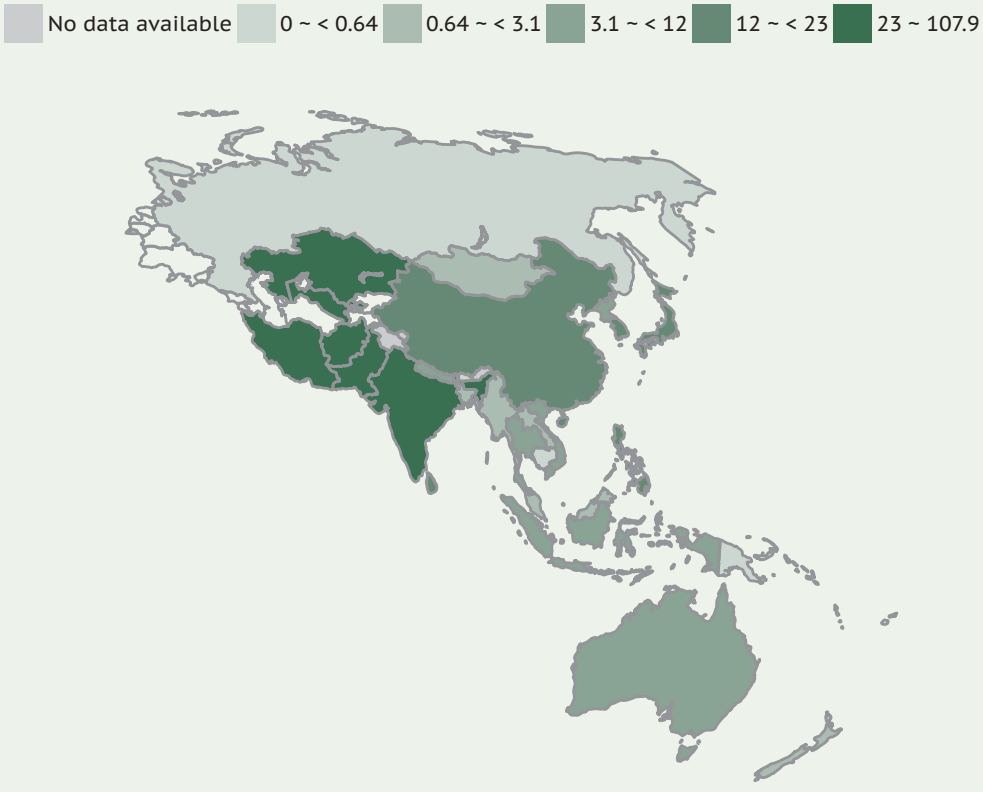
Source: Land and Water Division (AQUASTAT).

MAP 54: **Total water withdrawal per capita (m^3/yr/cap, 2000-2010*)**



Source: Land and Water Division (AQUASTAT).

MAP 55: **Renewable freshwater resources withdrawn by agriculture (percent, 2000-2010*)**



Source: Land and Water Division (AQUASTAT).

Biodiversity

The APR is home to some of the world's most abundant biological diversity. It also hosts wildlife species that are unique to the region such as the giant panda, the tiger, the Asian elephant, the Javan rhinoceros and the orang-utang[10]. But population and economic growth together with industrialization, urbanization and intensified agriculture are putting enormous pressure on natural ecosystems throughout the region.

Asia and the Pacific has more threatened animal and plant species than any other world region – 6 887 in 2012, amounting to roughly one-third of all the threatened species in the world. UNESCAP reports that most countries in the region saw an increase in the numbers of species at risk between 2008 and 2010, the greatest being in India, with 99 species[11].

Among the subregions, Southeast Asia represented the principal terrestrial and marine hotspot in 2012 with 3 186 species threatened, almost half the red-listed species for the entire region. Southeast Asia includes the two countries – Malaysia and Indonesia – with the highest numbers of threatened animals and plants.

After a rapid increase in the number and size of nationally protected areas between 1990 and 2005, conservation efforts since then appear to have slowed in many countries. There are, however some notable successes such as in Bhutan, which doubled its protected areas between 1990 and 2010, and Kiribati, which in 2008 established the Phoenix Islands protected area, the world's largest sanctuary at 400 000 square kilometres.

In Cambodia, starting from almost nothing two decades ago, more than a quarter of the country is now designated as a nature reserve. In New Zealand 26 percent of the land is nationally protected. Nonetheless the APR has less land protected as natural reserve than Africa and falls 1 percent below the world average of 12 percent; it is a long way from the International Convention on Biodiversity's target of 17 percent by 2020 (Table 45).

With the exception of Australia and Kiribati, recent progress has also been slow in the establishment of protected marine areas, which account for significantly less than 5 percent of territorial waters in many APR countries. Yet marine conservation is of crucial importance in an area that holds one-third of the world's coral reefs .

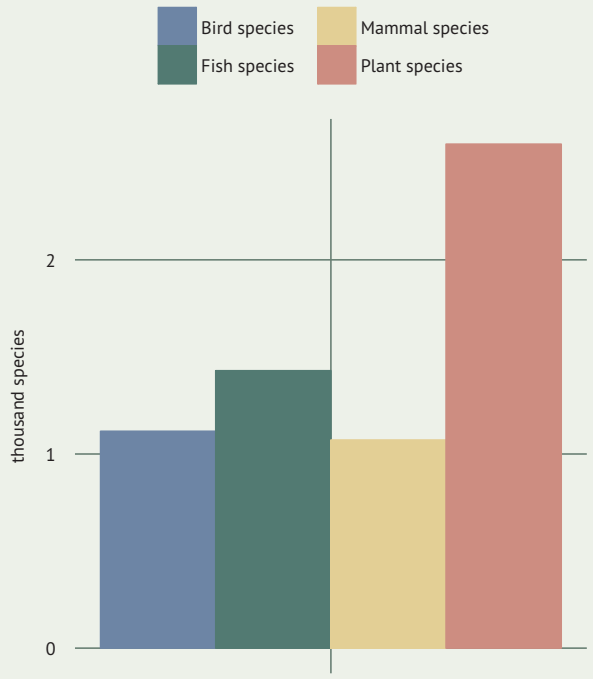
Further reading

- FAO Biodiversity (www.fao.org/biodiversity)
- UN International Year of Biodiversity 2010 (www.fao.org/biodiversity/2010-international-year-of-biodiversity)
- FAO/INFOODS: Nutrition and Biodiversity (www.fao.org/infoods/infoods/food-biodiversity/en/)

[10] Source : UNEP , available at http://www.cbd.int/gbo/gbo3/doc/StateOfBiodiversity-Asia.pdf

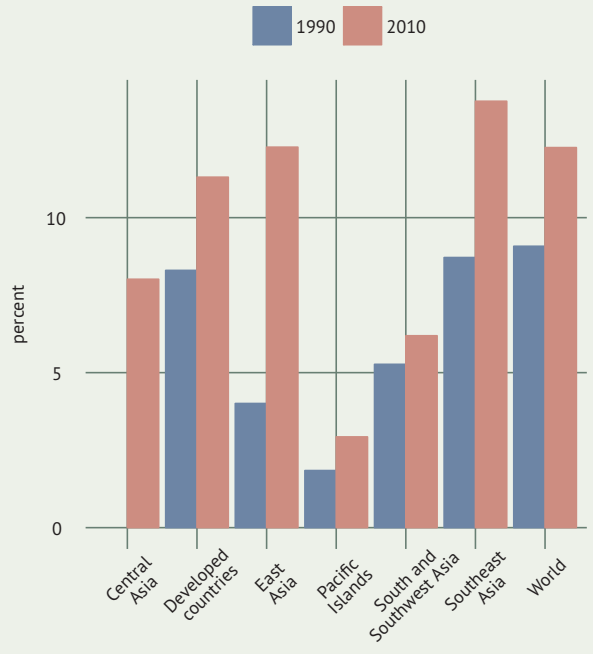
[11] Source : ESCAP , available at http://www.unescap.org/stat/data/syb2011/ESCAP-SYB2011.pdf

CHART 104: **Species threatened in Asia and the Pacific (2012)**



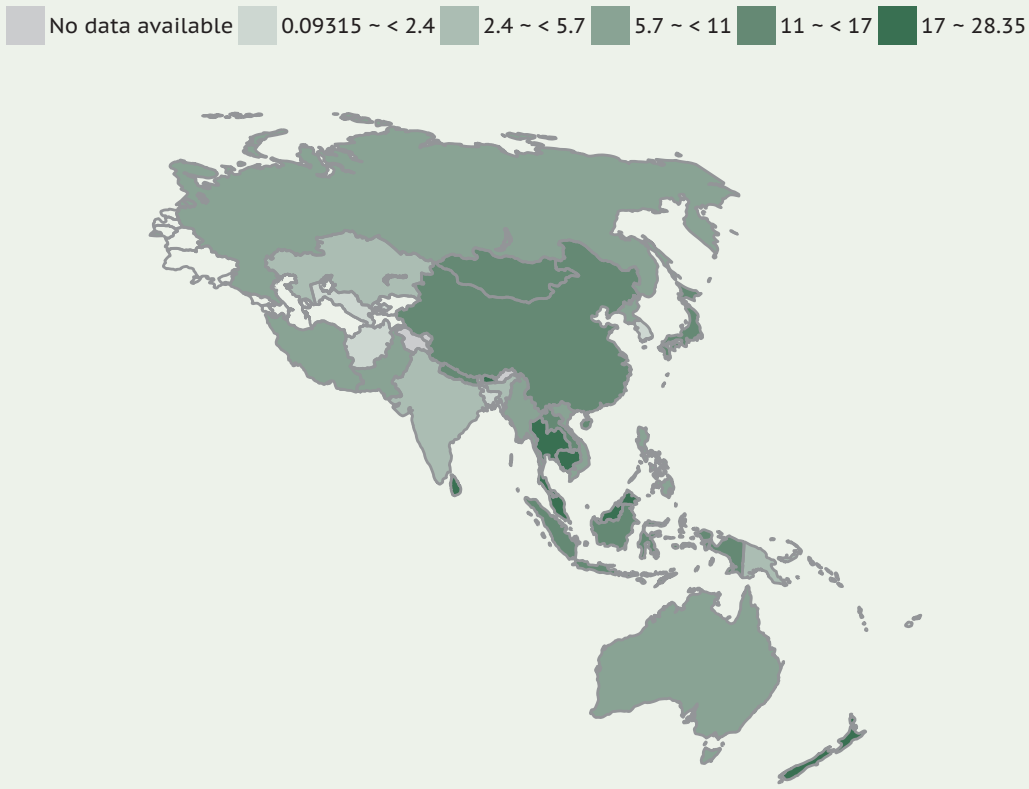
Source: World Bank (WDI).

CHART 105: **Terrestrial protected areas, share of total land area (1990 and 2010)**



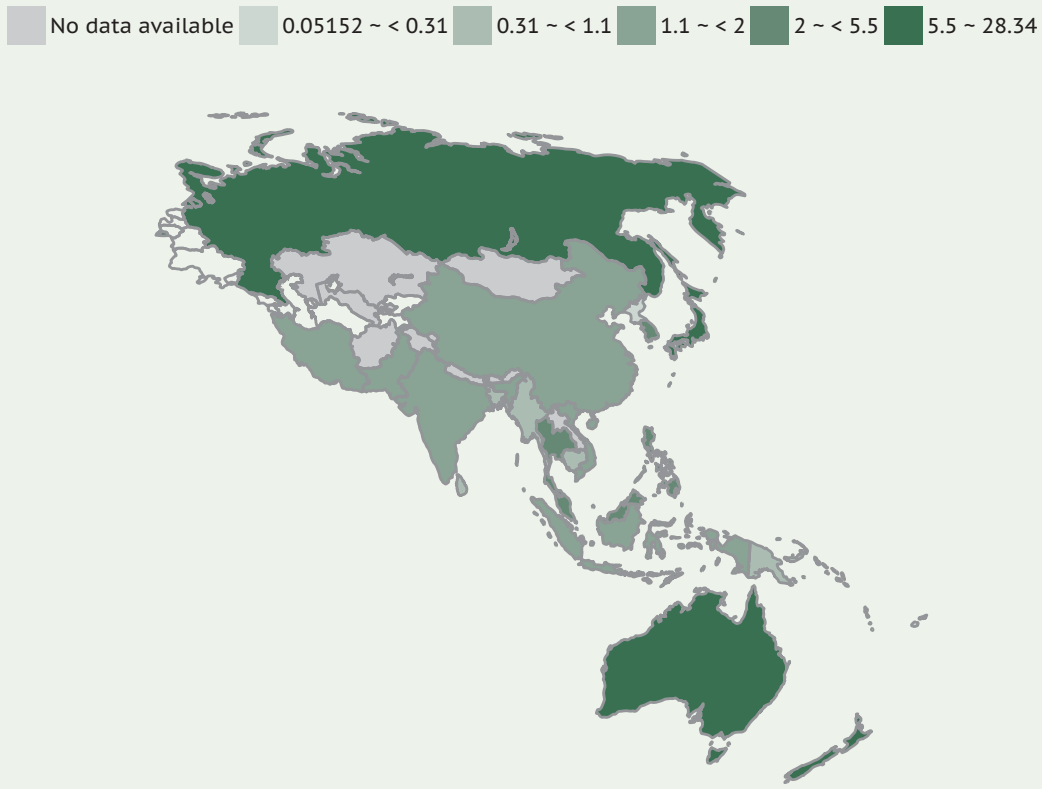
Source: World Bank (WDI).

MAP 56: **Terrestrial protected areas, share of total land area (percent, 2010)**



Source: World Bank (WDI).

MAP 57: **Marine protected areas, share of territorial waters (percent, 2010)**



Source: World Bank (WDI).

Agri-environmental indicators

Agri-environmental indicators are used to quantify the pressure which agriculture is placing on natural resources. They can be used to identify measures and policies to develop more sustainable production systems and avoid environmental damage, including soil and water degradation.

Intensifying agricultural production is essential in order to produce the 60 percent + increase in food supply that over 9 billion people will need in 2050. This requires preserving the natural resource base from which the extra food must be produced which in turn will depend upon sustainability of agricultural practices.

Most of the data presented in this section come from a selection of core indicators originally developed by OECD and Eurostat and recently expanded by FAO. Generally speaking the indicators show different trends between developing and developed countries, with agricultural area increasing in the former but decreasing in the latter.

This general contract trend in farmland applies to the APR, where farmland has been decreasing steadily in Australia, Japan and New Zealand since the mid-1990s, although some growth has taken place since 2010.

There has also been some expansion in farmland in Southeast Asia, although it still has proportionately less farmland than any other region except Central Asia, which has just over 20 percent. In East Asia, agricultural land makes up more than 60 percent of the total land area, despite a major reduction ten years ago.

Increasing livestock density per hectare is another indicator of mounting pressure on the environment. Populations of cattle and buffalo per hectare are higher in the APR than any other region except Latin America and the Caribbean. Southeast Asia has the highest density with 0.5 head per hectare.

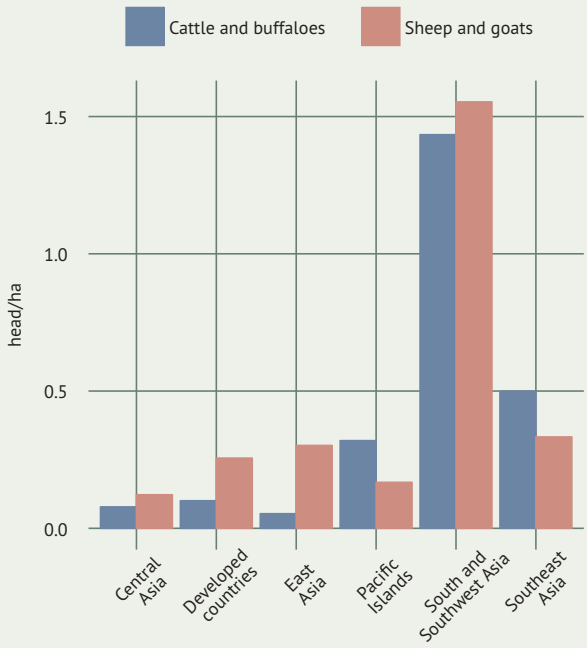
Throughout the region, poultry population densities have grown more than those of any other type of livestock, especially in Southeast Asia. The ROK now has almost 100 poultry birds per hectare – 1 000 times more than sheep and goats.

Intensive livestock farming can lead to water pollution. This is measured in terms of bacterial oxygen demand (BOD), i.e. the amount of oxygen that bacteria in water must consume in breaking down waste. According to this metric China has more polluted waterbodies than any other country, ahead of the Russian Federation and Japan. But in per capita terms China is overtaken by several countries, including the Russian Federation.

Further reading

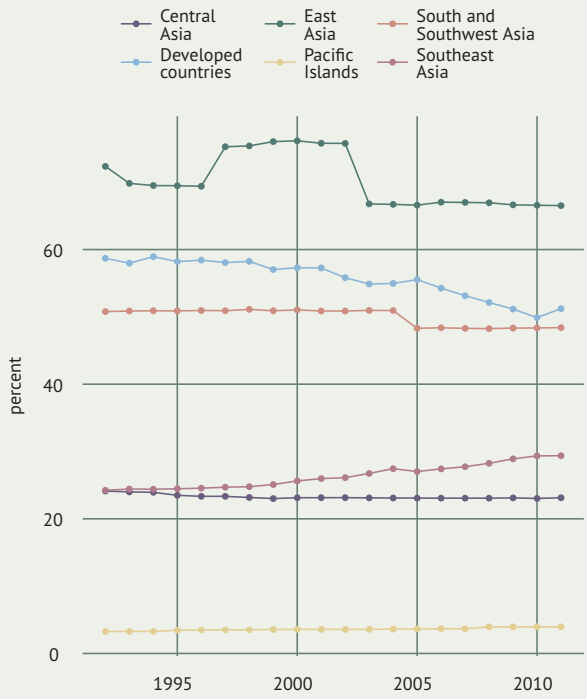
- OECD (www.oecd.org/agriculture/env/indicators)
- EUROSTAT (http://epp.eurostat.ec.europa.eu/portal/page/portal/agri_environmental_indicators/introduction)

CHART 106: **Livestock density per ha of agricultural land, cattle and buffalo, sheep and goats (2011)**



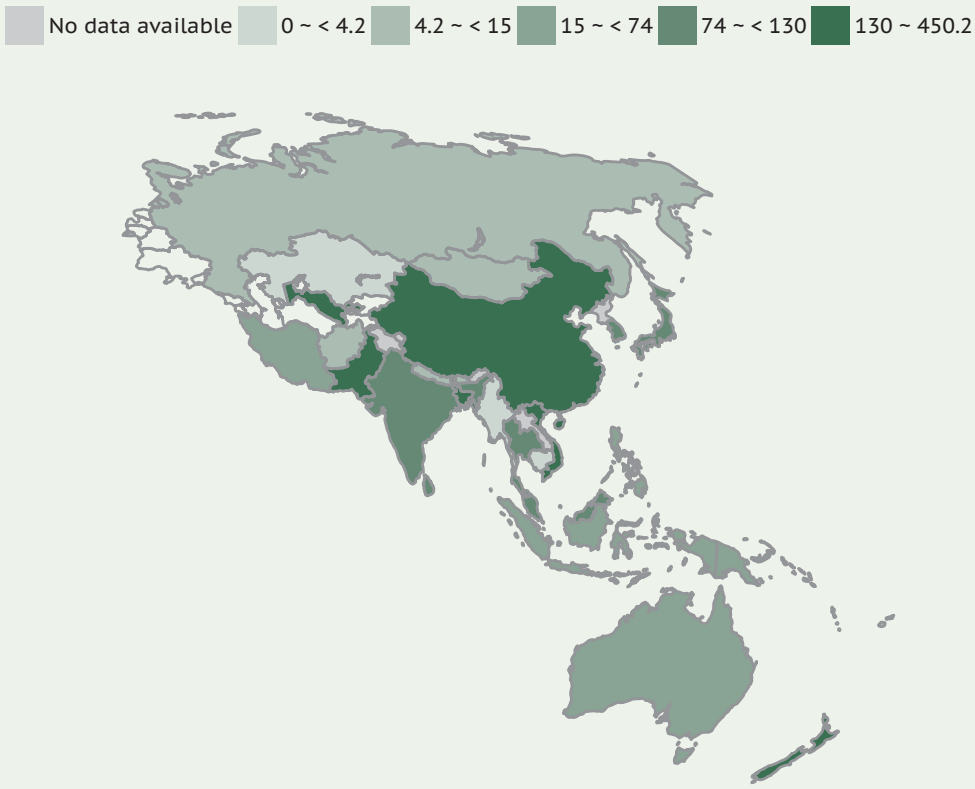
Source: FAO, Statistics Division (FAOSTAT).

CHART 107: **Agricultural land, share of total land area (1992-2011)**



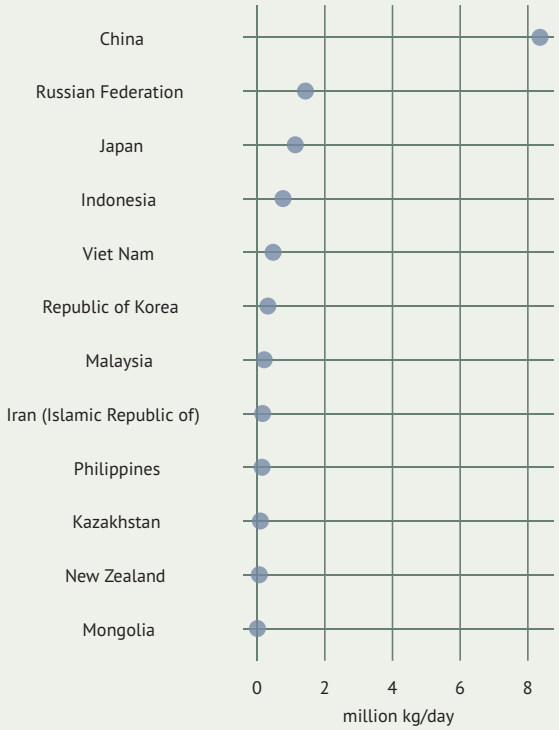
Source: FAO, Statistics Division (FAOSTAT).

MAP 58: **Nitrogen fertilizer consumption per ha of arable area and permanent crops (kg/ha, 2009)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 108: **Organic water pollutant (BOD) emissions (2005)**



Source: World Bank (WDI).

CHART 109: **Organic water pollutant (BOD) emissions per worker (2005)**

Source: World Bank (WDI).

Organic farming

Organic agriculture is a farming system that seeks to enhance soil and ecosystem health by avoiding the use of chemical inputs and relying on local natural rhythms and resources. Mineral fertilizers, synthetic pesticides and genetically-modified organisms are all banned in the system.

Current growing interest in organic agriculture is driven by environmental as well as health and food quality concerns. At the global level the land area being farmed organically in 2011 was 37.2 million hectares, more than three times that in 2011. Expansion of area under organic farming has been matched by rapid growth in the organic food and drinks market, the value of which was US$63 billion, some US$4 billion or 7 percent more than in 2010.

While 90 percent of the organic market is in Europe and North America, it has also been expanding in other regions and in the APR, where demand grew between 15 and 20 percent a year between 1999 and 2009.

In 2009, three of the top ten organic-producing countries were in the APR. Australia was the largest producer of organic products in the world with over 12 million hectares under organic management in 2007. It should be noted though that a large proportion of this land is natural prairie used as forage for livestock. China and India have emerged as leaders in the production of organic products. China was the fifth biggest organic producer in terms of land area with 1.55 million hectares in 2007 while India reported 1.03 million hectares in the same year.

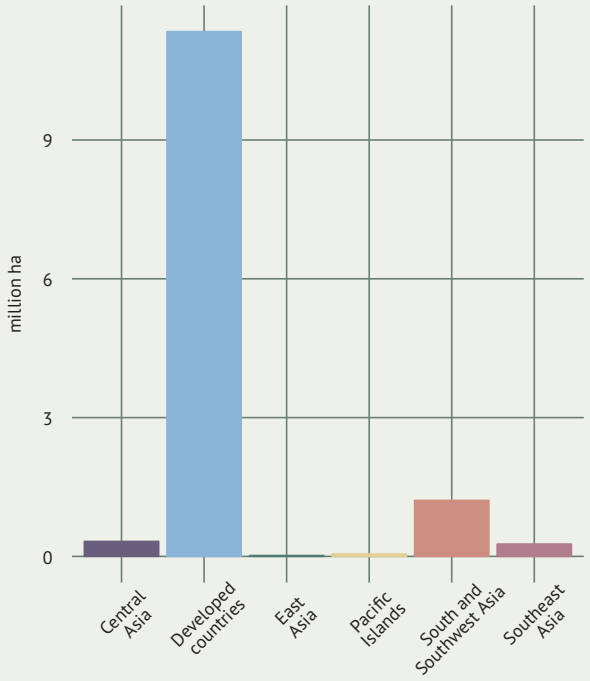
Organic farming offers Asian countries a number of potential advantages, including better incomes for farmers because organic products tend to fetch higher prices. This could also serve to reduce migration towards overpopulated cities, especially as organic farming is labour-intensive and can create jobs.

Organic farming is also knowledge-intensive, however, and requires well-functioning systems of research, training and extension to increase productivity and reduce costs. The participation of farmers' organizations is critical in this context.

Further reading

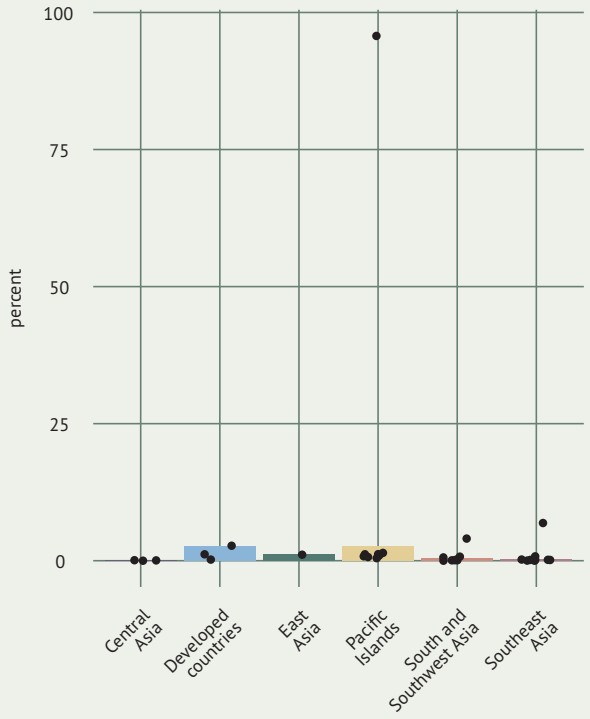
- FAO Organic Agriculture (www.fao.org/organicag/en/)
- FAO Organic Agriculture and Environmental Stability of the Food Supply - FAO (ftp://ftp.fao.org/docrep/fao/meeting/012/ah950e.pdf)

CHART 110: **Organic agriculture area (2011)**



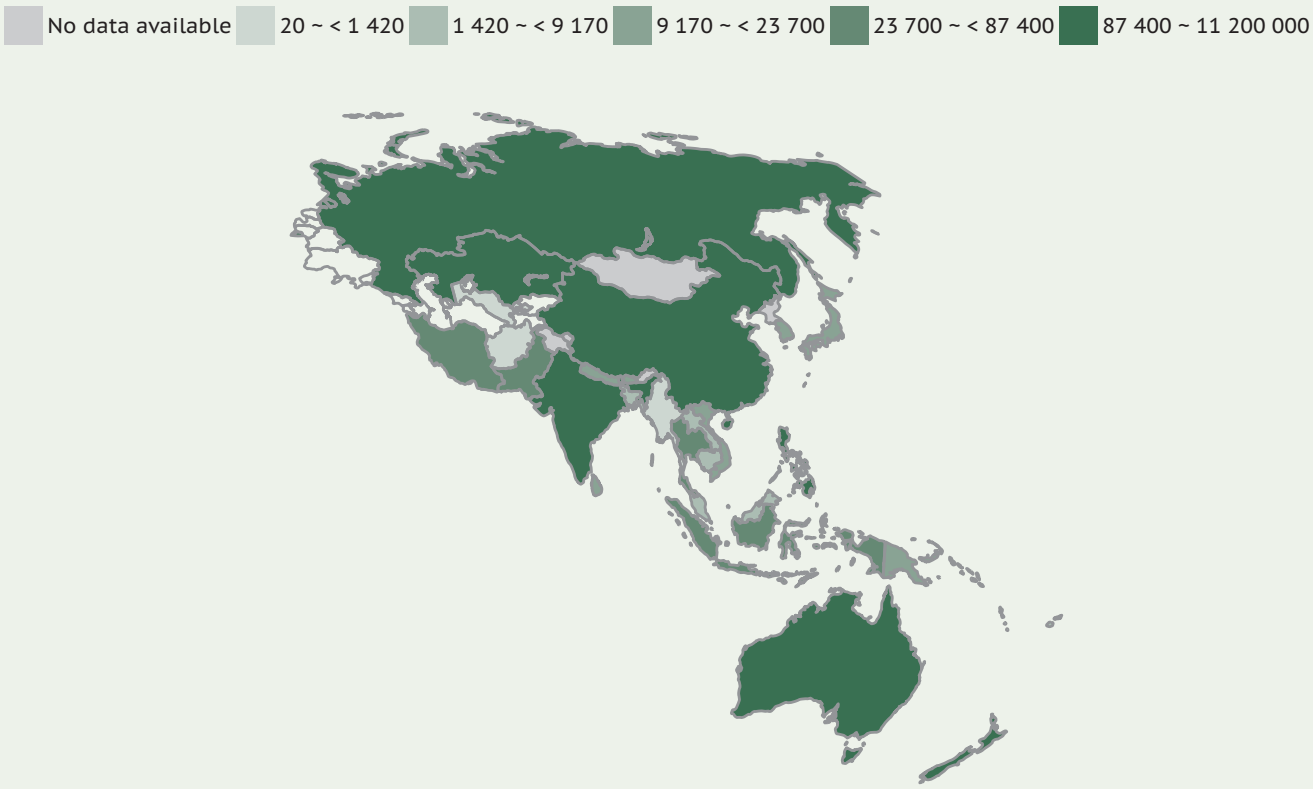
Source: FAO, Statistics Division (FAOSTAT).

CHART 111: **Organic agriculture, share of total agricultural area (2011)**



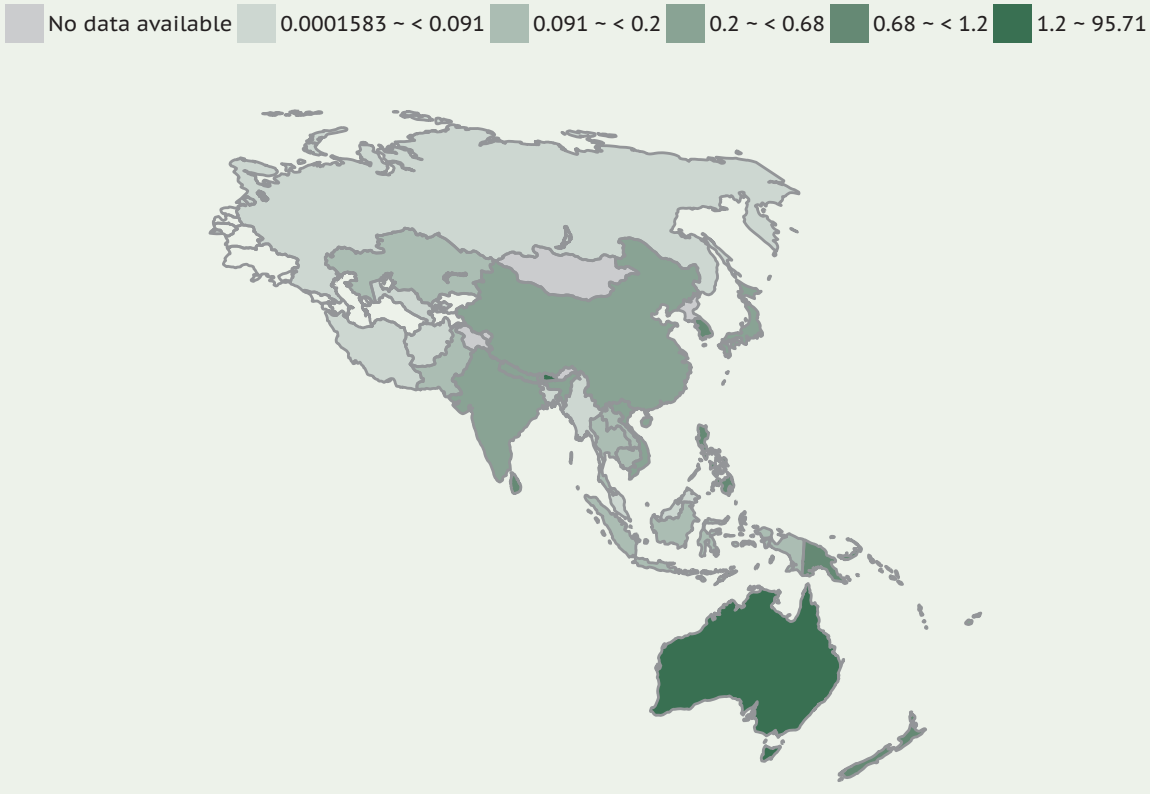
Source: FAO, Statistics Division (FAOSTAT).

MAP 59: **Organic agriculture area (ha, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

MAP 60: **Organic agriculture, share of total agricultural area (percent, 2011)**



Source: FAO, Statistics Division (FAOSTAT).

Bio-based economy

Asia and the Pacific produced half of the world's total output of biofuels in 2009 with 561 million tonnes of oil equivalent out of a global 1 120 tonnes.

But much of this is still traditional bioenergy such as wood, charcoal, dung and crop residues, used by poorer people for heating and cooking fuel. The modern biofuel sector, which includes bioethanol and biodiesel for transport and biomass used in energy-efficient heat generation, is a different case altogether. Over the next 20 years, according to the International Energy Agency (IEA), consumption of biofuels in the transport sector in developing countries in the region is projected to grow at 13.8 percent *per annum*, resulting in a minimum tenfold increase in modern biofuel output.[12]

Already, the United States Department of Agriculture estimates that China saved about US$1 billion in oil imports[13] in 2009 by using nationally-produced ethanol. Increasingly dependent on imported oil, the biomass-rich Southern Asian countries have been some of the quickest in the region to adopt bioenergy support policies aimed at achieving similar results.

The IEA also projects that power generation from biomass and wastes in non-developed APR countries will grow at 12.3 percent *per annum* in the next two decades.

The trends point to the APR moving rapidly towards bio-based economies founded on renewable forms of energy, with the emergence of green industries providing new opportunities for the rural sector. Such emerging bio-based economies centre on energy efficiency, sustainable feedstock for polymer production and industrial processes that reduce carbon emissions and energy consumption.

For example growing 1 tonne of jute fibre requires 10 percent less energy than that used in the production of competing polypropylene. Significantly, production of natural fibre increased very substantially in many countries in the region between 1993 and 2011, more than doubling in India and Australia, and tripling in Myanmar (from a much smaller base). Leading fibre-producing countries such as China, Pakistan and Bangladesh have also shown large increases of 50 percent and more.

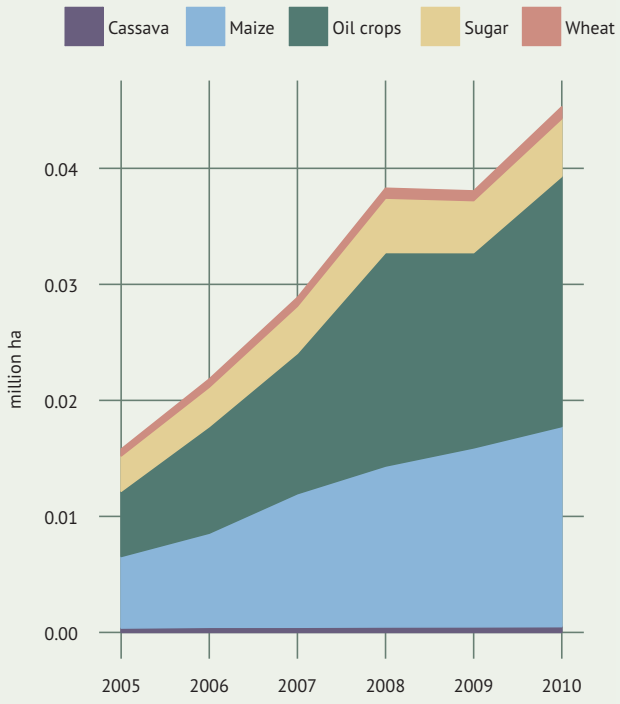
Further reading

- FAO Bioenergy (www.fao.org/bioenergy)
- UN International Year of Natural Fibres (www.naturalfibres2009.org/en/index.html)

[12] Source: page 4 of Sustainable bioenergy in Asia, FAO. Available at http://www.fao.org/docrep/016/i3007e/i3007e.pdf

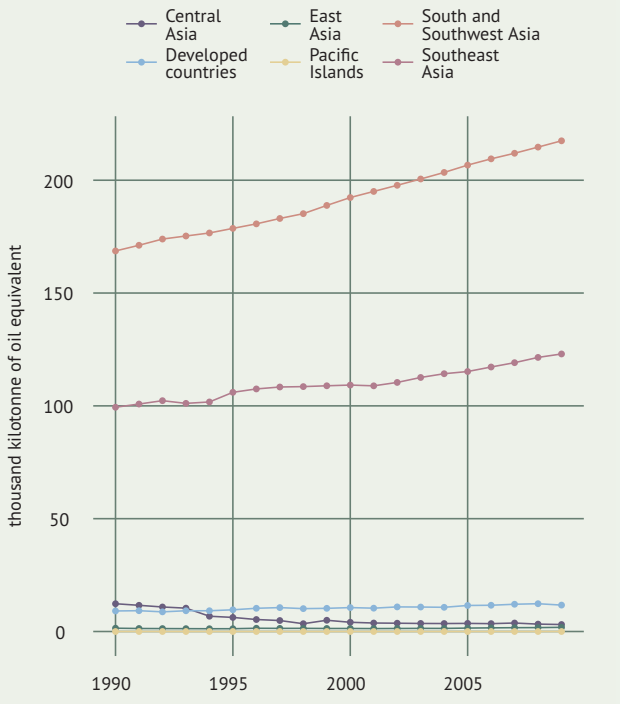
[13] Source: page 5 of Sustainable bioenergy in Asia, FAO.

CHART 112: **World area under bioenergy crops (2005-2010)**



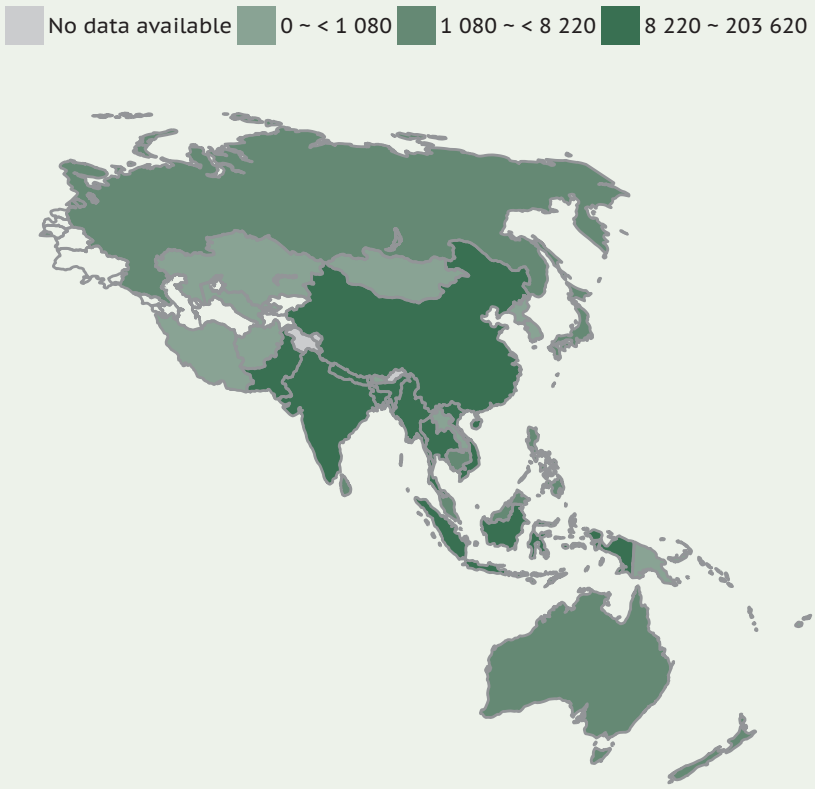
Source: FAO.

CHART 113: **Biofuel production (1990-2009)**



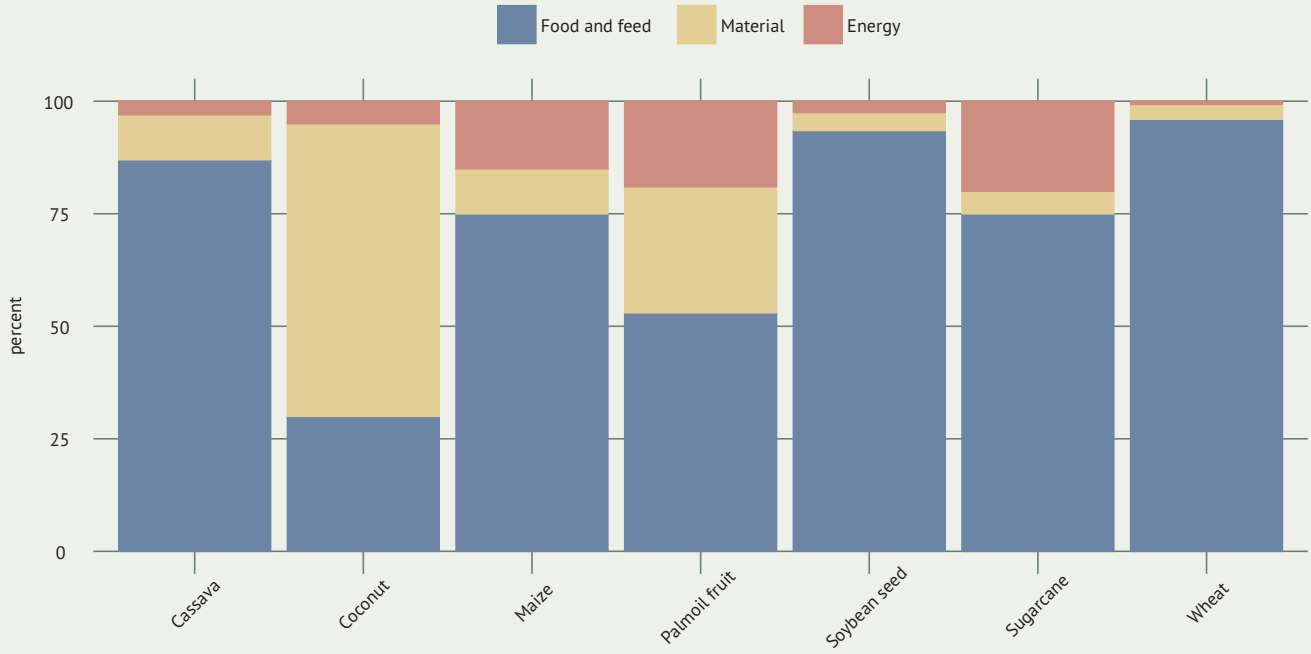
Source: IEA.

MAP 61: **Biofuel production (kilotonne of oil equivalent, 2009)**



Source: IEA.

CHART 114: **Share of food crop usage in the world's bio-based economy (2009)**



Source: FAO, Statistics Division.

Climate change

Current global surface temperatures are now about 0.6˚C higher than the average in the last century. At the same time extreme weather events, as witnessed in recent years in the APR, are becoming more frequent, causing increasing damage to ecosystems, agriculture and human health.

According to a 2013 World Bank report, *Turn down the heat*, continued temperature rise in the absence of appropriate mitigation measures would have severe and in some cases devastating impacts on agriculture, fisheries and tourism in the APR, particularly in Southern Asia. Nonetheless, in some regions, for example Northeast Asia, agricultural crop production is expected to increase somewhat as a result of climate change.

Due to a combination of the risk factors driven by sea-level rise, increased heat extremes and more intense tropical cyclones, critical Southeast Asian rice production in low lying coastal and deltaic areas is projected to be at increasing risk. In Southern Asia, the World Bank report projected a one-third decline in per capita crop production by 2050 due to factors associated with climate change impact. With population increasing at about 70 percent over the same period there would be a need for substantial crop imports.

For rice, the report forecast an annual yield reduction of 0.2 percent to 2050 under continued climate change. Effects would be particularly severe in Bangladesh, given the country's vulnerability to coastal flooding. It projected a possible drop of approximately 80 million tonnes in rice production in Bangladesh by 2050.

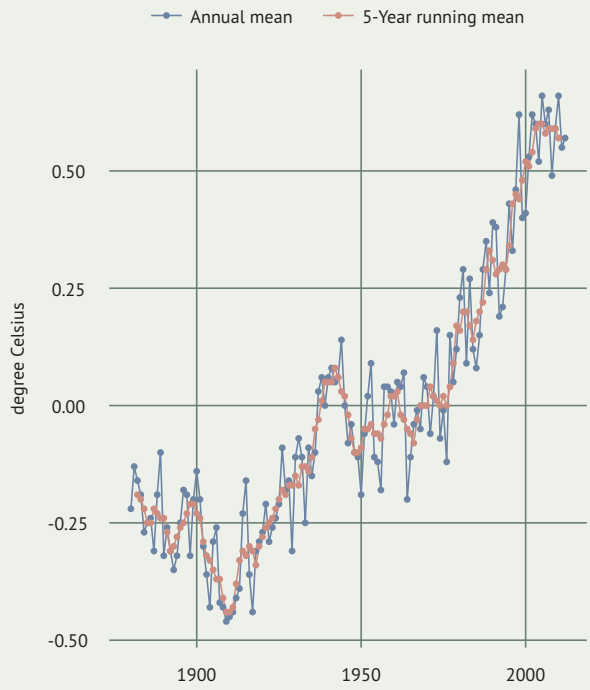
The report found "Southeast Asia and the Ganges delta as a region that is characterized by a high exposure to both slow-onset impacts associated with sea-level rise, ocean warming, and acidification, and sudden-onset impacts associated with tropical cyclones. The corrosive effects of the slow-onset impacts potentially undermine resilience and increase vulnerability in the face of devastating extreme weather events. This complex vulnerability is set to increase as the world warms toward 4°C," the report added.

Coastal livelihoods dependent on marine ecosystems are also highly vulnerable. Large-scale damage to coral reefs as projected as soon as 2030 under a business-as-usual scenario would have "devastating" impacts on tourism revenue and reef-based fisheries.

Further reading

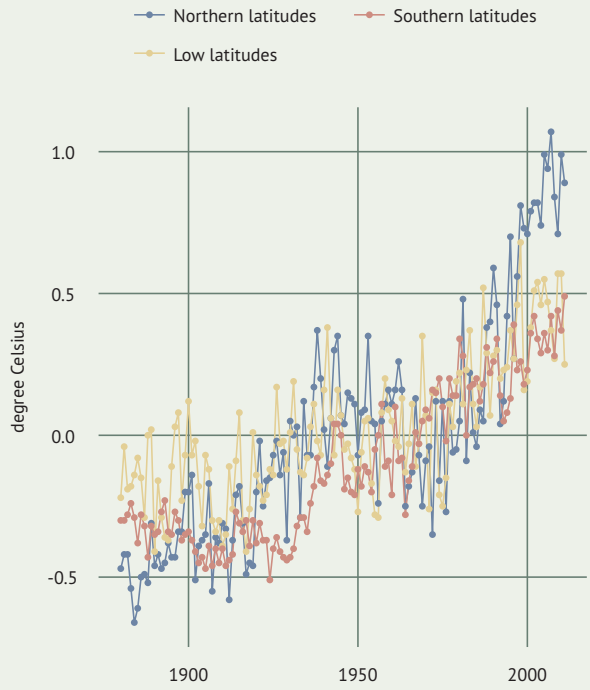
- Asian Development Bank (2013f)
- FAO Climate Change (www.fao.org/climatechange/)
- FAO Climate Change, Water and Food Security 2011
- FAO Energy-smart food for people and climate (www.fao.org/docrep/014/i2454e/i2454e00.pdf)
- Intergovernmental Panel on Climate Change (IPCC) (www.ipcc.ch/)
- NASA (http://data.giss.nasa.gov/gistemp/)

CHART 115: **Global land-ocean temperature index, base period 1951-1980 (1880-2012)**



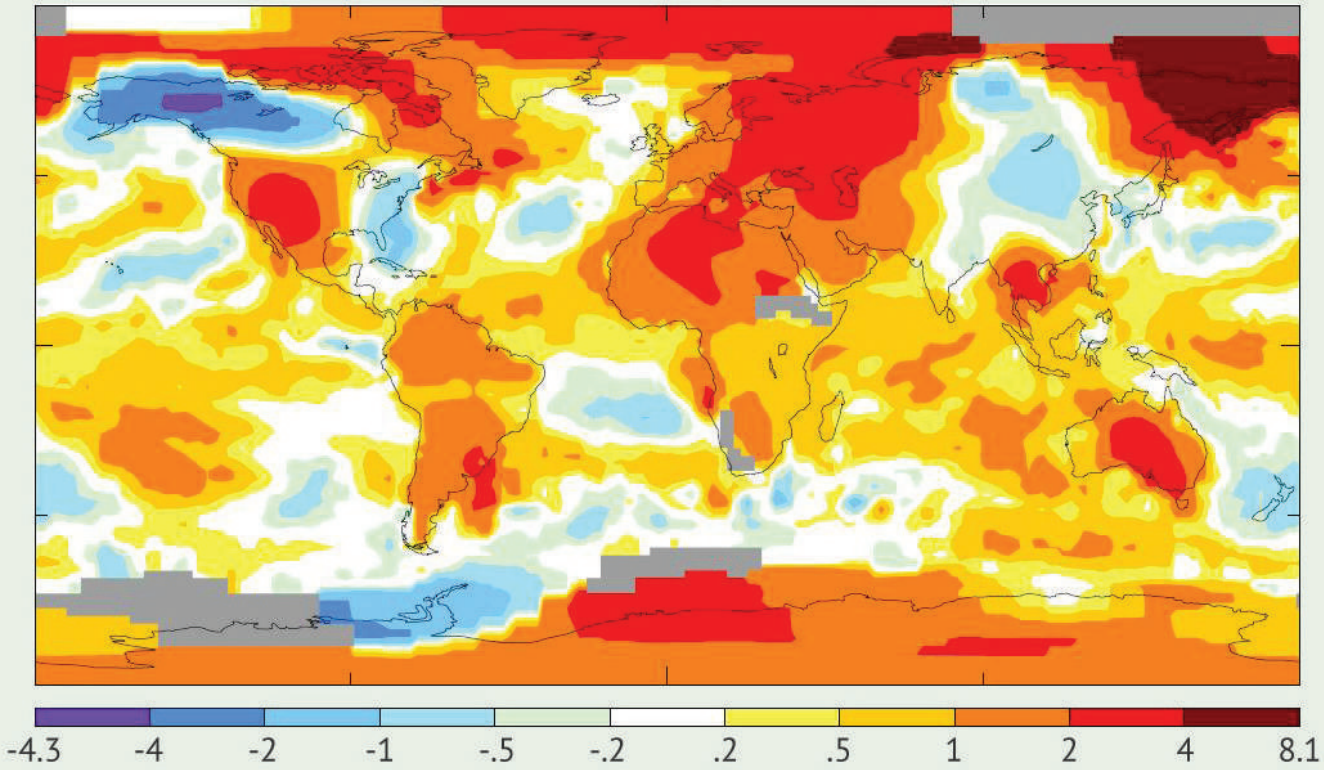
Source: NASA.

CHART 116: **Global land-ocean temperature index for three latitude bands, base period 1951-1981 (1880-2011)**



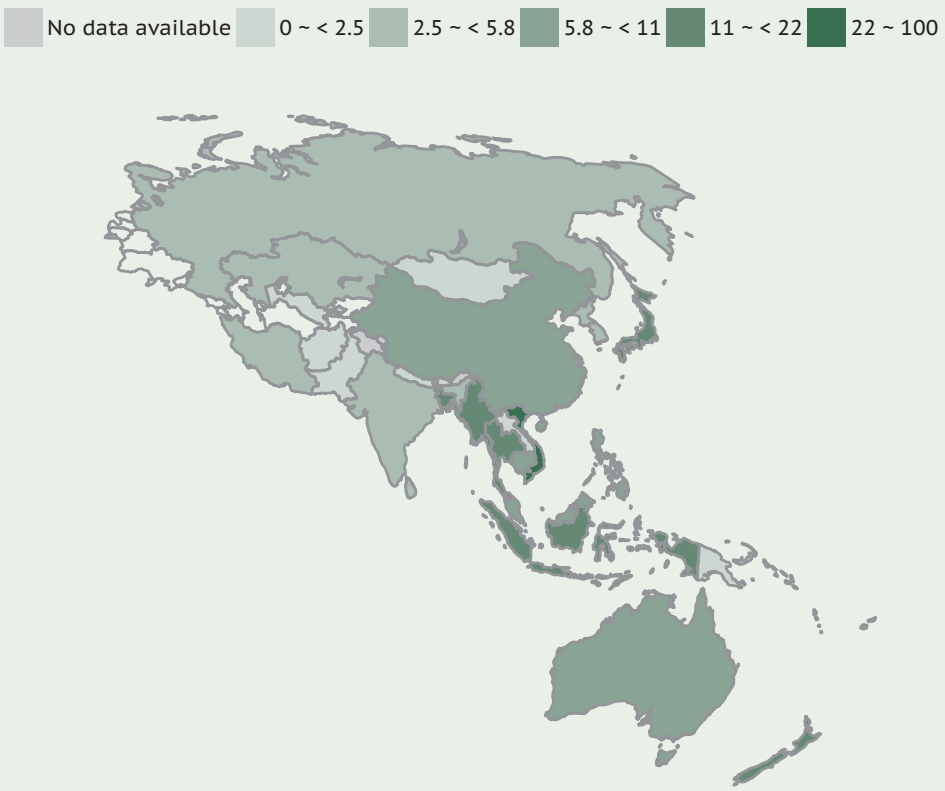
Source: NASA.

MAP 62: **Surface temperature, anomaly versus 1951-1980 (degrees Celsius, 2012)**



Source: NASA, GISS Surface Temperature Analysis.

MAP 63: **Share of population living in areas with elevation of five metres or less (percent, 2000)**



Source: World Bank (WDI).

Greenhouse gas emissions

Greenhouse gas (GHG) emissions[14] from agriculture account for up to 30 percent of all human-induced emissions of atmosphere-warming gases, according to the Intergovernmental Panel on Climate Change (IPCC). The greatest source of agricultural GHG emissions is enteric fermentation from the digestive systems of ruminants and some other animals.

With its huge livestock sector, the APR accounts for almost half of the global GHGs caused by human activities. After livestock, the second-highest source of emissions in the region is rice cultivation, with China alone accounting for almost a quarter of GHGs from that sector, followed by India.

Within the APR, South and Southwest Asia are responsible for the largest share of emissions – approximately one-third of all regional GHGs. At the country level, India is by far the largest emitter.

Second among the subregions is East Asia, with China as the biggest single source of emissions. Synthetic fertilizers applied to soils are the most significant source of emissions in China and the third greatest source of GHGs at the regional level.

Southeast Asia ranks first among subregions for emissions from cultivated organic soils, with Indonesia accounting for almost the entire subregional total. Emissions from organic soils can be very significant when peatlands are drained and degraded, thus becoming a significant source of carbon dioxide and nitrous oxide.

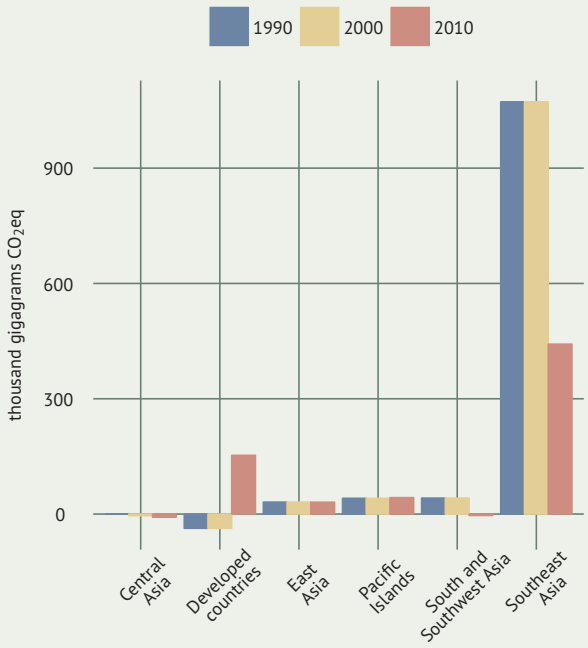
Emissions from deforestation (when felled trees release the carbon they stored) in the region are highest in Southeast Asia, although they fell by more than half between 2000 and 2010. Afforestation in the region's developed countries made them a carbon sink between 1990 and 2010 but they have since become a source of emissions.

Further reading

- IPCC (www.ipcc.ch/)
- FAOSTAT (http://faostat.fao.org/)
- Monitoring and Assessment of GHG Emissions and Mitigation Potentials in Agriculture, MICCA (www.fao.org/climatechange/micca/ghg/en/)

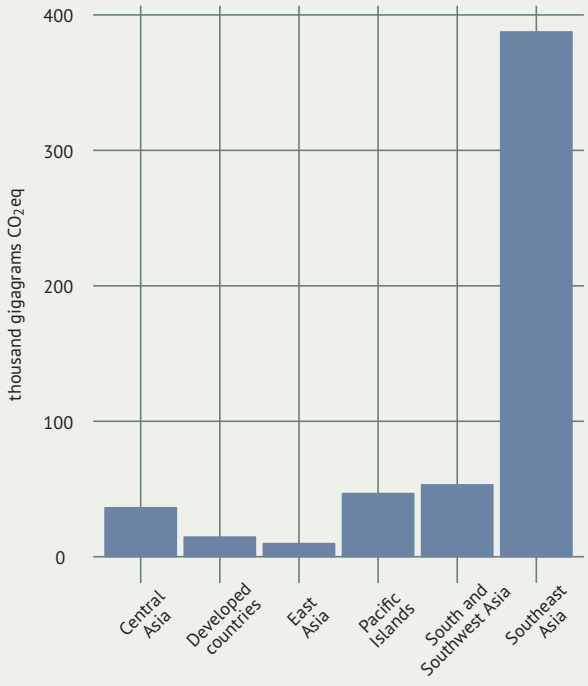
[14] Source: FAOSTAT database on GHG emissions, Statistics Division, FAO, Rome. Available at http://faostat.fao.org/.

CHART 117: **Net emissions/removals from net forest conversions (1990, 2000 and 2010)**



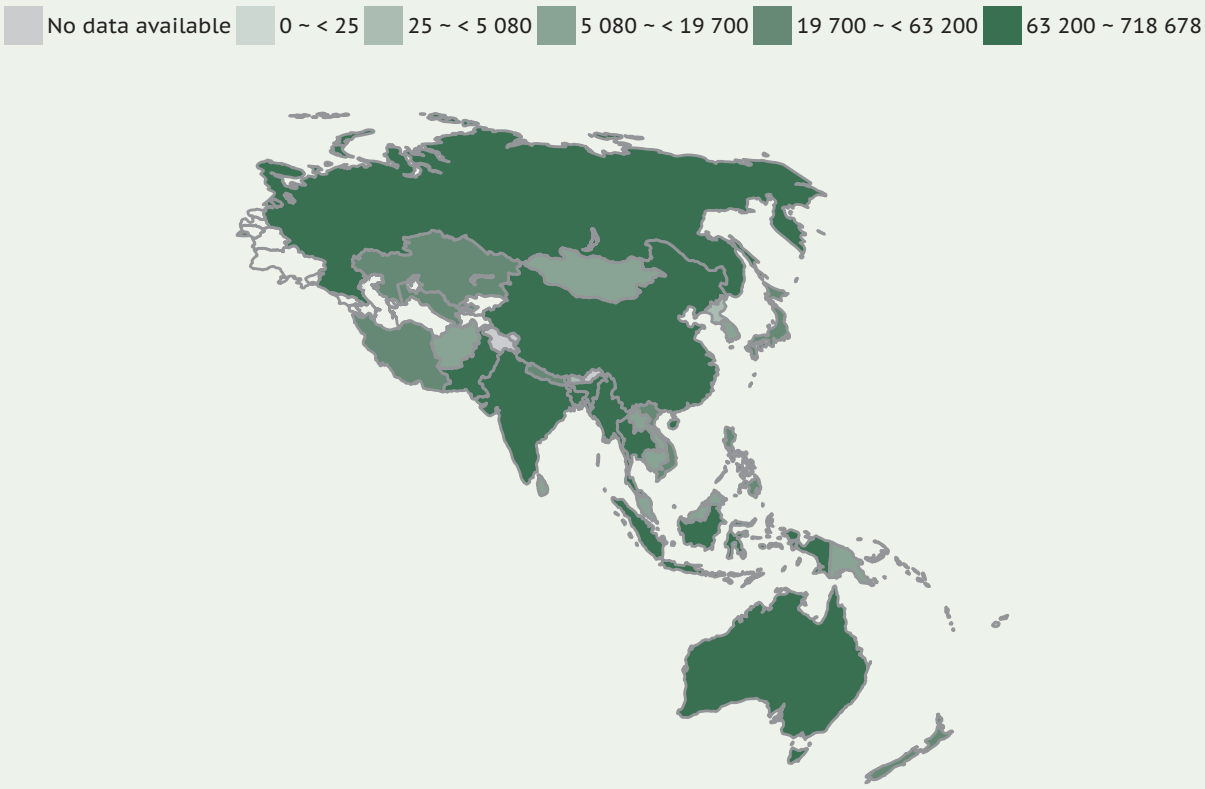
Source: FAO, Statistics Division (FAOSTAT).

CHART 118: **Greenhouse gas emissions from cultivated organic soils (2010)**



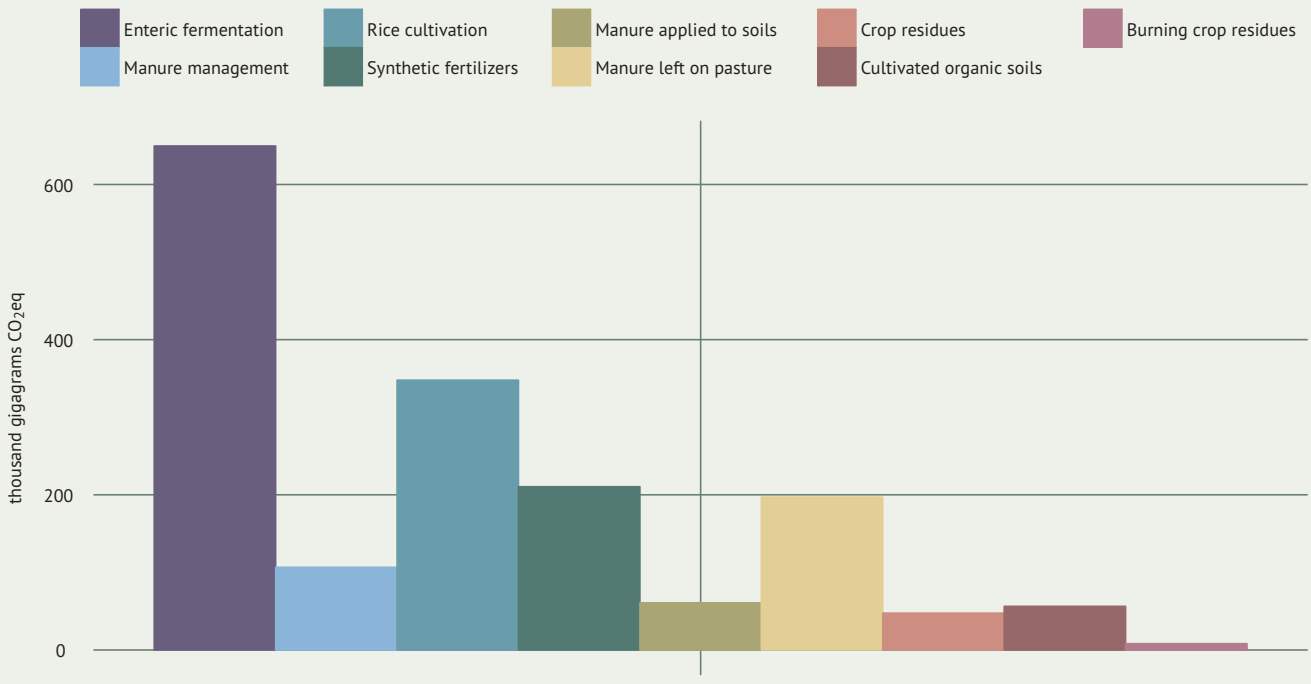
Source: FAO, Statistics Division (FAOSTAT).

MAP 64: **Total agricultural greenhouse gas emissions (gigagrams CO_2eq, 2010)**



Source: FAO, Statistics Division (FAOSTAT).

CHART 119: **Asia and Pacific agricultural greenhouse gas emissions by sector (2010)**



Source: FAO, Statistics Division (FAOSTAT).

TABLE 41: **Land and forestry**

	Forest area				Forest characteristics					
	total		% total land		primary forest		other naturally regenerated forest		planted forest	
	thousand ha 1990	thousand ha 2011	percent 1990	percent 2011	percent 1990	percent 2010	percent 1990	percent 2010	percent 1990	percent 2010
Regional Office for Asia and the Pacific	744 278	1 567 564	24.3	31.3	41.8	36.4	55.1	53.1	3.2	10.5
Developing countries and transition economies	557 108	1 385 939	24.9	33.1	42.1	38.8	55.2	50.4	2.6	10.7
Central Asia		815 725		41.8	29.7	31.5	68.6	66.3	1.7	2.3
Kazakhstan		3 303		1.2	0.0	0.0	69.8	72.8	30.2	27.2
Russian Federation		809 150		49.4	29.9	31.7	68.6	66.2	1.6	2.1
Uzbekistan		3 272		7.7	1.9	2.2	91.5	78.4	6.7	19.4
East Asia	184 248	232 195	16.7	21.0	34.6	39.0	59.8	48.9	5.6	12.1
China	157 141	209 624	16.9	22.6						
Democratic People's Republic of Korea	8 201	5 539	68.1	46.0	13.8	13.8	72.5	72.4	13.8	13.8
Mongolia	12 536	10 816	8.1	7.0	48.2	47.3	51.6	51.4	0.2	1.3
Republic of Korea	6 370	6 215	64.5	64.0		47.5		23.2		29.3
Pacific Islands	35 428	32 593	68.6	63.0	58.7	47.5	38.8	35.1	2.6	17.4
Cook Islands	15	16	62.1	64.6	0.0	0.0	96.6	92.9	3.4	7.1
Fiji	953	1 017	52.2	55.7	56.9	44.3	43.1	38.3	0.0	17.4
Kiribati	12	12	15.0	15.0	0.0	0.0	100.0	100.0	0.0	0.0
Marshall Islands		13		70.2	64.8	64.8	0.0	0.0	35.2	35.2
Micronesia (Federated States of)		64		91.7	62.2	75.4	5.9	2.4	31.9	22.2
Nauru	0	0	0.0	0.0						
Niue	21	18	79.2	71.2		30.1		68.3		1.6
Palau		40		87.6						
Papua New Guinea	31 523	28 584	69.6	63.1	99.4	91.2	0.4	8.5	0.2	0.3
Samoa	130	171	45.9	60.4		0.0		81.2		18.8
Solomon Islands	2 324	2 207	83.0	78.9	47.6	50.0	50.5	48.8	1.9	1.2
Tonga	9	9	12.5	12.5	44.4	44.4	44.4	44.4	11.1	11.1
Tuvalu	1	1	33.3	33.3						
Vanuatu	440	440	36.1	36.1						
Southeast Asia	246 845	212 597	56.7	49.0	13.4	29.8	81.6	63.4	5.0	6.8
Cambodia	12 944	9 967	73.3	56.5	5.9	3.2	93.6	96.1	0.5	0.7
Indonesia	118 545	93 747	65.4	51.7		50.0		46.2		3.8
Lao People's Democratic Republic	17 314	15 673	75.0	67.9	8.6	9.5	91.4	89.1	0.0	1.4
Malaysia	22 376	20 369	68.1	62.0	17.1	18.7	74.2	72.5	8.7	8.8
Myanmar	39 218	31 463	60.0	48.2	8.1	10.0	90.9	86.8	1.0	3.1
Philippines	6 570	7 720	22.0	25.9	13.1	11.2	82.3	84.2	4.6	4.6
Thailand	19 549	18 987	38.3	37.2	34.4	35.5	51.9	43.5	13.6	21.0
Timor-Leste	966	731	65.0	49.1	0.0	0.0	97.0	94.2	3.0	5.8
Viet Nam	9 363	13 941	28.8	45.0	4.1	0.6	85.6	74.0	10.3	25.5
South and Southwest Asia	90 588	92 830	14.1	14.5	19.5	19.1	72.3	67.9	8.2	13.0
Afghanistan	1 350	1 350	2.1	2.1						
Bangladesh	1 494	1 439	11.5	11.1	29.2	30.2	54.8	53.3	16.0	16.4
Bhutan	3 035	3 260	64.6	84.9	13.6	12.7	86.4	87.2	0.0	0.1
India	63 939	68 579	21.5	23.1	24.6	22.9	66.5	62.1	8.9	14.9
Iran (Islamic Republic of)	11 075	11 075	6.8	6.8	1.8	1.8	90.6	90.6	7.6	7.6
Maldives	1	1	3.0	3.0						
Nepal	4 817	3 636	33.7	25.4	8.1	14.5	91.1	84.4	0.8	1.2
Pakistan	2 527	1 644	3.3	2.1	0.0	0.0	90.7	79.8	9.3	20.2
Sri Lanka	2 350	1 845	37.5	29.4	10.9	9.0	78.8	81.1	10.3	9.9
Developed Countries	187 170	181 624	22.5	21.9	15.1	6.5	43.7	85.8	46.2	7.7
Australia	154 500	148 376	20.1	19.3		3.4		95.4	100.0	1.3
Japan	24 950	24 988	68.4	68.6	15.1	19.0	43.7	39.7	41.2	41.3
New Zealand	7 720	8 261	29.3	31.4		25.9		52.2	100.0	21.9
Regional Office for Africa	724 070	592 369	32.1	27.9	2.2	11.9	97.4	85.6	0.4	13.1
Regional Office for Europe and Central Asia		1 031 346		38.3	22.4	23.1	70.2	68.1	7.4	8.8
Regional Office for Latin America and the Caribbean	1 039 686	942 806	51.6	46.8	75.1	72.9	24.0	25.0	0.9	2.0
Regional Office for the Near East	98 673	22 656	6.8	1.9	16.1	15.7	75.7	73.9	8.2	10.4
World	4 168 399	3 957 571	32.0	31.0	28.0	38.2	69.1	52.9	3.0	9.9

TABLE 42: **Forestry production and trade**

	Production of selected forest products							
	industrial roundwood		woodfuel		roundwood			
	total	p.a. growth	total	p.a. growth	total	p.a. growth	export	import
	thousand m^3	percent	thousand m^3	percent	thousand m^3	percent	thousand m^3	thousand m^3
	2011-12	1962-2012	2011-12	1962-2012	2011-12	1962-2012	2011-12	2011-12
Regional Office for Asia and the Pacific	492 829		791 993	0.4	1 284 822	0.6	45 379.5	60 337.6
Developing countries and transition economies	425 657		787 168	0.4	1 212 825	0.5	29 707.1	55 821.1
Central Asia	177 536		39 218		216 754		17 867.0	380.0
Kazakhstan	73		272		345		0.1	85.3
Russian Federation	177 455		38 924		216 379		17 862.8	20.3
Uzbekistan	8		22		30		4.1	274.4
East Asia	106 797		191 305	−0.8	298 102	−0.1	45.8	44 998.4
China	101 574	2.5	182 009	−0.9	283 583	−0.2	9.6	37 813.2
Democratic People's Republic of Korea	1 500	1.8	6 047	1.9	7 547	1.9	29.2	3.1
Mongolia	49	−4.3	769	0.3	818	−0.6	0.5	0.8
Republic of Korea	3 674	2.2	2 480	−0.3	6 154	0.8	6.4	7 181.2
Pacific Islands	6 929		5 869	0.9	12 798	3.0	5 208.3	9.3
Cook Islands	5		0		5		0.8	0.0
Fiji	445	4.0	37	0.9	482	3.5	8.9	0.0
Kiribati	0		3	2.6	3	2.6	0.0	0.1
Marshall Islands	0		0		0		0.0	0.0
Micronesia (Federated States of)	0		3		3		0.0	0.7
Nauru	0		0		0		0.0	0.0
Niue	0		0	−2.6	0	−2.6	0.0	0.0
Palau	0		0		0		0.0	0.6
Papua New Guinea	4 476	6.9	5 533	0.9	10 009	2.0	3 256.9	1.9
Samoa	6	3.5	70	0.5	76	0.6	0.2	1.4
Solomon Islands	1 967	11.1	130	1.6	2 097	7.1	1 937.0	0.0
Tonga	2		2	0.3	4	1.7	1.9	3.8
Tuvalu	0		0		0		0.0	0.1
Vanuatu	28	11.9	91		119	15.2	2.6	0.8
Southeast Asia	103 512		161 733	−0.4	265 244	−0.1	6 559.3	1 698.3
Cambodia	170	−2.2	8 162	−1.1	8 332	−1.1	13.6	0.0
Indonesia	60 706	4.9	54 917	−2.8	115 622	−1.4	40.4	48.1
Lao People's Democratic Republic	855	4.8	5 922	0.3	6 777	0.6	429.1	0.3
Malaysia	18 051	1.9	2 711	−1.6	20 762	0.9	3 751.7	43.0
Myanmar	4 463	1.5	38 286	2.8	42 749	2.6	2 100.0	0.1
Philippines	3 867	−1.5	12 144	−0.8	16 011	−1.0	1.1	103.2
Thailand	8 700	2.1	19 080	−0.2	27 780	0.3	35.5	242.5
Timor-Leste	0		110		110		1.0	0.1
Viet Nam	6 700	2.7	20 400	0.4	27 100	0.8	187.0	1 261.1
South and Southwest Asia	30 883		389 043	1.3	419 927	1.3	26.6	8 735.1
Afghanistan	1 760	1.6	1 694	2.2	3 454	1.9	11.6	0.1
Bangladesh	282	−1.7	26 971	0.9	27 253	0.9	0.2	6.9
Bhutan	128		4 950	1.2	5 078	1.3	2.9	2.2
India	23 192	2.4	308 244	1.3	331 436	1.4	8.7	8 592.3
Iran (Islamic Republic of)	660	−4.1	45	−6.4	705	−4.3	0.1	85.9
Maldives	0		16	1.3	16	1.3	0.0	0.4
Nepal	1 260	1.5	12 403	0.7	13 663	0.7	0.0	0.6
Pakistan	2 990	3.5	29 660	1.7	32 650	1.8	0.2	46.4
Sri Lanka	611	0.0	5 061	−0.2	5 672	−0.1	2.8	0.4
Developed Countries	67 172		4 825	0.6	71 997	1.1	15 672.4	4 516.5
Australia	23 759	1.7	4 745	0.7	28 504	1.5	1 801.2	1.0
Japan	18 290	−1.8	80	−9.7	18 370	−2.3	114.3	4 512.6
New Zealand	25 123	3.4	0		25 123	3.2	13 757.0	3.0
Regional Office for Africa	69 067	2.5	586 388	2.2	655 455	2.1	3 898.2	166.3
Regional Office for Europe and Central Asia	548 725		158 139		706 864		61 838.4	55 978.3
Regional Office for Latin America and the Caribbean	221 276	4.2	289 182	1.2	510 458	2.1	1 430.0	242.5
Regional Office for the Near East	4 059		53 680	1.3	57 738	1.2	40.9	964.5
World	1 652 146		1 882 369	1.1	3 534 516	1.1	116 680.1	124 720.0

TABLE 43: **Forestry production: finished products**

	Production of selected forest products							
	sawnwood		wood-based panels		wood pulp		paper and paperboard	
	total thousand m^3 2011-12	p.a. growth percent 1962-2012	total thousand m^3 2011-12	p.a. growth percent 1962-2012	total thousand tonnes 2011-12	p.a. growth percent 1962-2012	total thousand tonnes 2011-12	p.a. growth percent 1962-2012
Regional Office for Asia and the Pacific	140 473		165 941		39 878		184 549	
Developing countries and transition economies	121 849		157 467		28 170		154 542	
Central Asia	32 348		12 881		8 261		7 875	
Kazakhstan	108		116		0		211	
Russian Federation	32 230		12 762		8 261		7 661	
Uzbekistan	10		3		0		2	
East Asia	60 036		118 751		9 056		113 910	
China	55 700	3.6	115 328	14.1	8 439	5.0	102 500	7.6
Democratic People's Republic of Korea	280	0.0	0		56		80	0.6
Mongolia	300	1.4	2		0		0	
Republic of Korea	3 756	4.0	3 421	7.7	561	7.0	11 330	10.2
Pacific Islands	215		114		0		0	
Cook Islands	0		0		0		0	
Fiji	90	2.4	20		0		0	
Kiribati	0		0		0		0	
Marshall Islands	0		0		0		0	
Micronesia (Federated States of)	0		0		0		0	
Nauru	0		0		0		0	
Niue	0		0		0		0	
Palau	0		0		0		0	
Papua New Guinea	81	1.4	94	3.7	0		0	
Samoa	1	−0.5	0		0		0	
Solomon Islands	27	4.4	0		0		0	
Tonga	2		0		0		0	
Tuvalu	0		0		0		0	
Vanuatu	14		0		0		0	
Southeast Asia	19 443		20 525		8 167		20 188	
Cambodia	102	0.7	33	6.7	0		0	
Indonesia	4 169	1.7	6 656	16.9	6 455	22.1	11 527	15.1
Lao People's Democratic Republic	183	5.6	24		0		0	
Malaysia	4 011	1.7	7 228	12.2	145		1 805	
Myanmar	1 610	2.3	152	9.2	1		45	
Philippines	500	−1.3	430	1.2	185	6.0	815	4.4
Thailand	2 868	2.3	5 400	11.3	1 001		4 396	13.5
Timor-Leste	0		0		0		0	
Viet Nam	6 000	5.4	602	11.6	380		1 600	11.7
South and Southwest Asia	9 807		5 196		2 686		12 570	
Afghanistan	400	1.8	1		0		0	
Bangladesh	388	0.5	9		47	0.9	58	−0.1
Bhutan	27		29		0		10	
India	6 889	2.5	2 964	7.2	2 308	10.0	10 870	6.4
Iran (Islamic Republic of)	31	−2.7	1 415		246		515	9.7
Maldives	0		0		0		0	
Nepal	630	2.2	69		0		13	
Pakistan	1 381	5.8	547	10.8	82	6.5	1 079	8.7
Sri Lanka	61	−1.4	161	6.1	3		24	3.1
Developed Countries	18 624		8 474		11 708		30 007	
Australia	4 556	0.7	1 614	3.8	1 431	2.7	3 191	3.7
Japan	9 801	−2.0	4 410	1.5	8 722	1.5	25 956	3.1
New Zealand	4 267	2.1	2 450	7.9	1 555	3.3	860	2.7
Regional Office for Africa	8 353		2 623		2 371		2 748	
Regional Office for Europe and Central Asia	143 131		81 610		47 314		107 209	
Regional Office for Latin America and the Caribbean	42 296	2.6	17 538		22 174		20 078	
Regional Office for the Near East	285		1 743		508		3 290	
World	408 768		299 008		173 722		399 734	

TABLE 44: **Water withdrawal and pressure on renewable water resources**

	Years	Water withdrawal by sector			Water withdrawal		% of renewable freshwater resources	
		% of total			total	per capita	withdrawn	
	years	agricultural percent	industrial percent	municipal percent	million m^3/yr	m^3/yr/cap	total percent	by agriculture percent
	1975-2010	2010*	2010*	2010*	2010*	2010*	2010*	2010*
Regional Office for Asia and the Pacific								
Developing countries and transition economies								
Central Asia								
Kazakhstan	2000	86.6	12.1	1.2	33047	2218	28.9	26.1
Russian Federation	2001	19.9	59.8	20.2	66200	455	1.5	0.3
Uzbekistan	2000	91.2	2.7	6.1	59610	2358	118.3	107.9
East Asia								
China								
Democratic People's Republic of Korea	2005	76.3	13.2	10.4	8658	361	11.2	8.6
Mongolia	2005	44.4	31.8	23.8	511	195	1.5	0.7
Republic of Korea	2002	62.0	12.0	26.0	25470	549	36.5	22.7
Pacific Islands								
Cook Islands								
Fiji	2000	61.2	10.8	28.0	82	100	0.3	0.2
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea	2005	0.3	42.7	57.0	392	61	0.0	0.0
Samoa								
Solomon Islands								
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia								
Cambodia	2006	94.0	1.5	4.5	2184	160	0.5	0.4
Indonesia	2000	81.9	6.5	11.6	113288	517	5.6	4.6
Lao People's Democratic Republic	2005	93.0	4.0	3.1	4260	718	1.3	1.2
Malaysia	2005	34.2	36.2	29.5	13210	488	2.3	0.8
Myanmar	2000	89.0	1.0	10.0	33225	729	2.8	2.5
Philippines	2009	82.2	10.1	7.6	81559	875	17.0	14.0
Thailand	2007	90.4	4.8	4.8	57306	845	13.1	11.8
Timor-Leste	2004	91.4	0.2	8.4	1172	1105	14.3	13.0
Viet Nam	2005	94.8	3.7	1.5	82030	965	9.3	8.8
South and Southwest Asia								
Afghanistan	2000	98.8	0.6	0.7	23123	938	35.6	35.1
Bangladesh	2008	87.8	2.1	10.0	35870	241	2.9	2.6
Bhutan	2008	94.1	0.9	5.0	338	466	0.4	0.4
India	2010	90.4	2.2	7.4	761000	621	33.9	36.0
Iran (Islamic Republic of)	2004	92.2	1.2	6.6	93300	1306	67.7	62.6
Maldives	2008	0.0	5.1	94.9	6	19	15.7	0.0
Nepal	2005	98.2	0.3	1.5	9787	345	4.7	4.6
Pakistan	2008	94.0	0.8	5.3	183450	1057	74.4	69.9
Sri Lanka	2005	87.4	6.4	6.2	12946	639	24.5	21.4
Developed Countries								
Australia	2000	73.8	10.6	15.6	22580	1152	4.6	3.4
Japan	2001	63.1	17.5	19.3	90040	714	20.9	13.2
New Zealand	2002	74.3	4.2	21.5	4753	1200	1.5	1.1
Regional Office for Africa								
Regional Office for Europe and Central Asia								
Regional Office for Latin America and the Caribbean								
Regional Office for the Near East								
World								

TABLE 45: **Species threatened and nationally protected areas**

	Threatened species				Nationally protected areas			
	mammals	birds	fish	higher plants	terrestrial		territorial waters	
					% of total land area		% of territorial waters	
	species 2012	species 2012	species 2012	species 2012	percent 1990	percent 2010	percent 1990	percent 2010
Regional Office for Asia and the Pacific	1 147	1 204	1 549	2 978	9	11		
Developing countries and transition economies	1 056	1 043	1 359	2 906	9	10		
Central Asia	57	90	58	42		8		
Kazakhstan	16	22	15	17		3		
Russian Federation	31	52	36	8		9	2.2	10.8
Uzbekistan	10	16	7	17		2		
East Asia	104	161	155	392	12	16		
China	75	87	120	382	14	17	0.4	1.3
Democratic People's Republic of Korea	9	25	14	6	4	6	0.1	0.1
Mongolia	11	20	2	0	4	13		
Republic of Korea	9	29	19	4	2	2	3.5	3.9
Pacific Islands	93	116	184	237	2	3		
Cook Islands								
Fiji	6	14	13	61	1	1	0.1	0.1
Kiribati	1	6	11	0	5	23	0.3	22.6
Marshall Islands	2	4	12	0		3	0.0	0.6
Micronesia (Federated States of)	7	10	20	3		4	0.0	0.1
Nauru								
Niue								
Palau	4	4	15	3		2	0.5	5.3
Papua New Guinea	39	37	45	142	2	3	0.3	0.3
Samoa	2	6	13	2	2	3	0.5	0.5
Solomon Islands	20	20	18	16	0	0	0.0	0.1
Tonga	2	5	12	2	1	15	0.0	9.4
Tuvalu	2	1	10	0		0	0.0	0.2
Vanuatu	8	9	15	8	4	4	0.0	0.1
Southeast Asia	535	434	591	1 626	9	14		
Cambodia	37	26	40	32	0	26	0.0	0.4
Indonesia	184	122	141	385	10	14	0.5	2.0
Lao People's Democratic Republic	45	24	54	24	1	17		
Malaysia	70	45	68	676	17	18	1.5	2.0
Myanmar	46	44	41	39	3	6	0.3	0.3
Philippines	38	74	73	212	9	11	0.5	2.5
Thailand	57	47	96	116	15	20	4.0	4.4
Timor-Leste	4	7	5	1		6	0.0	6.7
Viet Nam	54	45	73	141	5	6	0.3	1.7
South and Southwest Asia	267	242	371	609	5	6		
Afghanistan	11	14	5	2	0	0		
Bangladesh	34	31	17	16	2	2	0.4	0.8
Bhutan	27	18	3	2	14	28		
India	94	80	212	300	5	5	1.6	1.7
Iran (Islamic Republic of)	16	22	30	2	5	7	1.0	1.7
Maldives	2	0	18	0				
Nepal	31	33	7	2	8	17		
Pakistan	23	29	35	2	10	10	1.8	1.8
Sri Lanka	29	15	44	283	20	21	0.1	1.1
Developed Countries	91	161	190	72	8	11		
Australia	55	51	102	46	7	11	10.9	28.3
Japan	27	40	65	7	13	16	2.0	5.5
New Zealand	9	70	23	19	25	26	0.4	10.8
Regional Office for Africa	728	751	1 765	2 555	11	12		
Regional Office for Europe and Central Asia	328	478	1 047	648		9		
Regional Office for Latin America and the Caribbean	599	960	1 051	4 090	10	20		
Regional Office for the Near East	219	209	460	245	4	8		
World	3 075	3 753	6 229	11 212	9	12		

TABLE 46: **Agri-environmental indicators**

	Stock of						Organic water pollutant (BOD) emissions	
	cattle and buffaloes		sheep and goats		poultry birds			
	per ha of agricultural area		per ha of agricultural area		per ha of agricultural area			
	head/ha	head/ha	head/ha	head/ha	head/ha	head/ha	kg/day	kg/day/worker
	2000	2011	2000	2011	2000	2011	2005-06*	2005-06*
Regional Office for Asia and the Pacific	0.3	0.4	0.5	0.5	3.9	6.5		
Developing countries and transition economies	0.4	0.4	0.5	0.6	4.9	8.1		
Central Asia	0.1	0.1	0.1	0.1	0.8	1.2		
Kazakhstan	0.0	0.0	0.0	0.1	0.1	0.2	96 770	0.2
Russian Federation	0.1	0.1	0.1	0.1	1.6	2.1	1 388 069	0.2
Uzbekistan	0.2	0.3	0.3	0.6	0.5	1.4		
East Asia	0.2	0.2	0.5	0.5	6.7	10.3		
China	0.2	0.2	0.5	0.5	8.2	12.3	8 823 750	0.1
Democratic People's Republic of Korea	0.2	0.2	1.0	1.5	7.0	9.2		
Mongolia	0.0	0.0	0.2	0.3	0.0	0.0	8 019	0.2
Republic of Korea	1.1	1.9	0.2	0.1	54.6	96.4	319 604	0.1
Pacific Islands	0.4	0.3	0.2	0.2	5.3	5.2		
Cook Islands	0.0	0.0	0.4	0.3	8.3	6.7		
Fiji	0.8	0.7	0.6	0.6	9.7	9.0		
Kiribati					10.7	16.8		
Marshall Islands								
Micronesia (Federated States of)	0.6	0.6	0.2	0.2	8.3	8.7		
Nauru					12.5	12.5		
Niue	0.0	0.0			2.5	3.0		
Palau								
Papua New Guinea	0.1	0.1	0.0	0.0	3.7	3.2		
Samoa	0.6	0.9			9.2	17.7		
Solomon Islands	0.2	0.2			2.5	2.6		
Tonga	0.4	0.4	0.4	0.4	10.0	10.6		
Tuvalu			0.0	0.0	20.0	25.0		
Vanuatu	0.8	0.9	0.1	0.1	1.9	4.3		
Southeast Asia	0.5	0.5	0.3	0.3	15.4	21.8		
Cambodia	0.8	0.7			4.3	4.4		
Indonesia	0.3	0.3	0.4	0.5	19.5	27.1	882 985	0.2
Lao People's Democratic Republic	1.2	1.2	0.1	0.2	8.1	12.7		
Malaysia	0.1	0.1	0.1	0.1	19.6	35.4	208 312	0.1
Myanmar	1.2	1.4	0.2	0.4	4.8	15.5		
Philippines	0.5	0.5	0.6	0.3	11.3	14.4	144 629	0.1
Thailand	0.3	0.4	0.0	0.0	12.7	13.0	581 425	0.2
Timor-Leste	0.7	0.7	0.3	0.5	3.0	2.1		
Viet Nam	0.8	0.8	0.1	0.1	22.3	29.8	500 482	0.1
South and Southwest Asia	1.2	1.4	1.2	1.6	3.1	8.3		
Afghanistan	0.1	0.1	0.6	0.6	0.2	0.4		
Bangladesh	2.5	2.7	3.7	6.1	17.6	30.5		
Bhutan	0.7	0.6	0.1	0.1	0.4	0.8		
India	1.6	1.8	1.0	1.3	2.2	5.4		
Iran (Islamic Republic of)	0.1	0.2	1.3	1.5	4.0	18.5	160 776	0.2
Maldives								
Nepal	2.5	2.9	1.7	2.3	4.5	9.4		
Pakistan	1.7	2.5	2.7	3.4	5.7	13.3	153 680	0.2
Sri Lanka	0.6	0.6	0.2	0.1	4.5	5.4	266 109	0.2
Developed Countries	0.1	0.1	0.3	0.3	0.8	0.7		
Australia	0.1	0.1	0.3	0.2	0.2	0.2		
Japan	0.9	0.9	0.0	0.0	56.3	38.6	1 126 863	0.1
New Zealand	0.6	0.9	2.8	2.7	0.9	1.2	62 459	0.2
Regional Office for Africa	0.2	0.3	0.4	0.5	0.8	1.3		
Regional Office for Europe and Central Asia	0.2	0.2	0.3	0.3	2.8	3.3		
Regional Office for Latin America and the Caribbean	0.5	0.6	0.2	0.2	3.1	4.2		
Regional Office for the Near East	0.1	0.1	0.5	0.8	1.9	6.9		
World	0.3	0.3	0.4	0.4	3.3	4.8		

TABLE 47: **Water pollution**

	Water pollution							
	% of total BOD emissions							
	chemical industry percent 2005-06*	clay and glass industry percent 2005-06*	food industry percent 2005-06*	metal industry percent 2005-06*	other industry percent 2005-06*	paper and pulp industry percent 2005-06*	textile industry percent 2005-06*	wood industry percent 2005-06*
Regional Office for Asia and the Pacific								
Developing countries and transition economies								
Central Asia								
Kazakhstan	8.9	7.9	18.5	33.7	24.0	2.3	4.3	0.5
Russian Federation	11.9	8.0	17.8	9.0	37.7	5.0	6.6	4.2
Uzbekistan								
East Asia								
China	13.0	6.5	7.4	7.2	38.7	4.1	21.4	1.7
Democratic People's Republic of Korea								
Mongolia	2.9	10.2	26.2	3.8	4.1	4.4	43.6	4.8
Republic of Korea	12.1	3.0	6.3	4.2	58.9	5.4	9.3	0.9
Pacific Islands								
Cook Islands								
Fiji								
Kiribati								
Marshall Islands								
Micronesia (Federated States of)								
Nauru								
Niue								
Palau								
Papua New Guinea								
Samoa								
Solomon Islands								
Tonga								
Tuvalu								
Vanuatu								
Southeast Asia								
Cambodia								
Indonesia	12.0	4.0	23.1	1.4	19.9	4.1	29.2	6.3
Lao People's Democratic Republic								
Malaysia	16.5	3.8	9.1	2.8	48.5	4.9	6.6	7.8
Myanmar								
Philippines	9.5	2.7	14.4	2.6	42.9	4.2	21.6	2.1
Thailand	12.4	4.7	16.4	1.9	37.2	4.2	20.5	2.8
Timor-Leste								
Viet Nam	6.8	6.7	13.3	1.4	24.7	3.5	40.3	3.3
South and Southwest Asia								
Afghanistan								
Bangladesh								
Bhutan								
India								
Iran (Islamic Republic of)	12.8	13.8	16.1	7.1	35.5	2.8	11.2	0.7
Maldives								
Nepal								
Pakistan	9.1	4.3	15.1	2.2	11.2	1.9	55.6	0.4
Sri Lanka	9.0	6.3	22.4	2.6	9.3	4.3	43.6	2.5
Developed Countries								
Australia								
Japan	11.2	3.6	15.0	3.3	52.5	7.0	5.3	2.0
New Zealand	8.6	3.1	30.4	2.0	29.3	12.7	6.1	7.8
Regional Office for Africa								
Regional Office for Europe and Central Asia								
Regional Office for Latin America and the Caribbean								
Regional Office for the Near East								
World								

TABLE 48: **Renewable feedstocks**

	Production		Organic agriculture	Production			
	biofuel		% of total area	natural fibre		recovered paper	
				total			
	thousand kilotonne of oil equivalent	thousand kilotonne of oil equivalent	percent	thousand tonnes	thousand tonnes	thousand tonnes	thousand tonnes
	2000	2009	2011	1993	2011	2000	2012
Regional Office for Asia and the Pacific	521.2	560.7	0.8			42 391	90 639
Developing countries and transition economies	510.6	549.0	0.3			22 296	65 456
Central Asia	4.1	3.1	0.1			1 540	2 115
Kazakhstan	0.1	0.2	0.1	60.0	118.0	0	15
Russian Federation	4.0	2.9	0.1	110.9	96.0	1 540	2 100
Uzbekistan	0.0	0.0	0.0	1 401.7	1 002.3	0	0
East Asia	205.0	205.5	0.4			15 549	52 300
China	203.6	203.6	0.4	4 732.4	6 892.4	10 546	43 473
Democratic People's Republic of Korea	1.0	1.0		21.5	24.6	0	0
Mongolia	0.1	0.1				0	0
Republic of Korea	0.2	0.7	1.1	0.7	0.0	5 003	8 827
Pacific Islands	0.0	0.0	2.6			0	0
Cook Islands	0.0	0.0	0.7			0	0
Fiji	0.0	0.0	0.5			0	0
Kiribati	0.0	0.0				0	0
Marshall Islands	0.0	0.0				0	0
Micronesia (Federated States of)	0.0	0.0				0	0
Nauru	0.0	0.0				0	0
Niue	0.0	0.0	1.2			0	0
Palau	0.0	0.0				0	0
Papua New Guinea	0.0	0.0	0.9			0	0
Samoa	0.0	0.0	95.7	0.6	0.4	0	0
Solomon Islands	0.0	0.0	1.4			0	0
Tonga	0.0	0.0	0.8			0	0
Tuvalu	0.0	0.0				0	0
Vanuatu	0.0	0.0	1.2			0	0
Southeast Asia	109.2	123.0	0.2			4 147	8 028
Cambodia	3.2	3.7	0.1	4.7	4.1	0	20
Indonesia	49.2	53.0	0.1	80.9	59.3	1 978	3 934
Lao People's Democratic Republic	0.0	0.0	0.2	7.2	4.1	0	0
Malaysia	2.5	3.2	0.0	0.0	0.0	890	1 200
Myanmar	9.2	10.5	0.0	61.5	196.9	28	38
Philippines	8.1	6.9	0.8	68.7	76.1	333	854
Thailand	14.6	20.5	0.2	205.7	41.9	778	1 856
Timor-Leste	0.0	0.0	6.9			0	0
Viet Nam	22.4	25.2	0.2	94.6	98.0	140	125
South and Southwest Asia	192.3	217.5	0.4			1 060	3 013
Afghanistan	0.0	0.0	0.0	22.0	10.9	0	0
Bangladesh	7.6	8.8	0.1	835.7	1 543.1	0	0
Bhutan	0.0	0.0	4.0	0.3	0.3	0	0
India	148.9	165.4	0.6	3 380.9	8 017.6	850	2 640
Iran (Islamic Republic of)	0.4	0.4	0.1	90.0	73.4	80	80
Maldives	0.0	0.0				0	0
Nepal	7.0	8.5	0.2	10.5	14.5	0	4
Pakistan	24.0	29.5	0.1	1 370.4	2 312.4	95	163
Sri Lanka	4.5	4.7	0.7		0.0	35	126
Developed Countries	10.6	11.7	2.7			20 095	25 184
Australia	4.9	5.7	2.7	409.3	843.6	1 893	3 179
Japan	4.7	4.9	0.2	0.0	0.0	18 012	21 750
New Zealand	1.0	1.1	1.2	1.3	2.8	190	255
Regional Office for Africa	188.2	244.2		1 062.7	1 264.1	839	1 205
Regional Office for Europe and Central Asia	69.9	104.7	1.4		3 162.5	44 837	56 745
Regional Office for Latin America and the Caribbean	90.7	123.6	0.9	1 273.2	2 911.1	5 533	10 311
Regional Office for the Near East	3.5	4.2				753	2 247
World	942.0	1 120.4				142 814	212 516

TABLE 49: **Agricultural emissions**

	Enteric fermentation	Manure management	Rice cultivation	Synthetic fertilizers	Manure applied to soils	Manure left on pasture	Crop residues	Cultivated organic soils	Burning crop residues
	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010	gigagrams CO_2eq 2010
Regional Office for Asia and the Pacific	809 434	169 122	457 990	435 707	127 041	264 047	74 036	56 496	9 150
Developing countries and transition economies	736 416	155 634	450 762	423 161	123 546	223 212	71 070	55 046	8 682
Central Asia	58 398	16 624	1 781	12 615	8 702	9 425	6 051	6 306	1 106
Kazakhstan	9 625	1 678	434	145	1 261	2 540	1 079	0	380
Russian Federation	37 147	12 700	1 181	7 698	5 924	3 989	4 490	6 306	682
Uzbekistan	11 626	2 246	166	4 772	1 517	2 895	482	0	44
East Asia	170 801	65 113	116 245	226 705	68 616	71 625	27 151	1 918	1 123
China	159 781	62 541	110 180	225 244	66 216	66 949	26 518	218	1 030
Democratic People's Republic of Korea	1 041	318	2 131	0	324	573	305	43	53
Mongolia	6 337	714	0	71	511	2 617	29	1 657	7
Republic of Korea	3 642	1 539	3 934	1 390	1 565	1 485	299	0	32
Pacific Islands	926	888	16	140	106	540	1	4 481	2
Cook Islands	1	10	0	0	1	1	0	0	0
Fiji	460	101	8	16	26	246	1	14	2
Kiribati	0	5	0	0	2	1	0	0	0
Marshall Islands	0	0	0	0	0	0	0	0	0
Micronesia (Federated States of)	1	11	0	0	1	2	0	0	0
Nauru	0	1	0	0	0	0	0	0	0
Niue	0	1	0	0	0	0	0	0	0
Palau	0	0	0	0	0	0	0	0	0
Papua New Guinea	159	585	2	103	53	128	1	4 468	0
Samoa	45	69	0	0	7	27	0	0	0
Solomon Islands	21	20	5	0	2	12	0	0	0
Tonga	22	28	0	21	3	12	0	0	0
Tuvalu	0	4	0	0	0	0	0	0	0
Vanuatu	216	53	0	0	9	111	0	0	0
Southeast Asia	71 535	27 843	197 783	45 938	18 553	28 574	13 181	37 238	2 386
Cambodia	4 366	1 338	9 099	136	671	1 300	609	0	117
Indonesia	19 126	6 289	58 845	17 974	5 390	10 714	4 309	30 349	734
Lao People's Democratic Republic	2 948	982	1 764	0	558	884	228	0	44
Malaysia	1 222	866	2 547	6 443	890	1 196	148	3 880	24
Myanmar	18 096	5 564	26 330	322	2 983	5 125	2 102	1 941	309
Philippines	7 131	3 558	30 592	3 788	2 079	2 566	1 227	0	322
Thailand	8 620	3 296	40 705	10 230	2 066	3 181	2 288	121	489
Timor-Leste	173	92	142	0	47	47	15	0	6
Viet Nam	9 853	5 859	27 759	7 046	3 868	3 561	2 255	947	341
South and Southwest Asia	434 756	45 166	134 936	137 763	27 570	113 049	24 686	5 104	4 065
Afghanistan	8 162	670	612	214	496	2 817	417	0	86
Bangladesh	22 851	2 225	24 065	5 906	1 651	8 956	2 905	3 319	432
Bhutan	293	27	55	4	14	63	9	0	2
India	301 218	30 213	95 016	106 822	16 737	69 613	16 790	902	2 701
Iran (Islamic Republic of)	18 287	3 854	2 601	2 520	3 734	9 445	1 511	0	236
Maldives	0	0	0	0	0	0	0	0	0
Nepal	11 325	1 051	3 258	115	617	2 689	525	564	129
Pakistan	71 265	6 966	6 954	21 110	4 229	19 165	2 280	0	437
Sri Lanka	1 356	159	2 376	1 072	93	302	250	318	41
Developed Countries	73 017	13 489	7 228	12 546	3 495	40 835	2 966	1 450	468
Australia	47 026	5 026	125	8 011	1 034	27 599	2 324	336	402
Japan	5 093	5 439	7 103	2 946	1 997	1 956	585	777	63
New Zealand	20 898	3 024	0	1 589	465	11 280	57	338	3
Regional Office for Africa	228 466	14 842	23 645	8 309	6 520	157 705	7 777	5 177	2 288
Regional Office for Europe and Central Asia	274 240	99 643	7 909	100 457	48 548	49 963	27 897	29 124	3 218
Regional Office for Latin America and the Caribbean	526 629	22 670	17 027	47 721	23 512	208 745	19 177	1 605	2 757
Regional Office for the Near East	57 726	6 346	5 781	17 311	4 986	37 525	4 417	0	635
World	1 960 484	348 079	519 531	682 636	220 255	741 025	152 903	99 048	19 702

PART

5

Metadata

Country list					
Developing countries and transition economies					
Central Asia	East Asia	Pacific Islands	Southeast Asia	South and Southwest Asia	Developed countries
Kazakhstan	China	Cook Islands	Cambodia	Afghanistan	Australia
Russian Federation	Democratic People's Republic of Korea	Fiji	Indonesia	Bangladesh	Japan
Uzbekistan	Mongolia	Kiribati	Lao People's Democratic Republic	Bhutan	New Zealand
	Republic of Korea	Marshall Islands	Malaysia	India	
		Micronesia (Federated States of)	Myanmar	Iran (Islamic Republic of)	
		Nauru	Philippines	Maldives	
		Niue	Thailand	Nepal	
		Palau	Timor-Leste	Pakistan	
		Papua New Guinea	Viet Nam	Sri Lanka	
		Samoa			
		Solomon Islands			
		Tonga			
		Tuvalu			
		Vanuatu			

Metadata

Aggregation

Two types of aggregation are used in the book, namely sum and weighted mean. Two restrictions are imposed when computing the aggregation. Sufficiency condition: the aggregation is computed only when sufficient countries have reported data. The current threshold is set at 50 percent of the variable and the weighting variable if present. Comparability condition: Since aggregations are usually computed over years, this condition is designed to ensure that the number of reporting entities are comparable over the years. The current restriction is that the number of reporting entities does not vary above 15 countries in order to account for transition in countries.

Agricultural area (ha)

Agricultural area: this category is the sum of areas under (a) arable land - land under temporary agricultural crops (multiple-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens and land temporarily fallow (less than five years). The abandoned land resulting from shifting cultivation is not included in this category. Data for "Arable land" are not meant to indicate the amount of land that is potentially cultivable; (b) permanent crops - land cultivated with long-term crops which do not have to be replanted for several years (such as cocoa and coffee); land under trees and shrubs producing flowers, such as roses and jasmine; and nurseries (except those for forest trees, which should be classified under "forest"); and (c) permanent meadows and pastures - land used permanently (five years or more) to grow herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land). Data are expressed in 1 000 hectares.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agricultural area organic (ha)

Sum of areas under "Agricultural area certified organic" and "Agricultural area in conversion to organic". Agricultural area certified organic is the land area exclusively dedicated to organic agriculture and managed by applying organic agriculture methods. It refers to the land area fully converted to organic agriculture. It is the portion of land area (including arable lands, pastures or wild areas) managed (cultivated) or wild harvested in accordance with specific organic standards or technical regulations and that has been inspected and approved by a certification body. Agricultural area in conversion to organic is the land area which is going through the organic conversion process, usually a two year period of conversion to organic land.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agricultural population, total

Agricultural population is defined as all persons depending for their livelihoods on agriculture, hunting, fishing and forestry. It comprises all persons economically active in agriculture as well as their non-working dependents. It is not necessary that this referred population exclusively comes from the rural population.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agricultural production indices

The FAO indices of agricultural production show the relative level of the aggregate volume of agricultural production for each year in comparison with the base period 1999-2001. They are based on the sum of price-weighted quantities of different agricultural commodities produced after deductions of quantities used as seed and feed weighted in a similar manner. The resulting aggregate represents, therefore, disposable production for any use except as seed and feed. All the indices at the country, regional and world levels are calculated by the Laspeyres formula. Production quantities of each commodity are weighted by 1999-2001 average international commodity prices and summed for each year. To obtain the index, the aggregate for a given year is divided by the average aggregate for the base period 1999-2001. Since the FAO indices are based on the concept of agriculture as a single enterprise, amounts of seed and feed are subtracted from the production data to avoid double counting , once in the production data and once with the crops or livestock produced from them. Deductions for seed (in the case of eggs, for hatching) and for livestock and poultry feed apply to both domestically produced and imported commodities. They cover only primary agricultural products destined for animal feed (e.g. maize, potatoes, milk, etc.). Processed and semi-processed feed items such as bran, oilcakes, meals and molasses have been completely excluded from the calculations at all stages. It should be noted that when calculating indices of agricultural, food and nonfood production, all intermediate primary inputs of agricultural origin are deducted. However, for indices of any other commodity group, only inputs originating from within the same group are deducted; thus, only seed is removed from the group "crops" and from all crop subgroups, such as cereals, oil crops, etc.; and both feed and seed originating from within the livestock sector (e.g. milk feed, hatching eggs) are removed from the group "livestock products". For the main two livestock subgroups, namely, meat and milk, only feed originating from the respective subgroup is removed. Indices which take into account deductions for feed and seed are referred to as "net". Indices calculated without any deductions for feed and seed are referred to as "gross".The"international commodity prices" are used in order to avoid the use of exchange rates for obtaining continental and world aggregates, and also to improve and facilitate international comparative analysis of productivity at the national level. These" international prices", expressed in so-called"international dollars", are derived using a Geary-Khamis formula for the agricultural sector. This method assigns a single "price" to each commodity. For example, one metric ton of wheat has the same price regardless of the country where it was produced. The currency unit in which the prices are expressed has no influence on the indices published. The commodities covered in the computation of indices of agricultural production are all crops and livestock products originating in each country. Practically all products are covered, with the main exception of fodder crops. The category of food production includes commodities that are considered edible and that contain nutrients. Accordingly, coffee and tea are excluded along with inedible commodities because, although edible, they have practically no nutritive value. Prices applied to meat in reality represent the prices of animals for slaughtering in terms of live weight. For example, if the price of one metric ton (1 000 kg) of pigs alive is 825 dollars and the ratio meat to live weight is 75 to 100, the price applicable to 750 kg of pig meat will be 825 dollars, corresponding to 1 100 dollars per metric tons. The indices are calculated from production data presented on a calendar year basis. The FAO indices may differ from those produced by the countries themselves because of differences in concepts of production, coverage, weights, time reference of data and methods of calculation.

Agricultural tractors, total (tractors)

Agricultural tractors generally refer to wheel and crawler or tracklaying type tractors (excluding garden tractors) used in agriculture. Data are expressed in numbers in use in the agricultural sector.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agricultural water withdrawal, share of total water withdrawal (percent)

Agricultural water withdrawal as percentage of total water withdrawal.

Source: Land and Water Division (AQUASTAT)

Owner: FAO

Agriculture value added per worker (constant 2000 US$)

Agriculture value added per worker is a measure of agricultural productivity. Value added in agriculture measures the output of the agricultural sector (ISIC divisions 1-5) less the value of intermediate inputs. Agriculture comprises value added from forestry, hunting, and fishing as well as cultivation of crops and livestock production. Data are in constant 2000 U.S. dollars.

Source: World Bank (WDI)

Owner: Derived from World Bank national accounts files and Food and Agriculture Organization, Production Yearbook and data files.

Agriculture, Forestry, Fishing, and Hunting, Cash (Budg. Cen. Govt.) (share of agricultural GDP)

See 'Government expenditure'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agriculture, Forestry, Fishing, and Hunting, Cash (Budg. Cen. Govt.) (share of total outlays)

See 'Government expenditure'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agriculture, Forestry, Fishing, and Hunting, Noncash (Budg. Cen. Govt.) (share of agricultural GDP)

See 'Government expenditure'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agriculture, Forestry, Fishing, and Hunting, Noncash (Budg. Cen. Govt.) (share of total outlays)

See 'Government expenditure'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Agriculture, value added (percent of GDP)

Agriculture corresponds to ISIC divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3. Note: For VAB countries, gross value added at factor cost is used as the denominator.

Source: World Bank (WDI)

Owner: World Bank national accounts data, and OECD National Accounts data files.

All GHG agricultural sectors, total emissions in CO_2eq (gigagrams)

Agriculture Total contains all the emissions produced in the different agricultural emissions sub-domains, providing a picture of the contribution to the total amount of GHG emissions from agriculture. GHG Emissions from agriculture consist of non-CO_2 gases, namely methane (CH_4) and nitrous oxide (N_2O), produced by crop and livestock production and management activities.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Aquaculture fish production (tonnes)

Aquaculture is defined as the farming of aquatic organisms. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms which are harvested by an individual or corporate body which has owned them throughout their rearing period contribute to aquaculture, while aquatic organisms which are exploitable by the public as a common property resource, with or without appropriate licenses, are the harvest of fisheries. In the case of capture-based aquaculture, only the incremental growth (or weight gain) in captivity, could and should be reported as the production from aquaculture. Data included here cover aquaculture production of fish, molluscs, crustaceans and miscellaneous aquatic animals but exclude production for marine mammals, crocodiles, corals, pearls, sponges and aquatic plants.

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Aquaculture fish production inland (tonnes)

Aquaculture production from inland areas.

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Aquaculture fish production marine (tonnes)

Aquaculture production from marine areas.

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Arable land (ha)

Arable land is the land under temporary agricultural crops (multiple-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens and land temporarily fallow (less than five years). The abandoned land resulting from shifting cultivation is not included in this category. Data for 'Arable land' are not meant to indicate the amount of land that is potentially cultivable.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Arable land and permanent crops (ha)

Arable land and Permanent crops, this category is the sum of areas under 'Arable land' and 'Permanent crops'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Area under bioenergy crops (ha)

The assumed land area required to produce a given annual quantity of biofuel production.

Source: FAO

Owner: Based on IEA biofuel production data

Artificial sweeteners

High-intensity or low-caloric sweetening agents that are produced chemically.

Average dietary supply adequacy (index)

The indicator expresses the Dietary Energy Supply (DES) as a percentage of the Average Dietary Energy Requirement (ADER) in the country. Each country's or region's average supply of calories for food consumption is normalized by the average dietary energy requirement estimated for its population, to provide an index of adequacy of the food supply in terms of calories. Analysed together with the prevalence of undernourishment, it allows discerning whether undernourishment is mainly due to insufficiency of the food supply or to particularly bad distribution. The indicator is calculated as an average over 3 years to reduce the impact of possible errors in estimated DES, due to the difficulties in proper accounting of stock variations in major food. It thus provides an indicator of structural food supply adequacy.

Source: FAO, Statistics Division

Owner: FAO

Average fat supply (g/cap/day)

National average fat supply (expressed in grams per caput per day).

Source: FAO, Statistics Division

Owner: FAO

Average protein supply (g/cap/day)

National average protein supply (expressed in grams per caput per day). As other indicators based on Food balance Sheets data, it is calculated on 3 year averages, to reduce the impact of errors in recording of annual stock variations.

Source: FAO, Statistics Division

Owner: FAO

Average supply of protein of animal origin (g/cap/day)

National average protein supply (expressed in grams per caput per day). It includes the following groups: Meat; Offals; Animal Fats and Products; Milk and Products; Eggs, Fish, Seafood and Products; and Aquatic Products, other. The indicator is calculated on 3 year averages.

Source: FAO, Statistics Division

Owner: FAO

Beef and buffalo meat (tonnes)

See 'Buffalos', 'Meat, total', and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Biofuel production (energy, kilotonne of oil equivalent)

Sum of ethanol and biodiesel production, reported in kilotonne of oil equivalent.

Source: IEA

Owner: Energy Balances of OECD Countries and Energy Balances of Non-OECD Countries, 2011 editions

Bird species, threatened

Birds are listed for countries included within their breeding or wintering ranges. Threatened species are the number of species classified by the IUCN as endangered, vulnerable, rare, indeterminate, out of danger, or insufficiently known.

Source: World Bank (WDI)

Owner: United Nations Environmental Programme and the World Conservation Monitoring Centre, and International Union for Conservation of Nature, Red List of Threatened Species.

Buffaloes

Indian, Asiatic, pigmy, water buffalo (Bubalus bubalus; B. arnee; B. depressicornis); African buffalo (genus Syncerus); American bison (Bison bison); European bison (Bison bonasus); beeffalo (cross between a bison and a domesticated beef animal). Excludes wild bison and buffalo.

Burning crop residues, total emissions in CO_2eq (gigagrams)

Greenhouse Gas (GHG) emissions from burning crop residues consist of methane and nitrous oxide gases produced by the combustion of a percentage of the crop residues burnt on-site.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Butter and ghee production (tonnes)

See 'Butter, ghee' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Butter, Ghee

Default composition: 886 Butter, cow milk, 887 Ghee, butteroil of cow milk, 952 Butter, buffalo milk, 953 Ghee, of buffalo milk, 983 Butter and ghee, sheep milk, 1022 Butter of goat milk.

Capture fish production (tonnes)

Capture fishery is defined as the hunting, collecting and gathering activities directed at removing or collecting live wild aquatic organisms. The capture production statistics here indicate the nominal catches of aquatic organisms, killed, caught, trapped or collected for all commercial, industrial, recreational and subsistence purposes in live weight equivalent. Data included here cover capture production of fish, molluscs, crustaceans and miscellaneous aquatic animals but exclude production for marine mammals, crocodiles, corals, pearls, sponges and aquatic plants.

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Capture fish production inland (tonnes)

Capture fishery production from inland areas.

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Capture fish production marine (tonnes)

Capture fishery production from marine areas.

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Cassava

Manioc, mandioca, yuca (Manihot esculenta, syn. M. utilissima); yuca dulce (M. palmata, syn. M. dulcis). A semi-permanent crop grown in tropical and subtropical regions. Sometimes bitter and sweet cassavas are referred to as separate species, the former being M. esculenta and the latter M. palmata, but this is incorrect since the toxicity varies according to location. Cassava is the staple food in many tropical countries. It is not traded internationally in its fresh state because tubers deteriorate very rapidly.

Cattle

Common ox (Bos taurus); zebu, humped ox (Bos indicus); Asiatic ox (subgenus Bibos); Tibetan yak (Poephagus grunniens). Animals of the genus listed, regardless of age, sex, or purpose raised. Data are expressed in number of heads.

Cattle and buffalo (heads)

See 'Cattle' and 'Buffalo'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Cereal exports (tonnes)

Exports (volume) of cereals.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Cereal import dependency ratio (percent)

Cereal imports/(cereal production+cereal import-cereal export). The indicator is calculated on 3 year averages.

Source: FAO, Statistics Division

Owner: FAO

Cereal imports (tonnes)

Imports (volume) of cereals.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Cereals

Cereals include Wheat, Rice Paddy, Barley, Maize, Popcorn, Rye, Oats, Millets, Sorghum, Buckwheat, Quinoa, Fonio, Triticale, Canary Seed, Mixed Grain and Cereals Nes.

Cereals harvested area (ha)

See 'Cereals' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Cereals production (tonnes)

See 'Cereals' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Cereals yield (hg/ha)

See 'Cereals' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Cheese (all kinds) production (tonnes)
All kinds of cheese. See also 'Production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Chickens
Fowl (Gallus domesticus); Guinea fowl (Numida meleagris. Domesticated birds only. Data are expressed in thousands.

Chickens (heads)
See 'Chickens' and 'Production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Children in employment, total (share of children ages 7-14)
Children in employment refer to children involved in economic activity for at least one hour in the reference week of the survey.
Source: World Bank (WDI)
Owner: Understanding Children's Work project based on data from ILO, UNICEF and the World Bank.

Citrus
Including inter alia: bergamot (Citrus bergamia); citron (C. medica var. cedrata); chinotto (C. myrtifolia); kumquat (Fortunella japonica). Some minor varieties of citrus are used primarily in the preparation of perfumes and soft drinks.

Citrus fruit harvested area (ha)
See 'Fruit, citrus nes' and 'Crop area'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Citrus fruit production (tonnes)
See 'Fruit, citrus nes' and 'Crop production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Citrus fruit yield (hg/ha)
See 'Fruit, citrus nes' and 'Crop yield'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Coarse grain
Coarse grains include Barley, Maize, Popcorn, Rye, Oats, Millet, Sorghum, Buckwheat, Quinoa, Fonio, Triticale, Canary seed, Mixed grain and Cereals, nes.

Coarse grain harvested area (ha)
See 'Coarse grain' and 'Crop area'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Coarse grain production (tonnes)
See 'Coarse grain' and 'Crop production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Coarse grain yield (hg/ha)
See 'Coarse grain' and 'Crop yield'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Cocoa, beans
Theobroma cacao. The seeds contained in the fruit of the cacao-tree, including whole or broken, raw or roasted.

Cocoa, paste
Obtained by grinding roasted cocoa beans. Also called liquor. Not defatted.

Coconut Oil
Default composition: Oil, coconut (copra)

Coconuts
Cocos nucifera Husked coconut. In shell, covered by the endocarp, while exocarp (the smooth outer skin) and mesocarp (the fibrous covering) are removed. Immature nuts contain a milky juice that is consumed as a refreshing drink. Mature nuts are consumed as such, or processed for copra or desiccated coconut. The flesh, from which copra/oil is extracted, constitutes 40-70 percent of the weight of the husked coconut. The oil content is about 36 percent of the flesh.

Cotton lint
Gossypium spp. Fibres from ginning seed cotton that have not been carded or combed. Trade data also include fibres that have been cleaned, bleached, dyed or rendered absorbent.

Cottonseed Oil
Default composition: Oil, cottonseed

CPIA (Country Policy and Institutional Assessment) business regulatory environment rating (1=low to 6=high)
Business regulatory environment assesses the extent to which the legal, regulatory and policy environments help or hinder private businesses in investing, creating jobs, and becoming more productive.
Source: World Bank (WDI)
Owner: World Bank Group, CPIA database (http://www.worldbank.org/ida).

Crop area
Crop area is a surface of land on which a crop is grown. In general, the area measured for cadastral purposes includes, in addition to the area cultivated, headlands, ditches and other non-cultivated areas. Such an area can be called gross area as against the net area which includes only the portion of the gross area actually cultivated. For various reasons, e.g. natural calamities or economic considerations, certain areas planted or sown with a given crop are not harvested or are harvested before the crop reaches maturity. Hence the need for the concept of area to be sub-divided into sown or planted area and harvested area. Sown area data are necessary to estimate quantities used for seeding purposes; harvested area, to provide reliable and accurate yield and production data. A peculiarity of permanent crops is that the number of trees or plants is reported in addition to or, instead of, the area planted. This is particularly so as regards plants growing outside of compact plantations, which are either interplanted with other crops or are scattered. Both area and number of trees are also divided into productive or bearing and non-productive or non-bearing areas or trees. In most cases, non-bearing refers to young plants that are not yet bearing.

Crop production
Crop production data refer to the actual harvested production from the field or orchard and gardens, excluding harvesting and threshing losses and that part of crop not harvested for any reason. Production therefore includes the quantities of the commodity sold in the market (marketed production) and the quantities consumed or used by the producers (auto-consumption). When the production data available refer to a production period falling into two successive calendar years and it is not possible to allocate the relative production to each of them, it is usual to refer production data to that year into which the bulk of the production falls. Crop production data are recorded in tonnes (t). In many countries, crop production data are obtained as a function of the estimated yield and the total area. If such a compilation method of production statistics is enforced by the country, it must be ensured that the total area does not refer to sown or planted area, which would give then the 'biological production', but to the actually harvested area during the year.

Crop residues, total emissions in CO_2eq (gigagrams)

Greenhouse Gas (GHG) emissions from crop residues consist of nitrous oxide gas from decomposition of nitrogen in crop residues left on managed soils.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Crop yield

Harvested production per unit of harvested area for crop products. In most of the cases yield data are not recorded but obtained by dividing the production data by the data on area harvested. Data on yields of permanent crops are not as reliable as those for temporary crops either because most of the area information may correspond to planted area, as for grapes, or because of the scarcity and unreliability of the area figures reported by some countries.

Crops net per capita production index number (2004-2006 = 100)

See 'Agricultural production indices'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Cultivated organic soils, total emissions in CO_2eq (gigagrams)

Greenhouse gas (GHG) emissions data from cultivated organic soils are those associated with nitrous oxide gas from drained organic soils. Computed at Tier 1 and complemented by geo-spatial data, following the 2006 IPCC Guidelines for National GHG Inventories (IPCC, 2006). Available by country, with global coverage and relative to the period 1990-2010 with annual updates.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Dairy products (milk equivalent) exports (tonnes)

Exports (volume) of dairy products (milk equivalent).

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Dairy products (milk equivalent) imports (tonnes)

Imports (volume) of dairy products (milk equivalent).

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Depth of the food deficit (kcal/cap/day)

The depth of the food deficit indicates how many calories would be needed to lift the undernourished from their status, everything else being constant. The average intensity of food deprivation of the undernourished, estimated as the difference between the average dietary energy requirement and the average dietary energy consumption of the undernourished population (food-deprived), is multiplied by the number of undernourished to provide an estimate of the total food deficit in the country, which is then normalized by the total population. The indicator is calculated as an average over 3 years.

Source: FAO, Statistics Division

Owner: FAO

Domestic food price volatility (index)

The Domestic Food Price Volatility is a measure of variation of the Domestic Food Price Level Index. It has been computed as the Standard Deviation (SD) of the deviations from the trend over the previous five years.

Source: FAO, Statistics Division

Owner: ILO and World Bank ICP (International Comparison Project)

Droughts, floods, extreme temperatures (percent of population affected, average 1990-2009)

Droughts, floods and extreme temperatures is the annual average percentage of the population that is affected by natural disasters classified as either droughts, floods, or extreme temperature events. A drought is an extended period of time characterized by a deficiency in a region's water supply that is the result of constantly below average precipitation. A drought can lead to losses to agriculture, affect inland navigation and hydropower plants, and cause a lack of drinking water and famine. A flood is a significant rise of water level in a stream, lake, reservoir or coastal region. Extreme temperature events are either cold waves or heat waves. A cold wave can be both a prolonged period of excessively cold weather and the sudden invasion of very cold air over a large area. Along with frost it can cause damage to agriculture, infrastructure, and property. A heat wave is a prolonged period of excessively hot and sometimes also humid weather relative to normal climate patterns of a certain region. Population affected is the number of people injured, left homeless or requiring immediate assistance during a period of emergency resulting from a natural disaster; it can also include displaced or evacuated people. Average percentage of population affected is calculated by dividing the sum of total affected for the period stated by the sum of the annual population figures for the period stated.

Source: World Bank (WDI)

Owner: EM-DAT: The OFDA/CRED International Disaster Database: www.emdat.be, Universite Catholique de Louvain, Brussels (Belgium), World Bank.

Egg production

Covers all domestic birds which have contributed to egg production during the year, wherever they lay and the corresponding total production, including eggs intended to be used for hatching but excluding waste on farms.

Eggs

Default composition: 1062 Eggs, hens in shell, 1063 Eggs, liquid, 1064 Eggs, dried, 1091 Eggs, other birds, in shell; nutrient data only: 916 Egg albumine

Eggs primary production (tonnes)

See 'Eggs' and 'Egg production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Emissions

The release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time.

Employees, agriculture, female (share of female employment)

Employees are people who work for a public or private employer and receive remuneration in wages, salary, commission, tips, piece rates, or pay in kind.

Source: World Bank (WDI)

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Employees, agriculture, male (share of male employment)

Employees are people who work for a public or private employer and receive remuneration in wages, salary, commission, tips, piece rates, or pay in kind.

Source: World Bank (WDI)

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Employment in agriculture (share of total employment)

Employees are people who work for a public or private employer and receive remuneration in wages, salary, commission, tips, piece rates, or pay in kind.

Source: World Bank (WDI)

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Employment, total

Employees are people who work for a public or private employer and receive remuneration in wages, salary, commission, tips, piece rates, or pay in kind.

Source: World Bank

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Enteric fermentation, total emissions in CO_2eq (gigagrams)

Greenhouse gas (GHG) emissions from enteric fermentation consist of methane gas produced in digestive systems of ruminants and to a lesser extent of non-ruminants.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Environmental Protection, Cash (Budg. Cen. Govt.) (share of total outlays)

See 'Government expenditure'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Environmental Protection, Noncash (Budg. Cen. Govt.) (share of total outlays)

See 'Government expenditure'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Evaporated and condensed milk production (tonnes)

See 'Milk excluding butter' and 'Milk production (tonnes)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Export of forest products (US$)

Forest materials for commercial use.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Export of roundwood (m^3)

See 'Roundwood'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Exports of fish (US$)

Value of exports of fish in current US$ (data reported include fish, molluscs, crustaceans, and miscellaneous aquatic animals but excluding marine mammals, crocodiles, corals, pearls, sponges and aquatic plants, miscellaneous aquatic animal products and fish waste).

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Fat supply quantity in crops primary equivalent (g/cap/day)

Fat supply quantity in crops primary equivalent.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Fats, animals, raw

Default composition: 869 Fat, cattle, 871 Fat, cattle butcher, 949 Fat, buffalo, 979 Fat, sheep, 994 Grease incl. lanolin wool, 1019 Fat, goats, 1037 Fat, pigs, 1040 Fat, pig butcher, 1043 Lard, 1065 Fat, poultry, 1066 Fat, poultry, rendered, 1129 Fat, camels, 1160 Fat, other camelids, 1168 Oils, fats of animal nes, 1221 Lard stearine oil, 1222 Degras, 1225 Tallow, 1243 Fat, nes, prepared

FDI inward flows - Agriculture, hunting, forestry, fishing (current US$)

Inflows of foreign direct investment (FDI) in agriculture, hunting, forestry, and fishing.

Source: Foreign agriculture investment database

Owner: UNCTAD

FDI inward flows - Agriculture, hunting, forestry, fishing + Food, beverages, tobacco (current US$)

Inflows of foreign direct investment (FDI) in agriculture, hunting, forestry, and fishing + food, beverages, tobacco.

Source: Foreign agriculture investment database

Owner: UNCTAD

FDI inward flows - Food, beverages, tobacco (current US$)

Inflows of foreign direct investment (FDI) in food, beverages, tobacco.

Source: Foreign agriculture investment database

Owner: UNCTAD

Female employment, total

Employees are people who work for a public or private employer and receive remuneration in wages, salary, commission, tips, piece rates, or pay in kind.

Source: World Bank

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Fertilizers consumption

Mineral fertilizers made their appearance with the Industrial Revolution and had an important role in sustaining the growing population of the earth: half the population of the earth is now estimated to be fed with crops grown using synthetic fertilizers (Erisman et al. 2008). Fertilizers can have a negative impact on the environment, leading to eutrophication and poisoning of water, and pollution of soil (e.g. heavy metals, soil acidification, POP-Persistent Organic Pollutants). Also, the production of fertilizers is energy intensive and mineable phosphorus reserves are finite.

Fertilizers Manufactured, nes

Mineral or chemical fertilizers not elsewhere specified.

Fertilizers, organic

Animal or vegetable fertilizers, whether or not mixed together or chemically treated; fertilizers produced by the mixing or chemical treatment of animal or vegetable products.

Fibre crop harvested area (ha)

See 'Fibre crops' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Fibre crop yield (hg/ha)

See 'Fibre crops' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Fibre crops

Natural fibre crops include Agave Fibres Nes, Cotton lint, Fibre Crops Nes, Flax fibre and tow, Hemp Tow Waste, Jute, Manila Fibre (Abaca), Other Bastfibres, Ramie, Seed cotton and Sisal.

Fibre crops production (tonnes)

See 'Fibre crops' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Fish species, threatened

Fish species are based on Froese, R. and Pauly, D. (eds). 2008. Threatened species are the number of species classified by the IUCN as endangered, vulnerable, rare, indeterminate, out of danger, or insufficiently known.

Source: World Bank (WDI)

Owner: Froese, R. and Pauly, D. (eds). 2008. FishBase database, www.fishbase.org.

Fixed broadband Internet subscribers (per 100 people)

Fixed broadband Internet subscribers are the number of broadband subscribers with a digital subscriber line, cable modem, or other high-speed technology.

Source: World Bank (WDI)

Owner: International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.

Food

Data refer to the total amount of the commodity available as human food during the reference period. Data include the commodity in question, as well as any commodity derived there from as a result of further processing. Food from maize, for example, comprises the amount of maize, maize meal and any other products derived there from available for human consumption. Food from milk relates to the amounts of milk as such, as well as the fresh milk equivalent of dairy products.

Food net per capita production index number (2004-2006 = 100)

See 'Agricultural production indices'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Food Price Level Index (index)

The Domestic Food Price Level Index is calculated by dividing the Food Purchasing Power Parity (FPPP) by the General PPP, thus providing an index of the price of food in the country relative to the price of the generic consumption basket. Data are available for 2005 from the ICP Program. They are then extended to other years by adjusting both numerator and denominator using the relative chenges in Food CPI and General CPI as provided by the ILO.

Source: FAO, Statistics Division

Owner: ILO and World Bank ICP (International Comparison Project)

Food production

For primary commodities, production relates to the total domestic production whether inside or outside the agricultural sector, i.e. including non-commercial production and production in kitchen gardens. Unless otherwise indicated, production is reported at the farm level for primary crops (i.e. excluding harvesting losses for crops) and livestock items and in terms of live weight (i.e. the actual ex-water weight of the catch at the time of capture) for primary fish items. Production of processed commodities relates to the total output of the commodity at the manufacturing level (i.e. it comprises output from domestic and imported raw materials of originating products). Reporting units are chosen accordingly, e.g. cereals are reported in terms of grains and paddy rice. As a general rule, all data on meat are expressed in terms of carcass weight. Usually the data on production relate to that which takes place during the reference period. However, production of certain crops may relate to the harvest of the year preceding the utilization period if harvesting takes place late in the year. In such instances, the production of a given year largely moves into consumption in the subsequent year. In the Food Balance Sheets a distinction is made between "output" and "input". The production of primary as well as of derived products is reported under "output". For derived commodities, the amounts of the originating commodity that are required for obtaining the output of the derived product are indicated under "input", and are expressed in terms of the originating commodity. The various factors used, i.e. milling rates, extraction rates, conversion or processing factors, carcass weights, milk yield, egg weights etc., should indicate the average national rate at which these commodities are generally converted.

Food supply in crops primary equivalent (kcal/cap/day)

Food supply in crops primary equivalent.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Foreign direct investment, net inflows (percent of GDP)

Foreign direct investment is the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.

Source: World Bank (WDI)

Owner: International Monetary Fund, International Financial Statistics and Balance of Payments databases, World Bank, Global Development Finance, and World Bank and OECD GDP estimates.

Forest area (ha)

Forest area is the land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use. Forest is determined both by the presence of trees and the absence of other predominant land uses. The trees should be able to reach a minimum height of 5 metres (m) in situ. Areas under reforestation that have not yet reached but are expected to reach a canopy cover of 10 percent and a tree height of 5 m are included, as are temporarily unstocked areas, resulting from human intervention or natural causes, which are expected to regenerate. Includes: areas with bamboo and palms provided that height and canopy cover criteria are met; forest roads, firebreaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of specific scientific, historical, cultural or spiritual interest; windbreaks, shelterbelts and corridors of trees with an area of more than 0.5 ha and width of more than 20 m; plantations primarily used for forestry or protective purposes, such as: rubber-wood plantations and cork, oak stands. Excludes: tree stands in agricultural production systems, for example in fruit plantations and agroforestry systems. The term also excludes trees in urban parks and gardens.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Freshwater fish

Default composition: 1501 Frwtr Diad F, 1502 Frwtr Fz Whl, 1503 Frwtr Fillet, 1504 Frwtr Fz Flt, 1505 Frwtr Cured, 1506 Frwtr Canned, 1507 Frwtr Pr nes, 1508 Frwtr Meals

Fruit harvested area (ha)

See 'Fruit, excluding melons' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Fruit production, excluding melons (tonnes)

See 'Fruit, excluding melons' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Fruit yield (hg/ha)

See 'Fruit, excluding melons' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Fruit, citrus nes

Including inter alia: bergamot (Citrus bergamia); citron (C. medica var. cedrata); chinotto (C. myrtifolia); kumquat (Fortunella japonica). Some minor varieties of citrus are used primarily in the preparation of perfumes and soft drinks.

Fruit, excluding melons

Fruit Crops consist of fruits and berries that, with few exceptions, are characterized by their sweet taste. Nearly all are permanent crops, mainly from trees, bushes and shrubs, as well as vines and palms. Fruits and berries grow on branches, stalks or the trunks of plants, usually singly, but sometimes grouped in bunches or clusters (e.g. bananas and grapes). Commercial crops are cultivated in plantations, but significant quantities of fruits are also collected from scattered plants that may or may not be cultivated.

Fruit, fresh nes

Including inter alia: azarole (Crataegus azarolus); babaco (Carica pentagona); elderberry (Sambucus nigra); jujube (Zizyphus jujuba); litchi (Nephelium litchi); loquat (Eriobotrya japonica); medlar (Mespilus germanica); pawpaw (Asimina triloba); pomegranate (Punica granatum); prickly pear (Opuntia ficus-indica); rose hips (Rosa spp.); rowanberry (Sorbus aucuparia); service-apple (Sorbus domestica); tamarind (Tamarindus indica); tree-strawberry (Arbutus unedo). Other fresh fruit are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report fresh fruit under this heading that are classified separately by FAO.

GDP (current US$)

GDP at purchasers' prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used.

Source: World Bank (WDI)

Owner: World Bank national accounts data, and OECD National Accounts data files.

GINI index

Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Source: World Bank (WDI)

Owner: World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).

Global 5-Year running mean land-ocean temperature index (degrees Celsius)

Global 5-years running mean land-ocean temperature index, with base period 1951-1980.

Source: NASA

Owner: Hansen et al. 2007

Global annual mean land-ocean temperature index (degrees Celsius)

Global annual mean land-ocean temperature index, with base period 1951-1980.

Source: NASA

Owner: Hansen et al. 2006

Global annual mean land-ocean temperature index, low latitudes 23.6N-23.6S (degrees Celsius)

Global annual mean land-ocean temperature index, low latitudes 23.6N-23.6S with base period 1951-1980.

Source: NASA

Owner: Hansen et al. 2009

Global annual mean land-ocean temperature index, northern latitudes 90N-23.6N (degrees Celsius)

Global annual mean land-ocean temperature index, northern latitudes 90N-23.6N with base period 1951-1980.

Source: NASA

Owner: Hansen et al. 2008

Global annual mean land-ocean temperature index, southern latitudes 23.6S-90S (degrees Celsius)

Global annual mean land-ocean temperature index, southern latitudes 23.6S-90S with base period 1951-1980.

Source: NASA

Owner: Hansen et al. 2010

GNI per capita, Atlas method (current US$)

GNI per capita (formerly GNP per capita) is the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. GNI, calculated in national currency, is usually converted to U.S. dollars at official exchange rates for comparisons across economies, although an alternative rate is used when the official exchange rate is judged to diverge by an exceptionally large margin from the rate actually applied in international transactions. To smooth fluctuations in prices and exchange rates, a special Atlas method of conversion is used by the World Bank. This applies a conversion factor that averages the exchange rate for a given year and the two preceding years, adjusted for differences in rates of inflation between the country, and through 2000, the G-5 countries (France, Germany, Japan, the United Kingdom, and the United States). From 2001, these countries include the Euro area, Japan, the United Kingdom, and the United States.

Source: World Bank (WDI)

Owner: World Bank national accounts data, and OECD National Accounts data files.

Goats

Includes Hircus, Ibex, Nubiana, Pyrenaica, Tibetana, Kashmir and Angora.

Government expenditure

Data presented on government expenditure refer to Core Areas of Government Functions Relevant to the Agriculture Sector based on the Classification of Functions of Government (COFOG) as outlined in the IMF's Government Finance Statistics Manual, 2001 (GFSM 2001). COFOG is essential for making international comparisons of the extent to which governments are involved in economic and social functions because it avoids problems associated with organizational changes in a single government, and problems of organizational differences among countries. Statistics on expenditures in agriculture, forestry and fisheries and on environmental protection can be used to study the effectiveness of government programmes that support an enabling environment for essential public goods with high economic and social returns. COFOG provides key aggregates that could be used as indicators or measures of results / outcomes.

Government expenditure allocated to agricultural and rural development

Data on government expenditure on agriculture refers to all non-repayable payments, whether capital or current, requited or not by government for the agricultural and rural development sector.

Grain, mixed

A mixture of cereal species that are sown and harvested together. The mixture wheat/rye is known as meslin, but in trade is usually classified with wheat.

Grapes

Default composition: 560 Grapes, 561 Raisins, 562 Juice, grape, 563 Grapes, must

Gross capital stock (constant 2005 prices)

The estimate of capital stock in agriculture refers to a value that is attached to the total physical capital capacity available for repeated use in the production of other goods, in existence at specific points in time in the economy of the agriculture sector. The estimates of investment in agriculture have indirectly been derived by the FAO Statistics Division using physical data on livestock, tractors, irrigated land and land under permanent crops etc., and the average prices for the year 1995. These data enabled the derivation of the capital stock in agriculture which is the gross, and the annual change in the latter is taken to reflect investment in agriculture.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Gross capital stock, land development (constant 2005 prices)

See 'Gross capital stock (constant 2005 prices)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Gross capital stock, livestock fixed assets (constant 2005 prices)

See 'Gross capital stock (constant 2005 prices)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Gross capital stock, livestock inventory (constant 2005 prices)

See 'Gross capital stock (constant 2005 prices)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Gross capital stock, machinery & equipment (constant 2005 prices)

See 'Gross capital stock (constant 2005 prices)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Gross capital stock, plantation crops (constant 2005 prices)

See 'Gross capital stock (constant 2005 prices)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Gross capital stock, structures for livestock (constant 2005 prices)

See 'Gross capital stock (constant 2005 prices)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Groundnut Oil

Default composition: 244 Oil, groundnut

Health expenditure, total (percent of GDP)

Total health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation.

Source: World Bank (WDI)

Owner: World Health Organization National Health Account database (see http://apps.who.int/nha/database for the most recent updates).

Honey, natural

Honey produced by bees (Apis mellifera) or by other insects.

Import of forest products (US$)

Forest materials for commercial use.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Import of roundwood (m^3)

See 'Roundwood'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Imports of fish (US$)

Value of imports of fish in current US$ (data reported includes fish, molluscs, crustaceans, and miscellaneous aquatic animals but excludes production for marine mammals, crocodiles, corals, pearls, sponges and aquatic plants, miscellaneous aquatic animal products and fish waste).

Source: Fisheries and Aquaculture Department (Fishery and Aquaculture statistics)

Owner: FAO

Income share held by highest 20 percent

Percentage share of income or consumption is the share that accrues to subgroups of population indicated by deciles or quintiles. Percentage shares by quintile may not sum to 100 because of rounding.

Source: World Bank (WDI)

Owner: World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).

Income share held by lowest 20 percent

Percentage share of income or consumption is the share that accrues to subgroups of population indicated by deciles or quintiles. Percentage shares by quintile may not sum to 100 because of rounding.

Source: World Bank (WDI)

Owner: World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).

Industrial roundwood

The wood removed (volume of roundwood under bark) for production of goods and services other than energy production (woodfuel). It represents the sum of: sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood. See http://www.fao.org/forestry/62283/en/ for further information.

Industrial roundwood production (m^3)

See 'Industrial roundwood' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Industrial water withdrawal, share of total water withdrawal (percent)

Industrial water withdrawal as percentage of total water withdrawal.

Source: Land and Water Division (AQUASTAT)

Owner: FAO

Industry, value added (percent of GDP)

Industry corresponds to ISIC divisions 10-45 and includes manufacturing (ISIC divisions 15-37). It comprises value added in mining, manufacturing (also reported as a separate subgroup), construction, electricity, water, and gas. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3. Note: For VAB countries, gross value added at factor cost is used as the denominator.

Source: World Bank (WDI)

Owner: World Bank national accounts data, and OECD National Accounts data files.

Internally displaced persons, total

Internally Displaced Persons (IDPs) are people or groups of individuals who have been forced to leave their homes or places of habitual residence, in particular as a result of, or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural- or human-induced disasters, and who have not crossed an international border. For purposes of UNHCR's statistics, this population only includes conflict-generated IDPs to whom the Office extends protection and/or assistance. As such, UNHCR statistics do not provide a comprehensive picture of global internal displacement. Moreover, UNHCR's IDP statistics are not necessarily representative of the entire IDP population in a given country but are exclusively limited to the ones who are protected and/or assisted by the Office. For global IDP estimates, consult the Internal Displacement Monitoring Centre (IDMC) of the Norwegian Refugee Council (NRC) website. The 2007 IDP population category also includes people in IDP-like situations. This sub-category is descriptive in nature and includes groups of persons who are inside their country of nationality or habitual residence and who face protection risks similar to those of IDPs but who, for practical or other reasons, could not be reported as such.

Source: Statistical Online Population Database

Owner: UNHCR

Irrigation potential (ha)

Area of land which is potentially irrigable. Country/regional studies assess this value according to different methods. For example, some consider only land resources, others consider land resources plus water availability, others include economical aspects in their assessments (such as distance and/or difference in elevation between the suitable land and the available water) or environmental aspects, etc. If available, this information is given in the individual country profiles. The figure includes the area already under agricultural water management .

Source: Land and Water Division (AQUASTAT)

Owner: FAO

Jute and jute-like

White jute (Corchorus capsularis); red jute, tossa (C. olitorius). Trade data cover raw or processed jute (but not spun), tow and waste, yarn waste and garnetted stock and may include jute-like fibres.

Jute and jute-like harvested area (ha)

See 'Jute and jute-like' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Jute and jute-like production (tonnes)

See 'Jute and jute-like' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Jute and jute-like yield (hg/ha)

See 'Jute and jute-like' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Labor participation rate, female (share of female population ages 15+)

Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.

Source: World Bank (WDI)

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Labor participation rate, male (share of male population ages 15+)

Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.

Source: World Bank (WDI)

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Land area (sq. km)

Land area is a country's total area, excluding area under inland water bodies, national claims to continental shelf, and exclusive economic zones. In most cases the definition of inland water bodies includes major rivers and lakes.

Source: World Bank (WDI)

Owner: Food and Agriculture Organization, electronic files and web site.

Life expectancy at birth, total (years)

Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.

Source: World Bank (WDI)

Owner: UNPD World Population Prospects 2010

Literacy rate, adult female (percent of females ages 15 and above)

Adult literacy rate is the percentage of people ages 15 and above who can, with understanding, read and write a short, simple statement on their everyday life.

Source: World Bank (WDI)

Owner: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

Livestock

Animals such as cattle and sheep which are kept on the holding or otherwise for agricultural production.

Maize

Zea mays Corn, Indian corn, mealies. A grain with a high germ content. At the national level, hybrid and ordinary maize should be reported separately owing to widely different yields and uses. Used largely for animal feed and commercial starch production.

Male employment, total

Employees are people who work for a public or private employer and receive remuneration in wages, salary, commission, tips, piece rates, or pay in kind.

Source: World Bank

Owner: International Labour Organization, Key Indicators of the Labour Market database.

Mammal species, threatened

Mammal species are mammals excluding whales and porpoises. Threatened species are the number of species classified by the IUCN as endangered, vulnerable, rare, indeterminate, out of danger, or insufficiently known.

Source: World Bank (WDI)

Owner: United Nations Environmental Programme and the World Conservation Monitoring Centre, and International Union for Conservation of Nature, Red List of Threatened Species.

Manufactures Unit Value (MUV) (index)

The MUV is a composite index of prices for manufactured exports from the 15 major developed and emerging economies to low- and middle-income economies, valued in U.S. dollars. For the MUV (15) index, unit value indexes in local currency for each country are converted to U.S. dollars using market exchange rates and are combined using weights determined by the share of each country's exports in G15 exports to low- and middle-income countries. The shares are calculated using SITC revision 3 Manufactures exports data from UN COMTRADE in 2005, the base year. The primary manufacturing prices index source is OECD's Domestic Producer Price Index (PPI) for manufacturing. Whenever PPI is not available, export price indexes or the export unit values are used as proxies. The countries and relative weights (in parentheses) are: Brazil (2.95 percent), Canada (0.93 percent), China (11.79 percent), France (5.87 percent), Germany (13.29 percent), India (1.77 percent), Italy (6.07 percent), Japan (16.70 percent), Mexico (0.93 percent), South Africa (0.75 percent), South Korea (10.95 percent), Spain (2.30 percent), Thailand (2.51 percent), United Kingdom (3.50 percent), and United States (19.68 percent).

Source: World Bank

Owner: World Bank, Development Prospects Group; Historical US GDP deflator: US Department of Commerce.

Manure applied to soils, total emissions in CO_2eq (gigagrams)

Greenhouse gas (GHG) emissions from manure applied to soils consist of nitrous oxide gas from nitrogen additions to managed soils from treated manure.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Manure left on pasture, total emissions in CO_2eq (gigagrams)

Greenhouse Gases (GHG) emissions data from manure left on pasture consist of nitrous oxide gas from nitrogen additions to managed soils from grazing livestock.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Manure management, total emissions in CO_2eq (gigagrams)

Greenhouse gas (GHG) emissions from manure management consist of methane and nitrous oxide gases from aerobic and anaerobic decomposition processes.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Marine protected areas (share of territorial waters)

Marine protected areas are areas of intertidal or subtidal terrain–and overlying water and associated flora and fauna and historical and cultural features–that have been reserved by law or other effective means to protect part or all of the enclosed environment.

Source: World Bank (WDI)

Owner: United Nations Environmental Programme and the World Conservation Monitoring Centre, as compiled by the World Resources Institute, based on data from national authorities, national legislation and international agreements.

Meat, ass

Including frog legs, marine mammals, etc. Some countries includeunder this heading meats that are listed above, but which are notreported separately. Fresh, chilled or frozen.

Meat, beef, preparations

Meat and offal (o/t liver) that are boiled, steamed, grilled, fried,roasted or otherwise cooked. Includes prepared meals that contain morethan 20 percent of meat and offal by weight.

Meat, total

Meat from animals, fresh, chilled or frozen, with bone in. All data shown relate to total meat production from both commercial and farm slaughter. Data are given in terms of dressed carcass weight, i.e. excluding offals and slaughter fats.

Meat, total (tonnes)

See 'Meat, total' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Milk

Whole fresh milk production from Buffalo, Camels, Cows, Goats and Sheep.

Milk excluding butter

Default composition: 882 Milk, whole fresh cow, 888 Milk, skimmed cow, 889 Milk, whole condensed, 890 Whey, condensed, 891 Yoghurt, 892 Yoghurt, concentrated or not, 893 Buttermilk, curdled, acidified milk, 894 Milk, whole evaporated, 895 Milk, skimmed evaporated, 896 Milk, skimmed condensed, 897 Milk, whole dried, 898 Milk, skimmed dried, 899 Milk, dry buttermilk, 900 Whey, dry, 901 Cheese, whole cow milk, 904 Cheese, skimmed cow milk, 905 Whey, cheese, 907 Cheese, processed, 908 Milk, reconstituted, 917 Casein, 951 Milk, whole fresh buffalo, 954 Milk, skimmed buffalo, 955 Cheese, buffalo milk, 982 Milk, whole fresh sheep, 984 Cheese, sheep milk, 985 Milk, skimmed sheep, 1020 Milk, whole fresh goat, 1021 Cheese of goat milk, 1023 Milk, skimmed goat, 1130 Milk, whole fresh camel; nutrient data only: 903 Whey, fresh, 909 Milk, products of natural constituents nes, 910 Ice cream and edible ice

Milk production (tonnes)

Production data of milk indicates the quantity of milk produced during the year from the animals of the species to which the Supply Utilization Accounts refer. Milk production data are reported according to the concept of net milk production: total production of whole fresh milk, excluding the milk sucked by young animals but including amounts fed to livestock.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Mobile cellular subscriptions (per 100 people)

Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network. Post-paid and prepaid subscriptions are included.

Source: World Bank (WDI)

Owner: International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.

Mobile cellular subscriptions (subscriptions)

Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network. Post-paid and prepaid subscriptions are included.

Source: World Bank (WDI)

Owner: International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.

Mortality rate, infant (per 1 000 live births)

Infant mortality rate is the number of infants dying before reaching one year of age, per 1 000 live births in a given year.

Source: World Bank (WDI)

Owner: UNICEF, WHO, World Bank and UNPD

Mortality rate, under-5 (per 1,000 live births)

Under-five mortality rate is the probability per 1,000 that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates.

Source: World Bank (WDI)

Owner: Level & Trends in Child Mortality. Report 2011. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA, UNPD).

Municipal water withdrawal, share of total water withdrawal (percent)

Municipal water withdrawal as percentage of total water withdrawal.

Source: Land and Water Division (AQUASTAT)

Owner: FAO

Natural phosphates

Products obtained by grinding soft mineral phosphates and containing tricalcium phosphate and calcium carbonate as essential ingredients. The minimum content of nutrients is 25 percent P_2O_5 (Phosphorus expressed as P_2O_5 soluble in mineral acids, at least 55 percent of the declared content of P_2O_5 being soluble in 2 percent formic acid).

Natural Sodium Nitrate

Chemically obtained product containing sodium nitrate as its essential ingredient. The minimum content of nutrients is 15 percent N (Nitrogen expressed as nitric nitrogen).

Net forest conversion, net emissions/removal in CO_2eq (gigagrams)

GHG emissions data from forest land are currently limited to emissions from net forest conversion to non-forest land. They consist of the balance of CO_2 sources and sinks associated with deforestation and afforestation activities within a country.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Net official development assistance and official aid received (current US$)

Net official development assistance (ODA) consists of disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by non-DAC countries to promote economic development and welfare in countries and territories in the DAC list of ODA recipients. It includes loans with a grant element of at least 25 percent (calculated at a rate of discount of 10 percent). Net official aid refers to aid flows (net of repayments) from official donors to countries and territories in part II of the DAC list of recipients: more advanced countries of Central and Eastern Europe, the countries of the former Soviet Union, and certain advanced developing countries and territories. Official aid is provided under terms and conditions similar to those for ODA. Part II of the DAC List was abolished in 2005. The collection of data on official aid and other resource flows to Part II countries ended with 2004 data. Data are in current U.S. dollars.

Source: World Bank (WDI)

Owner: Development Assistance Committee of the Organisation for Economic Co-operation and Development, Geographical Distribution of Financial Flows to Developing Countries, Development Co-operation Report, and International Development Statistics database.

Nitrogen and phosphate fertilizers consumption (tonnes of K20 total nutrients)

Nitrogen and phosphate fertilizers consumption.

Source: FAO, Statistics Division

Owner: FAO

Nitrogen fertilizers consumption (tonnes of N total nutrients)

Nitrogen fertilizers consumption.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Number of people undernourished, total

Estimated number of people at risk of undernourishment. It is calculated by applying the estimated prevalence of undernourishment to the total population in each period.

Source: FAO, Statistics Division

Owner: FAO

ODA received for the agriculture sector (US$)

See 'Official Development Assistance'

Source: FAO, Statistics Division

Owner: The EAA dataset is compiled from the OECD (as given included in the OECD internet home-page), DAC Reports, Annual Reports of the World Bank and data received from other organizations on regional development. The data are processed by following a series of steps such as analyses, including systematic checking and verifications at various stages for enhancing the quality of the data prior to dissemination on FAOSTAT.

ODA received for the fishing sector (US$)

See 'Official Development Assistance'

Source: FAO, Statistics Division

Owner: The EAA dataset is compiled from OECD (as given included in the OECD internet home-page), DAC Reports, Annual Reports of the World Bank and data received from other organizations on regional development. The data are processed by following a series of steps such as analyses, including systematic checking and verifications at various stages for enhancing the quality of the data prior to dissemination on FAOSTAT.

ODA received for the forestry sector (US$)

See 'Official Development Assistance'

Source: FAO, Statistics Division

Owner: The EAA dataset is compiled from OECD (as given included in the OECD internet home-page), DAC Reports, Annual Reports of the World Bank and data received from other organizations on regional development. The data are processed by following a series of steps such as analyses, including systematic checking and verifications at various stages for enhancing the quality of the data prior to dissemination on FAOSTAT.

Official Development Assistance

The concessional (Official Development Assistance, ODA) and non-Concessional commitments made by bilateral and multilateral donors to developing countries is referred to as 'External Assistance to Agriculture'. The term 'Agriculture' is generally used in the broad sense to cover agriculture, forestry, fisheries, land and water, agro-industries, environment, manufacturing of agricultural inputs and machinery, regional and river development, and rural development. The narrow concept of agriculture has also been defined to look at the contribution made to develop agriculture in a strict sense. This includes assistance provided for the development of agriculture (crop and animal husbandry), forestry, fisheries (including training, extension and research) and development of land and water resources.

Oil-bearing crops

Oil-bearing crops or oil crops include both annual (usually called oilseeds) and perennial plants whose seeds, fruits or mesocarp and nuts are valued mainly for the edible or industrial oils that are extracted from them. They include: Castor oil seed, Coconuts, Cottonseed, Groundnuts, with shell, Hempseed, Jojoba Seeds, Karite Nuts (Sheanuts), Linseed, Melonseed, Mustard seed, Oil palm fruit, Oilseeds, Nes, Olives, Palm kernels, Palm oil, Poppy seed, Rapeseed, Safflower seed, Seed cotton, Sesame seed, Soybeans, Sunflower seed and Tung Nuts.

Oil-bearing crops harvested area, share of world total

See 'Oil-bearing crops' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Oil-bearing crops production (tonnes)

See 'Oil-bearing crops' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Oil-bearing crops yield (hg/ha)

See 'Oil-bearing crops' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Oil, maize

Extracted from germ by pressure or by solvents.

Oil, palm

Obtained from the mesocarp of the fruit of the oil palm by pressure, and also by solvent from the residues of the pressure extraction.

Oilcrops oil, Other

Default composition: 263 Karite nuts (sheanuts), 265 Castor oil seed, 275 Tung nuts, 277 Jojoba seed, 280 Safflower seed, 296 Poppy seed, 299 Melonseed, 305 Tallowtree seed, 310 Kapok fruit, 311 Kapokseed in shell, 312 Kapokseed shelled, 333 Linseed, 336 Hempseed, 339 Oilseeds nes, 343 Flour, oilseeds

Oilseeds exports (tonnes)

Exports (volume) of oilseeds.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Oilseeds imports (tonnes)

Imports (volume) of oilseeds.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Oilseeds nes

Includes inter alia: beech nut (Fagus sylvatica);(Aleurites moluccana);(Carapa guineensis);(Croton tiglium);(Bassia latifolia);(Guizotia abyssinica);(Licania rigida);(Perilla frutescens);(Jatropha curcas);(Shorea robusta);(Pongamia glabra);(Astrocaryum spp.). Other oilseeds, oleaginous fruits and nuts that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report commodities under this heading that are classified individually by FAO. Also included under this code are tea seeds, grape pips and tomato seeds from which oil is extracted.

Olive oil

Default composition: 261 Oil, olive, virgin, 274 Oil, olive residues

Organic water pollutant (BOD) emissions (kg per day per worker)

Emissions per worker are total emissions of organic water pollutants divided by the number of industrial workers. Organic water pollutants are measured by biochemical oxygen demand, which refers to the amount of oxygen that bacteria in water will consume in breaking down waste. This is a standard water-treatment test for the presence of organic pollutants.

Source: World Bank (WDI)

Owner: World Bank and UNIDO's industry database.

Organic water pollutant (BOD) emissions (kg per day)

Emissions of organic water pollutants are measured by biochemical oxygen demand, which refers to the amount of oxygen that bacteria in water will consume in breaking down waste. This is a standard water-treatment test for the presence of organic pollutants.

Source: World Bank (WDI)

Owner: 1998 study by Hemamala Hettige, Muthukumara Mani, and David Wheeler, "Industrial Pollution in Economic Development: Kuznets Revisited" (available at www.worldbank.org/nipr). The data were updated by the World Bank's Development Research Group using the same methodology as the initial study.

Other land (ha)

Other land is the land not classified as Agricultural land and Forest area. It includes built-up and related land, barren land, other wooded land, etc.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Other naturally regenerated forest (ha)

Naturally regenerated forest is forest predominantly composed of trees established through natural regeneration. Other naturally regenerated forest is forest where there are clearly visible indications of human activities.

Source: Global Forest Resources Assessment

Owner: FAO

Others and stateless, total

Population of concern to UNHCR, others and stateless.

Source: Statistical Online Population Database

Owner: UNHCR

Palmkernel Oil

Default composition: 258 Oil, palm kernel

Paper and paperboard

The sum of Paper and Paperboard, Newsprint, Paper and Paperboard other than Newsprint, Printing and Writing Paper, Other Paper and Paperboard, Household and Sanitary Paper, Wrapping and Packaging Paper and Paperboard and Other Paper and Paperboard Not Elsewhere Specified. See http://www.fao.org/forestry/62283/en/ for further information.

Paper and paperboard production (tonnes)

See 'Paper and paperboard' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Part of equipped area actually irrigated (percent)

Percent of area equipped for irrigation that is actually irrigated in any given year, expressed in percentage. Irrigated land that is cultivated more than once a year is counted only once.

Source: Land and Water Division (AQUASTAT)

Owner: FAO

Pastry

All baked products excluding those listed under bread. Pastry products may contain ingredients other than wheat flour, such as milk, eggs, sugar, honey, starch, fats, fruit, seeds, etc.

Per capita food production variability (index)

Per capita food production variability corresponds to the variability of the net food production value in constant 2004-2006 1 000 International $ (Net Food PIN) divided by the population number as from UN 2010 estimates. Variability is based on the trend of the Net Food PIN per capita over the period 1985 to 2010 and corresponds to the standard deviation of the deviation from the trend over a period of 5 years. Missing values for Eritrea/Ethiopia, former Yugoslavia and Caucasus countries for 1985 to 1992 are estimated backward using the share of the value of food production of each country in the total value of the region it belonged to prior to 1992.

Source: FAO, Statistics Division

Owner: FAO

Per capita food supply variability (index)

Food supply variability corresponds to the variable food supply total in kcal/person/day as estimated by the FAO Statistic Division. The variability is obtained as the standard deviation over 5 years of the deviation from the trend of per capita food supply observed during the period 1990 to 2010.

Source: FAO, Statistics Division

Owner: FAO

Per capita supply

Estimates of per capita food supplies available for human consumption during the reference period in terms of quantity, caloric value, protein and fat content. Calorie supplies are reported in kilocalories (1 calorie = 4.19 kilojoules). Per capita supplies in terms of product weight are derived from the total supplies available for human consumption (i.e. Food) by dividing the quantities of Food by the total population actually partaking of the food supplies during the reference period, i.e. the present in-area (de facto) population within the present geographical boundaries of the country. In other words, nationals living abroad during the reference period are excluded, but foreigners living in the country are included. Adjustments are made wherever possible for part-time presence or absence, such as temporary migrants, tourists and refugees supported by special schemes (if it has not been possible to allow for the amounts provided by such schemes under imports). In almost all cases, the population figures used are the mid-year estimates published by the United Nations Population Division. Per capita supply figures shown in the commodity balances therefore represent only the average supply available for the population as a whole and do not necessarily indicate what is actually consumed by individuals. Even if they are taken as approximation to per capita consumption, it is important to note that the amount of food actually consumed may be lower than the quantity shown here, depending on the degree of losses of edible food and nutrients in the household, e.g. during storage, in preparation and cooking etc. In many cases commodities are not consumed in the primary form in which they are presented in the commodity balance, e.g. cereals enter the household mainly in processed form like flour, meal, husked or milled rice. To take this fact into account, the caloric value, the protein and fat content shown against primary commodities in the commodity balances have been derived by applying the appropriate food composition factors to the quantities of the processed commodities and not by multiplying the quantities shown in the commodity balance with the food composition factors relating to primary commodities.

Percent of adults who are underweight (percent)

Percentage of adults who are underweight, as defined by a Body Mass Index (BMI) below the international reference standard of 18.5. To calculate an individual's BMI, weight and height data are need. The BMI is weight (kg) divided by squared height (m).

Source: FAO, Statistics Division

Owner: World Health Organization (WHO)

Percent of arable land equipped for irrigation (percent)

Percent of arable land equipped for irrigation. The indicator is calculated on 3 year averages.

Source: FAO, Statistics Division

Owner: FAO

Percent of paved roads over total roads (percent)

Paved roads are those surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete, or with cobblestones, as a percentage of all the country's roads, measured in length. Regional aggregates are computed as weighted average using total road network as weight. Because of the low coverage, missing values were interpolated using linear trend between two points or extrapolated backward and forward using the closest point. Note that regional aggregates were calculated only if countries for which data were available represented more than 70 percent of the total length of road network of the region they belong to.

Source: FAO, Statistics Division

Owner: International Road Federation, World Road Statistics and electronic files, except where noted.

Percentage of children under 5 years of age who are stunted (percent)

Percentage of stunting (height-for-age less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-5 years.

Source: FAO, Statistics Division

Owner: World Health Organization (WHO)

Percentage of children under 5 years of age who are underweight (percent)

Percentage of underweight (weight-for-age less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-5 years.

Source: FAO, Statistics Division

Owner: World Health Organization (WHO)

Percentage of children under 5 years of age who are wasted (percent)

Percentage of (weight-for-height less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-5 years.

Source: FAO, Statistics Division

Owner: World Health Organization (WHO)

Percentage of population with no reasonable access to improved sanitation facilities (percent)

Access to improved sanitation facilities refers to the percentage of the population with at least adequate access to excreta disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained.

Source: FAO, Statistics Division

Owner: World Health Organization (WHO)

Percentage of population with no reasonable access to improved water sources (percent)

Access to an improved water source refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling.

Source: FAO, Statistics Division

Owner: World Health Organization (WHO)

Permanent crops (ha)

Permanent crops is the land cultivated with long-term crops which do not have to be replanted for several years (such as cocoa and coffee); land under trees and shrubs producing flowers, such as roses and jasmine; and nurseries (except those for forest trees, which should be classified under "forest"). Permanent meadows and pastures are excluded from land under permanent crops.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Permanent meadows and pastures (ha)

Permanent meadows and pastures is the land used permanently (five years or more) to grow herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land). Data are expressed in 1000 hectares.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Pesticide consumption

Data refer to quantities of pesticides applied to crops and seeds in the agriculture sector. Figures are generally expressed in terms of active ingredients. Data are expressed in tonnes (t). However, due to some country reporting practices, the data may be reported by: consumption in formulated product (including diluents and adjuvants); sales; distribution or imports for use in the agricultural sector. In these cases it is specified in the country notes.

Pesticides

Pesticides refer to insecticides, fungicides, herbicides, disinfectants and any substance or mixture of substances intended for preventing, destroying or controlling any pest, including vectors of human or animal disease, unwanted species of plants or animals causing harm during or otherwise interfering with the production, processing, storage, transport or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs, or substances which may be administered to animals for the control of insects, arachnids or other pests in or on their bodies. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport.

Phosphate fertilizers consumption (tonnes of P205 total nutrients)

Phosphate fertilizers consumption.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Pig meat

Meat, with the bone in, of domestic or wild pigs (e.g. wild boars),whether fresh, chilled or frozen.

Pig meat per capita (tonne/cap)

See 'Pig meat' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Pigs

Domestic pig (Sus domestica); wild boar (Sus scrofa). See 866. Excludes non-domesticated wild boars.

Plant species (higher), threatened

Higher plants are native vascular plant species. Threatened species are the number of species classified by the IUCN as endangered, vulnerable, rare, indeterminate, out of danger, or insufficiently known.

Source: World Bank (WDI)

Owner: United Nations Environmental Programme and the World Conservation Monitoring Centre, and International Union for Conservation of Nature, Red List of Threatened Species.

Planted forest (ha)

Planted forest is forest predominantly composed of trees established through planting and/or deliberate seeding.

Source: Global Forest Resources Assessment

Owner: FAO

Political stability and absence of violence/terrorism (index)

Political stability and absence of violence measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.

Source: FAO, Statistics Division

Owner: WorldWide Governance Indicators

Population ages 0-14, total

Population with age between 0 and 14 years.

Source: United Nations Population Division

Owner: United Nations Population Division, World Population Prospects.

Population ages 15-64, total

Population with age between 15 and 64 years.

Source: United Nations Population Division

Owner: United Nations Population Division, World Population Prospects.

Population ages 65 and above, total

Population with age above 65.

Source: United Nations Population Division

Owner: United Nations Population Division, World Population Prospects.

Population density (people per sq. km of land area)

Population density is midyear population divided by land area in square kilometers. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship–except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. Land area is a country's total area, excluding area under inland water bodies, national claims to continental shelf, and exclusive economic zones. In most cases the definition of inland water bodies includes major rivers and lakes.

Source: World Bank (WDI)

Owner: Food and Agriculture Organization and World Bank population estimates.

Population living in areas where elevation is below 5 meters (share of total population)

Population below 5 m is the percentage of the total population living in areas where the elevation is 5 meters or less.

Source: World Bank (WDI)

Owner: Center for International Earth Science Information Network (CIESIN), Place II dataset.

Population, total

Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship–except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The values shown are midyear estimates.

Source: United Nations Population Division

Owner: United Nations Population Division, World Population Prospects.

Potash fertilizers consumption (tonnes of K20 total nutrients)

Potash fertilizers consumption.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Potassium sulphate

Is a white crystalline salt and contains 48 to 52 per cent potash (K20). Potassium sulphate can be extracted from naturally occurring brines or by the decomposition of potassium chloride with sulphuric acid.

Poultry birds (heads)

Domesticated birds for commercial use.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Poultry meat

Poultry birds, fresh, chilled or frozen, with bone in. All data shown relate to total meat production from both commercial and farm slaughter. Data are given in terms of dressed carcass weight, i.e. excluding offals and slaughter fats. Poultry meat includes Bird meat, nes, Chicken meat, Duck meat, Goose and guinea fowl meat and Turkey meat.

Poultry meat (tonnes)

See 'Poultry meat' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Poverty gap at US$1.25 a day PPP (percent)

Poverty gap is the mean shortfall from the poverty line (counting the nonpoor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

Source: World Bank (WDI)

Owner: World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).

Poverty gap at US$2 a day PPP (percente)

Poverty gap is the mean shortfall from the poverty line (counting the nonpoor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

Source: World Bank (WDI)

Owner: World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).

Poverty gap at national poverty line (percent)

Poverty gap at national poverty line is the mean shortfall from the poverty line (counting the nonpoor as having zero shortfall) as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

Source: World Bank (WDI)

Owner: Global Poverty Working Group. Data are based on World Bank's country poverty assessments and country Poverty Reduction Strategies.

Poverty gap at rural poverty line (percent)

Poverty gap at rural poverty line is the mean shortfall from the poverty line (counting the nonpoor as having zero shortfall) as a percentage of the national rural poverty line. This measure reflects the depth of poverty as well as its incidence.

Source: World Bank (WDI)

Owner: Global Poverty Working Group. Data are based on World Bank's country poverty assessments and country Poverty Reduction Strategies.

Poverty headcount ratio at US$1.25 a day PPP (percent of population)

Population below US$1.25 a day is the percentage of the population living on less than US$1.25 a day at 2005 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.

Source: World Bank (WDI)

Owner: World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).

Poverty headcount ratio at US$2 a day PPP (percent of population)

Population below US$2 a day is the percentage of the population living on less than US$2.00 a day at 2005 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.

Source: World Bank (WDI)

Owner: World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm).

Poverty headcount ratio at national poverty line (percent of population)

Poverty headcount ratio at national poverty line (percent of population).

Source: World Bank (WDI)

Owner: Global Poverty Working Group. Data are based on World Bank's country poverty assessments and country Poverty Reduction Strategies.

Prevalence of food inadequacy (percent)

It is conceptually analogous to the prevalence of undernourishment , but calculated setting the caloric threshold to a higher level, by using a Physical Activity Level (PAL) coefficient of 1.75, as opposed to 1.55. It measures the percentage of the population that is at risk of not covering the food requirements associated with normal physical activity, and therefore including also those who, even though cannot be considered chronically undernourished, are likely being conditioned in their economic activity by insufficient food. While the PoU is an estimator of chronic food deprivation ("hunger"), this new estimator is a less conservative measure of food inadequacy in the population. The indicator is calculated on 3 year averages.

Source: FAO, Statistics Division

Owner: FAO

Prevalence of undernourishment (percent)

Proportion of the population estimated to be at risk of caloric inadequacy. This is the traditional FAO hunger indicator, adopted as official Millennium Development Goal indicator for goal 1, target 1.9. The indicator is calculated on 3 year averages.

Source: FAO, Statistics Division

Owner: FAO

Primary completion rate, total (percent of relevant age group)

Primary completion rate is the percentage of students completing the last year of primary school. It is calculated by taking the total number of students in the last grade of primary school, minus the number of repeaters in that grade, divided by the total number of children of official graduation age.

Source: World Bank (WDI)

Owner: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

Primary forest (ha)

Primary forest is naturally regenerated forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.

Source: Global Forest Resources Assessment

Owner: FAO

Production

Figures relate to the total domestic production whether inside or outside the agricultural sector, i.e. it includes non-commercial production and production from kitchen gardens. Unless otherwise indicated, production is reported at the farm level for crop and livestock products (i.e. in the case of crops, excluding harvesting losses) and in terms of live weight for fish items (i.e. the actual ex-water weight at the time of the catch). All data shown relate to total meat production from both commercial and farm slaughter. Data are expressed in terms of dressed carcass weight, excluding offal and slaughter fats. Production of beef and buffalo meat includes veal; mutton and goat meat includes meat from lambs and kids; pig meat includes bacon and ham in fresh equivalent. Poultry meat includes meat from all domestic birds and refers, wherever possible, to ready-to-cook weight.

Production - Livestock primary

Livestock primary products include products from live and slaughtered animals. Products from slaughtered animals include meat, offals, raw fats, fresh hides and skins. Products from live animals include milk, eggs, honey, beeswax and fibres of animal origin. All

data shown relate to total meat production from both commercial and farm slaughter. Data are given in terms of dressed carcass weight, i.e. excluding offals and slaughter fats. Production of beef and buffalo meat includes veal; mutton and goat meat includes meat from lambs and kids, respectively; pig meat includes bacon and ham in fresh equivalent. Poultry meat includes meat from all domestic birds and refers, wherever possible, to ready-to-cook weight. Cow milk production relates to total production of whole fresh milk, excluding the milk sucked by young animals but including amounts fed to livestock. The concept of production of buffalo, sheep and goat milk is the same as for cow milk; however, the coverage is probably less adequate. Egg production covers all domestic birds which have contributed to egg production during the year, wherever they lay and the corresponding total production, including eggs intended to be used for hatching but excluding waste on farms.

Protein supply quantity in crops primary equivalent (g/cap/day)

Protein supply quantity in crops primary equivalent.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Pulses

Pulses are annual leguminous crops yielding from one to 12 grains or seeds of variable size, shape and colour within a pod. They are used for both food and feed. The term "pulses" is limited to crops harvested solely for dry grain, thereby excluding crops harvested green for food (green peas, green beans, etc.) which are classified as vegetable crops. Also excluded are those crops used mainly for oil extraction (e.g. soybean and groundnuts) and leguminous crops (e.g. seeds of clover and alfalfa) that are used exclusively for sowing purposes. They include Bambara beans, Beans, dry, Broad beans, horse beans, dry, Chick peas, Cow peas, dry, Lentils, Lupins, Peas, dry, Pigeon peas, Pulses, nes, and Vetches.

Pulses harvested area (ha)

See 'Pulses' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Pulses production (tonnes)

See 'Pulses' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Pulses yield (hg/ha)

See 'Pulses' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Rail-lines density (percent)

Rail lines density corresponds to the ratio between the length of railway route available for train service, irrespective of the number of parallel tracks (rail lines, total route in km) with the area of the country. Regional aggregates are computed as weighted average using surface area as weight. Because of the low coverage, missing values were interpolated using linear trend between two points or extrapolated backward and forward using closest point. Note that regional aggregates were calculated only if countries for which data were available represented more than 70 percent of the total area of the region to which they belong.

Source: FAO, Statistics Division

Owner: International Road Federation, World Road Statistics and electronic files, except where noted.

Rape and Mustard Oil

Default composition: Oil, rapeseed, mustard

Recovered paper

Waste and scraps of paper or paperboard that have been collected for re-use as a raw material for the manufacture of paper and paperboard. It includes: paper and paperboard that has been used for its original purpose and residues from paper and paperboard production. See http://www.fao.org/forestry/62283/en/ for further information.

Recovered paper production (tonnes)

See 'Recovered paper' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Rice (paddy)

Oryza spp., mainly Oryza sativa. Rice grain after threshing and winnowing. Also known as rice in the husk and rough rice. Used mainly for human food.

Rice (paddy) production (tonnes)

See 'Rice (paddy)' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Rice cultivation, total emissions in CO_2eq (gigagrams)

Greenhouse gas (GHG) emissions from rice cultivation consist of methane gas from the anaerobic decomposition of organic matter in paddy fields.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Rice harvested area (ha)

See 'Rice (paddy)' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Rice yield (hg/ha)

See 'Rice (paddy)' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Road density (percent)

Road density is the ratio of the length of the country's total road network to the country's land area. The road network includes all roads in the country: motorways, highways, main or national roads, secondary or regional roads, and other urban and rural roads. Regional aggregates are computed as weighted average using surface area as weight. Because of the low coverage, missing values were interpolated using linear trend between two points or extrapolated backward and forward using the closest point. Note that regional aggregates were calculated only if countries for which data were available represented more than 70 percent of the total area of the region they belong to.

Source: FAO, Statistics Division

Owner: International Road Federation, World Road Statistics and electronic files, except where noted.

Root and tuber crops

Roots and tubers are plants yielding starchy roots, tubers, rhizomes, corms and stems. They include Potatoes, Sweet Potatoes, Cassava, Yautia (Cocoyam), Taro (Cocoyam), Yams, Roots And Tubers Nes.

Root and tuber crops production (tonnes)

See 'Root and tuber crops' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Roots and tubers harvested area (ha)

See 'Root and tuber crops' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Roots and tubers yield (hg/ha)

See 'Root and tuber crops' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Roots and tubers, nes

Including inter alia: arracacha (Arracacoa xanthorrhiza); arrowroot (Maranta arundinacea); chufa (Cyperus esculentus); sago palm (Metroxylon spp.); oca and ullucu (Oxalis tuberosa and Ullucus tuberosus); yam bean, jicama (Pachyrxhizus erosus, P. angulatus); mashua (Tropaeolum tuberosum); Jerusalem artichoke, topinambur (Helianthus tuberosus). Other tubers, roots or rhizomes, fresh, that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report roots and tubers under this commodity heading that are classified individually by FAO.

Roundwood

All roundwood felled or otherwise harvested and removed. It comprises all wood obtained from removals, i.e. the quantities removed from forests and from trees outside the forest, including wood recovered from natural, felling and logging losses during the period, calendar year or forest year. It includes: all wood removed with or without bark, including wood removed in its round form, or split, roughly squared or in other form (e.g. branches, roots, stumps and burls (where these are harvested) and wood that is roughly shaped or pointed. In the production statistics, it represents the sum of: wood fuel, including wood for charcoal; sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood. See http://www.fao.org/forestry/62283/en/ for further information.

Roundwood production (m^3)

See 'Roundwood' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Rural population, total

Rural population refers to people living in rural areas as defined by national statistical offices.

Source: United Nations Population Division

Owner: United Nations Population Division, World Urbanization Prospects.

Safflower seed

Carthamus tinctorius. Valued mainly for its oil. Minor uses include as a human food and as poultry feed.

Safflower seed

Glycine soja. The most important oil crop. Also widely consumed as a bean and in the form of various derived products because of its high protein content, e.g. soya milk, meat, etc.

Sawnwood

Wood that has been produced from both domestic and imported roundwood, either by sawing lengthways or by a profile-chipping process and that, with a few exceptions, exceeds 5 mm in thickness. It includes: planks, beams, joists, boards, rafters, scantlings, laths, boxboards, sleepers and "lumber", etc., in the following forms: unplaned, planed, grooved, tongued, fingerjointed, chamfered, rabbeted, V-jointed, beaded, etc. It excludes: wooden flooring. See http://www.fao.org/forestry/62283/en/ for further information.

Sawnwood production (m^3)

See 'Sawnwood' and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

School enrollment, primary, female (percent net)

Net enrollment ratio is the ratio of children of official school age based on the International Standard Classification of Education 1997 who are enrolled in school to the population of the corresponding official school age. Primary education provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music.

Source: World Bank (WDI)

Owner: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

School enrollment, primary, male (percent net)

Net enrollment ratio is the ratio of children of official school age based on the International Standard Classification of Education 1997 who are enrolled in school to the population of the corresponding official school age. Primary education provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music.

Source: World Bank (WDI)

Owner: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

Services, etc., value added (percent of GDP)

Services correspond to ISIC divisions 50-99 and they include value added in wholesale and retail trade (including hotels and restaurants), transport, and government, financial, professional, and personal services such as education, health care, and real estate services. Also included are imputed bank service charges, import duties, and any statistical discrepancies noted by national compilers as well as discrepancies arising from rescaling. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The industrial origin of value added is determined by the International Standard Industrial Classification (ISIC), revision 3. Note: For VAB countries, gross value added at factor cost is used as the denominator.

Source: World Bank (WDI)

Owner: World Bank national accounts data, and OECD National Accounts data files.

Sesameseed oil

Default composition: Oil, sesame

Share of energy supply derived from cereals, roots and tubers (percent)

Energy supply (in kcal/caput/day) provided by cereals, roots and tubers divided by total Dietary Energy Supply (DES) (in kcal/caput/day) calculated from the correponding categories in the FAOSTAT Food Balance Sheets. As other indicators based on Food Balance Sheets data, it is calculated on 3 year averages, to reduce the errors due to the difficulties in recording annual stock changes.

Source: FAO, Statistics Division

Owner: FAO

Share of feedstocks used in bioenergy production (percent)

Estimated shares of commodity globally used in non-food sectors, including industrial renewable materials and bioenergy.

Source: FAO, Statistics Division

Owner: FAO

Share of food expenditure of the poor (percent)

Proportion of food consumption over total consumption (food and non-food) for the lowest income quintile of the population.

Source: FAO, Statistics Division

Owner: FAO

Share of freshwater resources withdrawn by agriculture (percent)

Water withdrawn for irrigation in a given year, expressed in percent of the total actual renewable water resources (TRWR_actual). This parameter is an indication of the pressure on the renewable water resources caused by irrigation.

Source: Land and Water Division (AQUASTAT)

Owner: FAO

Sheep

Ovis spp.. See 'Cattle'. Includes Uriel, Argali, Bighorn, Karakul and Astrakhan.

Sheep and goat meat (tonnes)

See 'Sheep', 'Goats', 'Meat, total', and 'Production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Sheep and goats (heads)

See 'Sheep' and 'Goats'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Skim milk and buttermilk production, dry (tonnes)

See 'Milk excluding butter' and 'Milk production (tonnes)'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Soyabean oil

Default composition: Oil, soybean

Sugar

Beta vulgaris var. altissima. In some producing countries, marginal quantities are consumed, either directly as food or in the preparation of jams.

Sugar (Raw Equivalent)

Default composition: 158 Sugar, cane, raw, centrifugal, 159 Sugar, beet, raw, centrifugal, 162 Sugar Raw Centrifugal, 164 Sugar refined, 168 Sugar confectionery, 171 Sugar flavoured

Sugar and honey exports (tonnes)

Exports (volume) of sugar and honey.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Sugar and honey imports (tonnes)

Imports (volume) of sugar and honey.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Sugar beet

Beta vulgaris var. altissima. In some producing countries, marginal quantities are consumed, either directly as food or in the preparation of jams.

Sugar cane

Saccharum officinarum. In some producing countries, marginal quantities of sugar cane are consumed, either directly as food or in the form of juice.

Sugar harvested area (ha)

See 'Sugar' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Sugar production (tonnes)

See 'Sugar' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Sugar yield (hg/ha)

See 'Sugar' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Sunflower seed

Helianthus annuus. Valued mainly for its oil. Minor uses include as a human food and as feed for birds.

Sunflowerseed oil

Default composition: Oil, sunflower

Synthetic fertilizers, total emissions in CO_2eq (gigagrams)

Greenhouse gas (GHG) emissions from synthetic fertilizers consist of nitrous oxide gas from synthetic nitrogen additions to managed soils.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Telephone lines (per 100 people)

Telephone lines are fixed telephone lines that connect a subscriber's terminal equipment to the public switched telephone network and that have a port on a telephone exchange. Integrated services digital network channels and fixed wireless subscribers are included.

Source: World Bank (WDI)

Owner: International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.

Terrestrial protected areas (share of total land area)

Terrestrial protected areas are totally or partially protected areas of at least 1 000 hectares that are designated by national authorities as scientific reserves with limited public access, national parks, natural monuments, nature reserves or wildlife sanctuaries, protected landscapes, and areas managed mainly for sustainable use. Marine areas, unclassified areas, littoral (intertidal) areas, and sites protected under local or provincial law are excluded.

Source: World Bank (WDI)

Owner: United Nations Environmental Programme and the World Conservation Monitoring Centre, as compiled by the World Resources Institute, based on data from national authorities, national legislation and international agreements.

Total area equipped for irrigation (ha)

Area equipped to provide water (via irrigation) to crops. It includes areas equipped for full/partial control irrigation, equipped lowland areas, and areas equipped for spate irrigation.

Source: Land and Water Division (AQUASTAT)

Owner: FAO

Total female population of concern to UNHCR, total

See 'Total population of concern to UNHCR, total'.

Source: Statistical Online Population Database

Owner: UNHCR

Total forest (ha)

Sum of 'Other naturally regenerated forest (ha)', 'Primary forest (ha)', and 'Planted forest (ha)'.

Source: Global Forest Resources Assessment

Owner: FAO

Total land area (ha)
Land area is the total area of the country excluding area under inland water bodies. Possible variations in the data may be due to updating and revisions of the country data and not necessarily to any change of area. Data are expressed in 1 000 hectares.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Total male population of concern to UNHCR, total
See 'Total population of concern to UNHCR, total'.
Source: Statistical Online Population Database
Owner: UNHCR

Total meat exports (tonnes)
Exports (volume) of total meat.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Total meat imports (tonnes)
Imports (volume) of total meat.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Total ODA received (US$)
See 'Official Development Assistance'
Source: FAO, Statistics Division
Owner: The EAA dataset is compiled from the OECD (as given included in the OECD internet home-page), DAC Reports, Annual Reports of the World Bank and data received from other organizations on regional development. The data are processed by following a series of steps such as analyses, including systematic checking and verifications at various stages for enhancing the quality of the data prior to dissemination on FAOSTAT.

Total pesticides use (tonnes)
Pesticides refer to insecticides, fungicides, herbicides, disinfectants and any substance or mixture of substances intended for preventing, destroying or controlling any pest, including vectors of human or animal disease, unwanted species of plants or animals causing harm during or otherwise interfering with the production, processing, storage, transport or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs, or substances which may be administered to animals for the control of insects, arachnids or other pests in or on their bodies. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport. Pesticides use data refers to quantities of pesticides applied to crops and seeds in the agriculture sector. Figures are expressed in metric tons of active ingredients. However, due to some country reporting practices, the data may be reported by: use in formulated product; sales; distribution or imports for use in the agricultural sector. In these cases it is specified in the country notes.
Source: FAO, Statistics Division
Owner: FAO

Total population of concern to UNHCR, total
Population of concern to UNHCR includes: refugees, asylum-seekers, returned refugees, internally displaced persons (IDPs) protected/assisted by UNHCR, returned IDPs, stateless persons, and others of concern to UNHCR.
Source: Statistical Online Population Database
Owner: UNHCR

Total public agricultural expenditures in R & D (2005 PPP US$)
Total public agricultural expenditures in R & D.
Source: ASTI
Owner: ASTI 2012, Eurostat 2012, OECD, 2012, and various country-level secondary sources (see for more information on data sources and estimations on http://www.asti.cgiar.org/pdf/CountrySourcesEstimations.pdf). Agricultural GDP from World Bank (2012).

Total public agricultural research expenditures (share of agricultural GDP)
Total public agricultural research expenditures as share of agricultural GDP.
Source: ASTI
Owner: ASTI 2012, Eurostat 2012, OECD, 2012, and various country-level secondary sources (see for more information on data sources and estimations on http://www.asti.cgiar.org/pdf/CountrySourcesEstimations.pdf). Agricultural GDP from World Bank (2012).

Total refugees, total
In UNHCR statistics, refugees include individuals recognized under the 1951 Convention relating to the Status of Refugees; its 1967 Protocol; the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa; those recognized in accordance with the UNHCR Statute; individuals granted complementary forms of protection; or, those enjoying 'temporary protection'. The 2007 refugee population category also includes people in a refugee-like situation, most of who were previously included in the Others of concern group. This sub-category is descriptive in nature and includes groups of persons who are outside their country or territory of origin and who face protection risks similar to those of refugees, but for whom refugee status has, for practical or other reasons, not been ascertained.
Source: Statistical Online Population Database
Owner: UNHCR

Total share of freshwater resources withdrawn (percent)
Total freshwater withdrawn in a given year, expressed in percentage of the actual total renewable water resources (TRWR_actual). This parameter is an indication of the pressure on the renewable water resources.
Source: Land and Water Division (AQUASTAT)
Owner: FAO

Total water withdrawal (m^3/yr)
Annual quantity of water withdrawn for agricultural, industrial and municipal purposes. It includes renewable freshwater resources as well as potential over-abstraction of renewable groundwater or withdrawal of fossil groundwater and potential use of desalinated water or treated wastewater. It does not include in stream uses, which are characterized by a very low net consumption rate, such as recreation, navigation, hydropower, inland capture fisheries, etc.
Source: Land and Water Division (AQUASTAT)
Owner: FAO

Total water withdrawal per capita (m^3/yr/person)
Total annual amount of water withdrawn per capita.
Source: Land and Water Division (AQUASTAT)
Owner: FAO

Trade (percent of GDP)
Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.
Source: World Bank (WDI)
Owner: World Bank national accounts data, and OECD National Accounts data files.

Treenuts harvested area (ha)
See 'Treenuts' and 'Crop area'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Treenuts production (tonnes)
See 'Treenuts' and 'Crop production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Treenuts yield (hg/ha)

See 'Treenuts' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Urban population, total

Urban population refers to people living in urban areas as defined by national statistical offices.

Source: United Nations Population Division

Owner: United Nations Population Division, World Urbanization Prospects.

Value of agricultural exports

Value of agricultural exports should be reported in national currency, US dollars or other currency. Export values are mostly reported as FOB. In the FAOSTAT database export values are expressed in thousand US dollars.

Value of agricultural imports

Value of agricultural imports should be reported in national currency, US dollars or other currency. Import values are mostly reported as CIF. In the FAOSTAT database import values are expressed in thousand US dollars.

Value of food imports over total merchandise exports (percent)

Value of food (excl. fish) imports over total merchandise exports. The indicator is calculated on 3 year averages.

Source: FAO, Statistics Division

Owner: FAO

Value of food production per capita (I$/cap)

The total value of Annual Food Production, as estimated by FAO and published by FAOSTAT in International Dollars (I$) divided by the total population. It provides a cross country comparable measure of the relative economic size of the food production sector in the country. The indicator is calculated on 3 year averages.

Source: FAO, Statistics Division

Owner: FAO

Vegetable production (tonnes)

See 'Vegetable, including melons' and 'Crop production'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Vegetable, including melons

Vegetables, as classified in this group, are mainly annual plants cultivated as field and garden crops in the open and under glass, and used almost exclusively for food. Vegetables grown principally for animal feed or seed should be excluded. Certain plants, normally classified as cereals and pulses, belong to this group when harvested green, such as green maize, green peas, etc. This grouping differs from international trade classifications for vegetables in that it includes melons and watermelons, which are normally considered to be fruit crops. But, whereas fruit crops are virtually all permanent crops, melons and watermelons are similar to vegetables in that they are temporary crops. Chilies and green peppers are included in this grouping when they are harvested for consumption as vegetables and not processed into spices. FAO production data for green peas and green beans refer to the total weight including pods, although some countries report on a shelled weight basis. The weight of the pods ranges from 40 to 50 percent for peas to up to 70 percent for broad beans. Area data on small vegetable gardens are often omitted in agricultural surveys, although production estimates may be reported. Trade data for fresh vegetables also include chilled vegetables, meaning the temperature of the products has been reduced to around 0 degrees Celsius without the products being frozen.

Vegetables harvested area (ha)

See 'Vegetable, including melons' and 'Crop area'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Vegetables yield (hg/ha)

See 'Vegetable, including melons' and 'Crop yield'.

Source: FAO, Statistics Division (FAOSTAT)

Owner: FAO

Vegetables, fresh nes

Including inter alia: bamboo shoots (Bambusa spp.); beets, chards (Beta vulgaris); capers (Capparis spinosa); cardoons (Cynara cardunculus); celery (Apium graveolens); chervil (Anthriscus cerefolium); cress (Lepidium sativum); fennel (Foeniculum vulgare); horseradish (Cochlearia armoracia); marjoram, sweet (Majorana hortensis); oyster plant (Tragopogon porrifolius); parsley (Petroselinum crispum); parsnips (Pastinaca sativa); radish (Raphanus sativus); rhubarb (Rheum spp.); rutabagas, swedes (Brassica napus); savory (Satureja hortensis); scorzonera (Scorzonera hispanica); sorrel (Rumex acetosa); soybean sprouts tarragon (Artemisia dracunculus); watercress (Nasturtium officinale). Other vegetables that are not identified separately because of their minor relevance at the international level. Because of their limited local importance, some countries report vegetables under this heading that are classified individually by FAO.

Waste

Amount of the commodity in question lost through wastage (waste) during the year at all stages between the level at which production is recorded and the household, i.e. storage and transportation. Losses occurring before and during harvest are excluded. Waste from both edible and inedible parts of the commodity occurring in the household is also excluded. Quantities lost during the transformation of primary commodities into processed products are taken into account in the assessment of respective extraction/conversion rates. Distribution wastes tend to be considerable in countries with hot humid climate, difficult transportation and inadequate storage or processing facilities. This applies to the more perishable foodstuffs, and especially to those which have to be transported or stored for a long time in a tropical climate. Waste is often estimated as a fixed percentage of availability, the latter being defined as production plus imports plus stock withdrawals.

Water pollution, chemical industry (share of total BOD emissions)

Industry shares of emissions of organic water pollutants refer to emissions from manufacturing activities as defined by two-digit divisions of the International Standard Industrial Classification (ISIC), revision 2: chemicals (35). Emissions of organic water pollutants are measured by biochemical oxygen demand, which refers to the amount of oxygen that bacteria in water will consume in breaking down waste. This is a standard water-treatment test for the presence of organic pollutants.

Source: World Bank (WDI)

Owner: 1998 study by Hemamala Hettige, Muthukumara Mani, and David Wheeler, "Industrial Pollution in Economic Development: Kuznets Revisited" (available at www.worldbank.org/nipr). The data were updated by the World Bank's Development Research Group using the same methodology as the initial study.

Water pollution, clay and glass industry (share of total BOD emissions)

See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Source: World Bank (WDI)

Owner: See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Water pollution, food industry (share of total BOD emissions)

See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Source: World Bank (WDI)

Owner: See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Water pollution, metal industry (share of total BOD emissions)
See 'Water pollution, chemical industry (percent of total BOD emissions)'.
Source: World Bank (WDI)
Owner: See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Water pollution, other industry (share of total BOD emissions)
See 'Water pollution, chemical industry (percent of total BOD emissions)'.
Source: World Bank (WDI)
Owner: See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Water pollution, paper and pulp industry (share of total BOD emissions)
See 'Water pollution, chemical industry (percent of total BOD emissions)'.
Source: World Bank (WDI)
Owner: See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Water pollution, textile industry (share of total BOD emissions)
See 'Water pollution, chemical industry (percent of total BOD emissions)'.
Source: World Bank (WDI)
Owner: See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Water pollution, wood industry (share of total BOD emissions)
See 'Water pollution, chemical industry (percent of total BOD emissions)'.
Source: World Bank (WDI)
Owner: See 'Water pollution, chemical industry (percent of total BOD emissions)'.

Water resources per capita (m^3/yr/person)
Total annual internal renewable water resources per inhabitant.
Source: Land and Water Division (AQUASTAT)
Owner: FAO

Wheat
Triticum spp.: common (T. aestivum) durum (T. durum) spelt (T. spelta). Common and durum wheat are the main types. Among common wheat, the main varieties are spring and winter, hard and soft, and red and white. At the national level, different varieties should be reported separately, reflecting their different uses. Used mainly for human food.

Wheat harvested area (ha)
See 'Wheat' and 'Crop area'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Wheat production (tonnes)
See 'Wheat' and 'Crop production.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Wheat yield (hg/ha)
See 'Wheat' and 'Crop yield'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Wood-based panels
The wood-based panels category is an aggregate category. In the production and trade statistics, it represents the sum of: veneer sheets, plywood, particle board, and fibreboard. See http://www.fao.org/forestry/62283/en/ for further information.

Wood-based panels production (m^3)
See 'Wood-based panels' and 'Production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Wood pulp
Wood pulp is a fibrous material prepared from pulpwood, wood chips, particles, residues or recovered paper by mechanical and/or chemical process for further manufacture into paper, paperboard, fibreboard or other cellulose products. In the production and trade statistics, it represents the sum of: mechanical wood pulp; semi-chemical wood pulp; chemical wood pulp; and dissolving wood pulp. See http://www.fao.org/forestry/62283/en/ for further information.

Wood pulp production (tonnes)
See 'Wood pulp' and 'Production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

Woodfuel
Roundwood that will be used as fuel for purposes such as cooking, heating or power production. It includes: wood harvested from main stems, branches and other parts of trees (where these are harvested for fuel) and wood that will be used for charcoal production (e.g. in pit kilns and portable ovens). The volume of roundwood used in charcoal production, is estimated by using a factor of 6.0 to convert from the weight (MT) of charcoal produced to the solid volume (CUM) of roundwood used in production. It is reported in cubic metres underbark (i.e. excluding bark). See http://www.fao.org/forestry/62283/en/ for further information.

Woodfuel production (m^3)
See 'Woodfuel' and 'Production'.
Source: FAO, Statistics Division (FAOSTAT)
Owner: FAO

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