E

联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura | منظمة الأغذية والزراعة للأمم المتحدة

FAO REGIONAL CONFERENCE FOR ASIA AND THE PACIFIC

Thirty-third Session

Putrajaya, Malaysia, 7–11 March 2016

Agenda item 9

State of food and agriculture in Asia and the Pacific region, including future prospects and emerging issues in the framework of Sustainable Development Goals (SDGs)

Executive summary

Asia and the Pacific region as a whole has achieved the Millennium Development Goal (MDG) 1C hunger target of "halving, between 1990 and 2015, the proportion of people who suffer from hunger". However, 490 million people still suffer from chronic hunger in this region and 94 million children remain stunted. Moreover, much of this progress is concentrated in the East and Southeast Asian subregions, while the South Asian subregion has lagged, reflecting differences in economic growth, income and gender inequalities, natural resources, infrastructure, the macroeconomic and sectoral policy environments, internal peace and security, and institutional stability. The challenge for the region in achieving Sustainable Development Goals (SDGs) is to ensure that people of all ages and genders enjoy their right to food through increased food production from a limited natural resource base and more equitable access to food, while coping with challenges such as climate change. FAO remains committed to work with member countries to assist them in meeting the SDG targets.

Guidance sought by the Regional Conference

The Regional Conference is invited to:

- provide guidance on priorities and policies for increasing the quantity and improving the quality of investments in agriculture and nutrition, differentiating the needs of Asia from those of the Pacific Island Countries;
- advise on policies and measures to strengthen social protection in Asia and the Pacific region;
- provide advice on the relevance of the three components of the Regional Initiative on Support to the Zero Hunger Challenge in Asia and the Pacific – operationalizing national food security policies and investment plans, strengthening undernourishment statistics and improving child nutrition; and
- note the alignment of the Organization's programme of work in Asia and the Pacific region with the Sustainable Development Goals (SDGs), and urge the Organization to continue to focus the implementation of the work on country priorities in 2016-17 and beyond, and in alignment with SDGs.

I. Introduction

1. Asia and the Pacific region[1] as a whole has achieved the Millennium Development Goal (MDG) 1C hunger target of "halving, between 1990 and 2015, the proportion of people who suffer from hunger". The proportion of the population below the minimum level of dietary energy consumption has fallen from 24 percent to 12 percent over this period, while the proportion of children under five years of age who are stunted has fallen from 49 percent to 30 percent.[2] However, 490 million people still suffer from chronic hunger in this region, about 61 percent of such people in the developing world, and 94 million children are stunted, about 58 percent of such children in the world. The Sustainable Development Goals (SDGs) challenge us to eradicate this remaining hunger.

2. Much of this progress is concentrated in the East and Southeast Asian subregions, while the South Asian subregion has lagged. This reflects country and subregional differences in terms of economic growth, income and gender inequalities, natural resources for food production, infrastructure, the macroeconomic and sector policy environments, the internal peace and security situation, and institutional stability. The challenge for the region, in achieving the main goals of the

[1] For the purposes of this document, "Asia and the Pacific Region" refers to the 8 member countries of the South Asian Association for Regional Cooperation (SAARC), the 8 member countries of the Association of South East Asian Nations (ASEAN) (excluding Brunei Darussalam and Singapore), Papua New Guinea, Timor-Leste, the People's Republic of China, the Democratic People's Republic of Korea, Mongolia and the developing island states of the Pacific.

[2] Author's calculations from UNICEF, WHO, WORLD BANK. 2015. Joint malnutrition dataset: September update. http://data.unicef.org/nutrition/malnutrition.html.

SDGs, is to ensure that people of all ages and genders enjoy their right to food through increased food production from a limited natural resource base and more equitable access to food, while coping with trends such as urbanization and challenges such as climate change and a lack of quality statistics and data on which to base sound, evidence-based policies. FAO remains committed to work with member countries to assist them in meeting the SDG targets.

3. The next section begins with the definition of food and nutrition security and then goes on to describe the current situation across Asia and the Pacific region and how it has evolved since 1990-92. This is followed by an analysis of the factors underlying this evolution. The next section analyses the measures needed for the improvements in food security and nutrition to continue to 2030 so that the SDG targets can be met. This is followed by a concluding section that sums up the principal findings.

II. The current situation of food security and nutrition in the Asia-Pacific region and its evolution

4. As stated in the introduction, Asia and the Pacific region has met at least one of the MDG 1 hunger targets, albeit with wide variations among subregions. Before providing a more detailed description of the current food security situation and its evolution between the early 1990s and the current period, it might be useful to provide a definition of the concept of food security.[3]

> Food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. – 1996 World Food Summit

From this definition, four main dimensions of food security can be identified, as described in Table 1 below. For food security objectives to be realized, all four dimensions must be fulfilled simultaneously.

Table 1: Dimensions of Food Security

Physical AVAILABILITY of food	Food availability addresses the "supply side" of food security and is determined by the level of food production, stock levels and net trade.
Economic and physical ACCESS to food	Access by individuals to adequate resources (entitlements) to acquire appropriate foods for a nutritious diet. These resources need not be exclusively monetary but may also include traditional rights e.g. to a share of common resources. Entitlements are defined as the set of all those commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which he or she lives.
Food UTILIZATION	Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals.
STABILITY of the other three dimensions over time	Even if your food intake is adequate today, you are still considered to be food insecure if you are at risk of inadequate access to food on a periodic basis, risking a deterioration of your nutritional status.

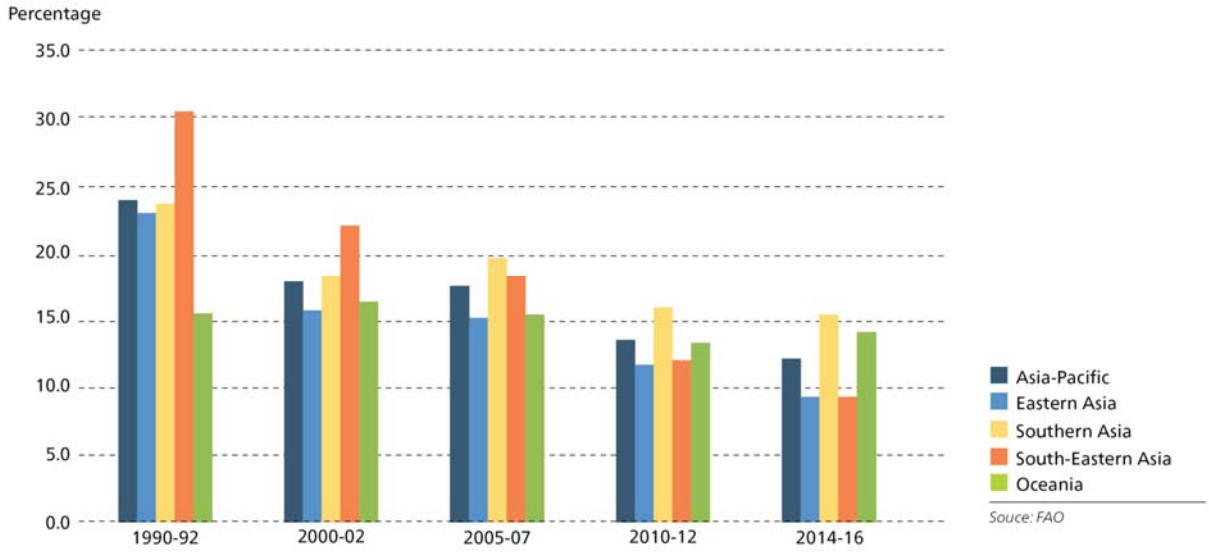
[3] FAO. 2008. *An Introduction to the Basic Concepts of Food Security*. Published by the EC - FAO Food Security Programme

	Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) may have an impact on the food security status of individuals.

Source: Adapted from FAO. 2008.

5. The FAO measure of undernourishment[4] captures the dimensions of *availability* and *access*. As explained in the introduction, the prevalence of undernourishment, i.e. inadequate food intake, has declined from 24 percent of the population of the Asia-Pacific region in 1990-92 to 12 percent in 2014-16. However, this decline is far from uniform across all subregions, as Figure 1 below shows. The prevalence of undernourishment fell most sharply in South-Eastern Asia, followed by Eastern Asia and Southern Asia. In the Oceania subregion, there was a very slight decline.

Figure 1: Prevalence of undernourishment in Asia and the Pacific by subregion, 1990-92–2014-16



Source: FAO, Bangkok (Thailand) Regional Office for Asia and the Pacific. 2015. *Regional overview of food insecurity Asia and the Pacific*. Towards a food secure Asia and the Pacific

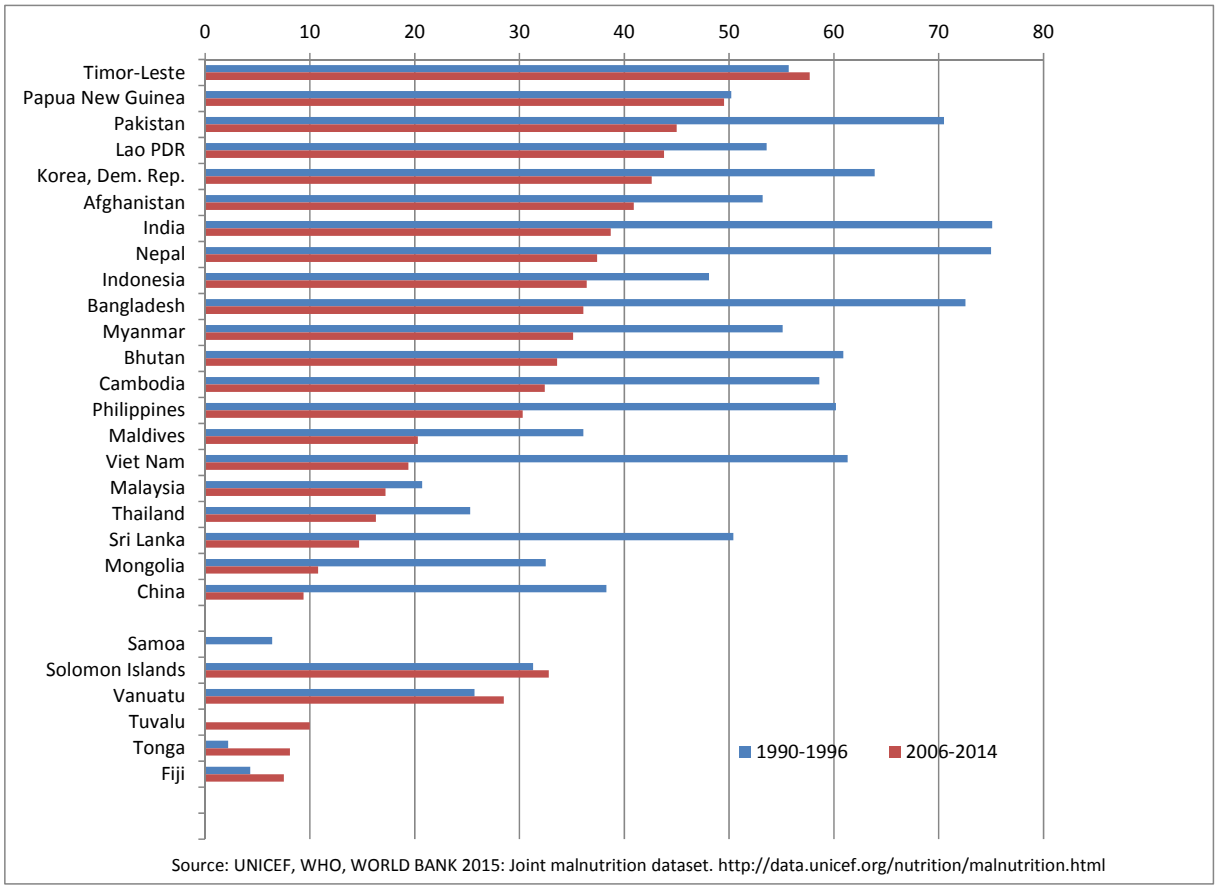
6. Food utilization can be assessed through anthropometric indicators, such as stunting and underweight of children under the age of five. Child malnutrition is known to lead to poor health outcomes, impaired brain development, cognitive deficits and reduced productivity throughout life. For children in particular, nutritional deficits especially in the first 1 000 days of life imply long-term developmental problems.

7. From Figure 2 below, it is apparent that there has been significant progress in Asia over the past twenty-five years in reducing the prevalence of stunting in children under five (which reflects long-term nutritional deprivation), with several countries recording steep declines. Despite this progress, stunting remains a serious problem, with prevalence rates of over 35 percent in several countries.[5]

8. The countries of Asia and the Pacific have also generally performed quite well, with a few exceptions, in improving access to safe drinking water and better sanitation facilities, which are key factors influencing the effective utilization of nutrients in food.

[4] FAO, IFAD and WFP. 2015. *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets*: taking stock of uneven progress. Rome, FAO. Annex 2, p. 48
[5] UNICEF, WHO, WORLD BANK 2015: Joint malnutrition dataset
http://data.unicef.org/nutrition/malnutrition.html

Figure 2: Prevalence of stunting in children under five by country, 1990-96–2006-14



9. As regards stability of access, there is some evidence that this improved in the region from 1990-92 to 2010-12. For example, the region reduced the vulnerability of food production to weather conditions by substantially expanding irrigation coverage. This seems to have decreased per capita food-supply variability in all subregions, sometimes substantially as in South-Eastern Asia where it declined 79 percent.[6]

10. Many governments in the region maintain strategic food reserves to meet emergency needs and to stabilize food prices. In addition, farmers also store food for household consumption until the next crop arrives and private traders maintain commercial stocks of food. Developing Asian countries held 63 percent of the 581 million tonnes of world cereal stocks in 2014. Countries in the region have

[6] FAO. 2015a. *Regional Overview of Food Insecurity Asia and the Pacific: Towards a Food Secure Asia and the Pacific. Bangkok, FAO*

also established the Association of South East Asian Nations (ASEAN) Plus Three Emergency Rice Reserve (APTERR) and the South Asian Association for Regional Cooperation (SAARC) Food Bank at the subregional level to deal with food shortages.

11. Price spikes in international food markets in 2007-08 and 2010-11 came as major shocks to the countries in the region and encouraged governments to emphasize investments in food production and productivity, and public assistance was often provided to poorer households affected by high prices. The impact of the crisis on food security in the region was relatively slight, although some of the poorer households experienced higher food insecurity during the crisis. Since that time, food prices have been on a downward trend.

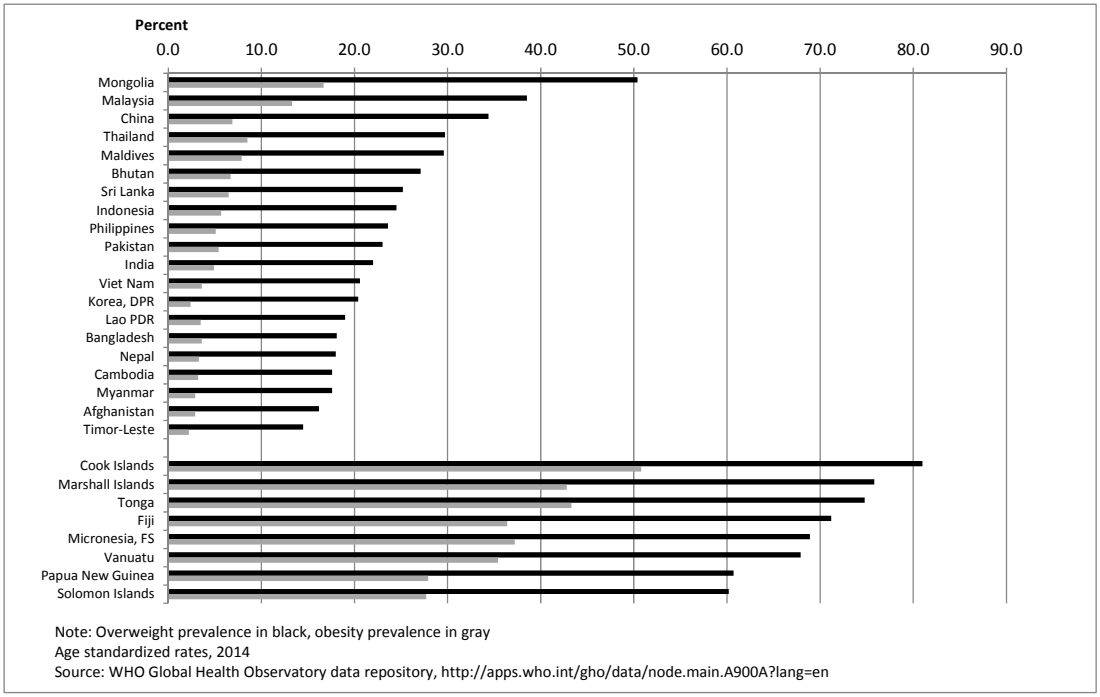
12. People in Asia and the Pacific region also suffer from significant micronutrient deficiencies, especially in iron, Vitamin A and iodine. The most recent data indicate that all countries in South-Eastern Asia and Southern Asia have a high prevalence of iron deficiency anaemia in pregnant women and children, with lower prevalence in the countries of Eastern Asia. Similar patterns prevail for vitamin A deficiency (VAD). Iodine deficiency is also widespread in the region with several countries having a prevalence higher than 20 percent.

13. Overweight and obesity are also important aspects of malnutrition. Unfortunately, they are growingly rapidly in importance both in the region and globally. Globally, about 13 percent of the world's adult population (11 percent of men and 15 percent of women) were obese in 2014. In 1980, only 5 percent of men and 8 percent of women were obese.

14. Figure 3 below shows the prevalence of obesity and overweight in the adult populations of selected countries in the Asia-Pacific region. From Figure 3, it is apparent that the Pacific Island states have particularly high rates of obesity and overweight, which are the underlying causes of diet-related, non-communicable diseases such as coronary heart disease, ischemic stroke and Type II diabetes. These are now the leading causes of death and morbidity in the countries of the Pacific, leading to calls by the region's political leadership for greater public-sector intervention. In Asia, there are three countries with high rates of overweight, Mongolia, Malaysia, and China. These countries are also facing a problem of rapidly rising rates of non-communicable diseases.

15. To sum up, the region has managed to improve food security and nutrition quite considerably since the early 1990s. However, as it started with a heavy handicap, it still contains the largest number of stunted and underweight children in the world: more than half of the nearly 160 million stunted children in the world live in this region. It still has a long way to go to attain the SDG 2 goal of ending hunger. At the same time, the problem of obesity and overweight is growing rapidly in importance.

Figure 3: Obesity and overweight in Asia and the Pacific, 2014. **Prevalence of overweight (BMI>=25) and obesity (BMI>=30) in adults (Age>=20.0, selected countries)**

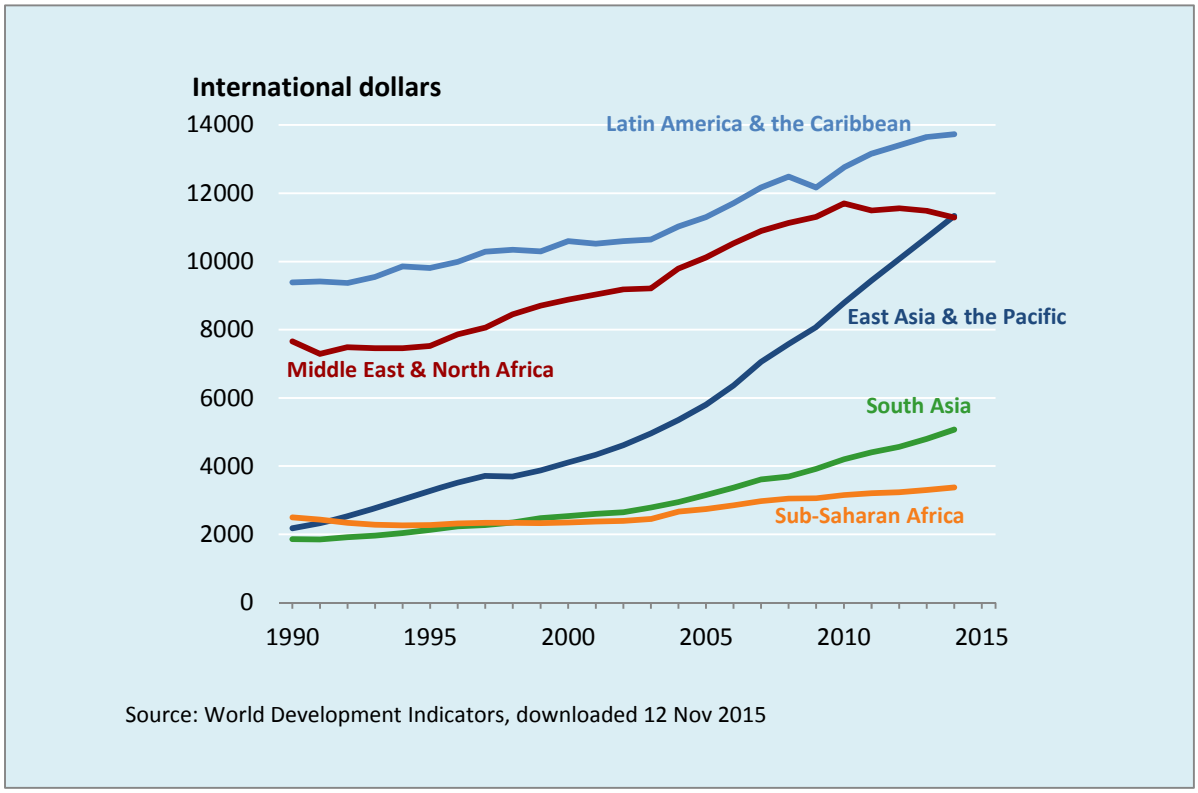


III. What factors lay behind the improvements in food security and nutrition?

16. It should not be forgotten that until the mid-1960s, the Asia-Pacific region had among the world's lowest incomes, exceptionally low intakes of dietary energy and some of the highest rates of poverty and malnutrition in the world. Its transformation began with the start of strong economic growth in Japan in the 1950s, which spread to the "Asian tigers" in the early 1960s, and then to the other countries of South-East Asia, China and finally South Asia from the 1980s onwards. In the 1990s and the first decade of the twenty-first century, the region experienced some of the highest growth rates of real per-capita GDP ever recorded.

17. However, because the region started with the lowest GDP per-capita levels in the world, even the strong growth it has enjoyed has not raised average per-capita GDP levels beyond those of the Middle East and North Africa region or the Latin America and Caribbean region. Figure 4 below shows real per-capita GDP in Purchasing Power Parity (PPP) terms from 1990 to the present, separately for the major regions of the developing world, with the Asia-Pacific region disaggregated into two major subregions, East Asia and the Pacific (including South-Eastern Asia) and South Asia.

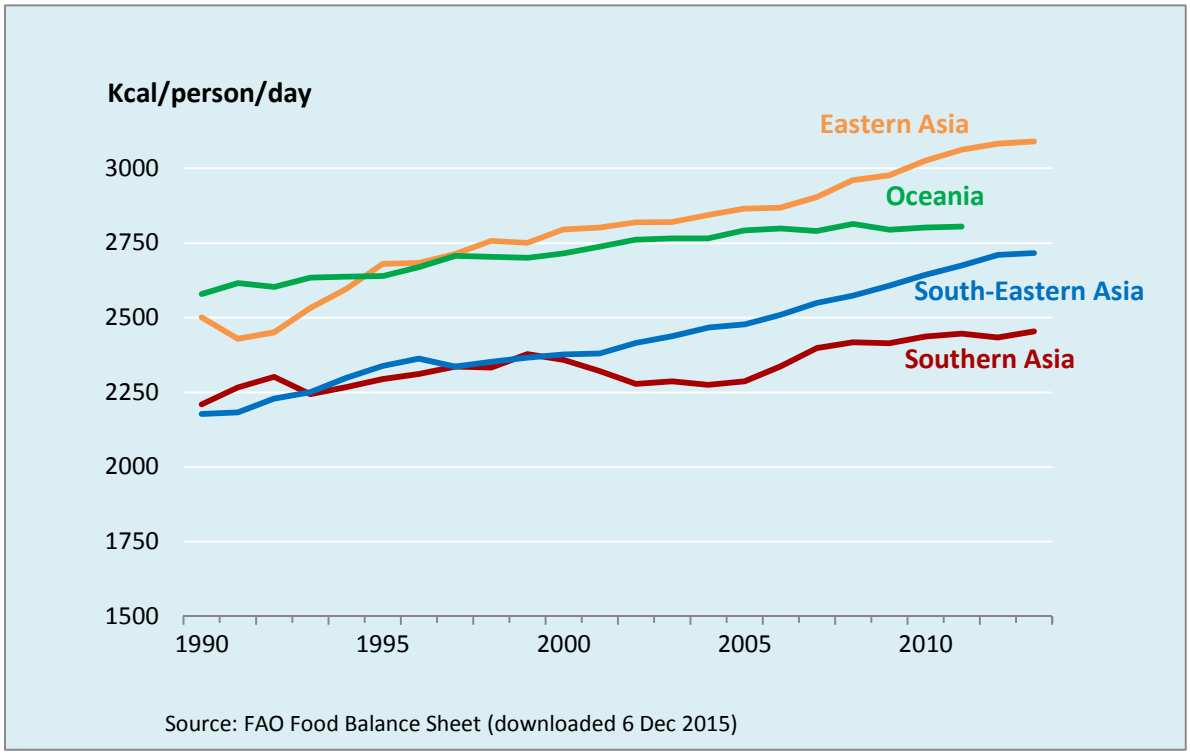
Figure 4: Per-capita GDP in constant 2011 international dollars by developing region



18. Strong growth in GDP and agricultural value added helped increase employment opportunities, reduce poverty rates and lower inflation – particularly for food. All of these factors helped improve access to food. The average GDP growth rate of 7 percent per annum in real terms achieved by the developing nations of Asia and Pacific region over the period from 1990 to 2010 contributed to a greater than 50 percent reduction in extreme poverty and led to improved access to food for the people of the region.

19. Over the past quarter-century (from 1990-92 to 2014-16), the supply of dietary energy from crops, livestock and fisheries production has grown faster than the population in almost all Asian countries. Figure 5 below shows the evolution of dietary energy supply (DES) during this time period. It depicts the average per-capita daily supply of dietary energy in kilocalories per person per day, i.e. the amount of dietary energy available from all the food consumed – cereals, fruits and vegetables, livestock products, fish, sugar and oils and fats – by the average person in a day. It can be seen as a measure of overall food consumption per person.

Figure 5: Average daily energy supply per capita by Asia-Pacific subregion, 1990 to 2013

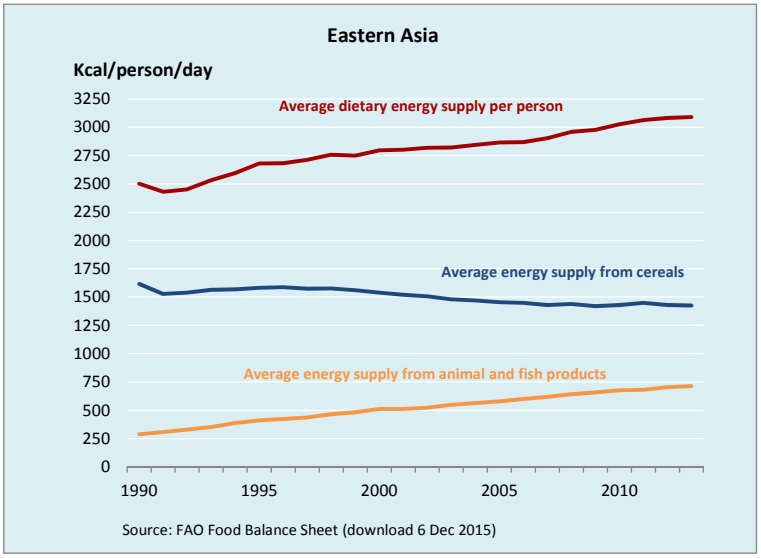


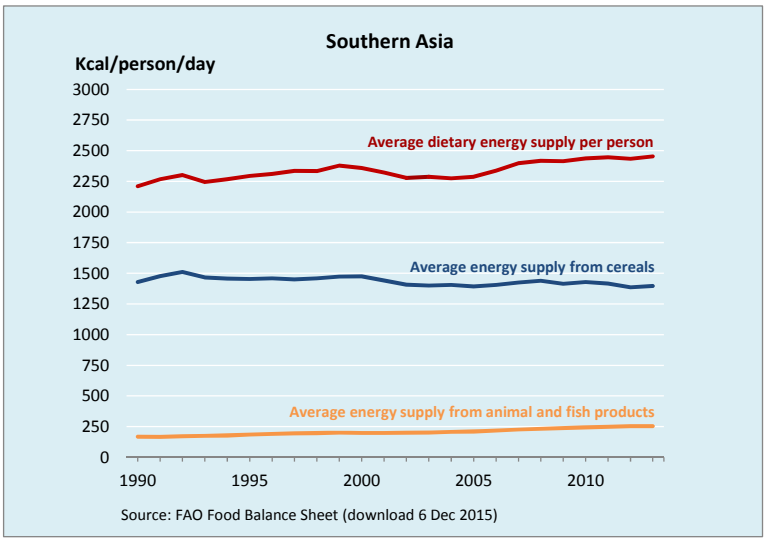
20. It can be seen from Figure 5 that food consumption per-capita increased in every subregion, albeit with significant variations among the subregions and across countries within subregions. The largest percentage increases in food consumption were achieved in Eastern and South-Eastern Asia (about 25 percent), followed by Southern Asia and Oceania, which had started with the highest per-capita food consumption. In China today, dietary energy supply per person per day is about 3 100 kcal, which is in the same range as some high income countries and higher than the equivalent figure for Japan. The relatively slow growth in per-capita food consumption in Southern Asia largely explains the slow progress in reducing undernourishment in that subregion.

21. Rising household incomes drove increases in food consumption as well as improvements in the quality of the diet. The contributions of traditional staple foods such as cereals to the diet declined while the contributions of non-staple crops, such as livestock products, oil crops, sugar and fruits and vegetables increased.

22. A comparison of Eastern Asia with Southern Asia illustrates these points. From Figures 6 and 7 below, it can be seen that whereas livestock products had provided only 250 kcal/person/day in 1990 in Eastern Asia, by 2013 this had increased to 750 kcal/person/day. In Southern Asia, on the other hand, the increase in consumption of livestock products was only slight, consistent with the smaller increase in average household income and thus average household food consumption. In both subregions, cereal consumption declined, consistent with the pattern seen in other countries when household incomes increase.

Figures 6 and 7: Sources of daily energy supply per capita, 1990 to 2013





Bangladesh[7]

Since 1990 Bangladesh has achieved remarkable reductions in poverty, food insecurity and malnutrition. Despite being a lower middle income country with one of the highest population densities in the world, it has succeeded in reducing the prevalence of stunting in children from over 70 percent in the early 1990s to about 36 percent in 2014 and of underweight from over 60 percent in the early 1990s to about 33 percent in 2014. It is especially encouraging that stunting in girls declined at almost the same rate as stunting in boys. These reductions were made possible by sharp increases in the real wages of agricultural daily labourers, the growth in demand for (largely female) labour from the textile industry, remittances from Bangladeshis working abroad, better access to improved sanitation facilities, improvements in female literacy and better access to assets on the part of women.

[7] See FAO Bangladesh Country Programming Framework 2014-18. Towards Sustainable Agriculture and Improved Food Security and Nutrition, pp. 16-21

The first two factors increased household incomes and made it possible for the poorest households to increase their food consumption, the third, together with the fourth and fifth factors, led to better food utilization and thus reduced malnutrition for children as well as adults. Despite these achievements, however, formidable challenges remain. The foremost of these is to consolidate these successes and extend them so that Bangladesh can succeed in eliminating hunger by 2030. Bangladesh does possess one advantage in this regard as it is well on the way to taking an integrated approach to food security and nutrition, involving a comprehensive food security policy framework (the National Food Policy) and programming document (the National Food Policy Plan of Action), as well as an investment plan for food security and nutrition (the Bangladesh Country Investment Plan). All these are supported by FAO.

IV. Can the SDGs be attained by 2030? Challenges and uncertainties

23. The 17 SDGs, adopted by world leaders as part of the 2030 Agenda for Sustainable Development, aim at ending poverty and hunger, reducing inequality and tackling climate change by 2030. In the words of FAO's Director-General,[8]

> "This is at the very heart of the new sustainable development agenda: freeing the world of poverty and hunger, and leaving no one behind. We can do it. We can be the Zero Hunger generation."

SDG goal 1 calls for the elimination of poverty and Goal 2 for the elimination of hunger by 2030. In this context, it is worth pointing out that agricultural growth in low-income and agrarian economies will be a key factor in attaining the SDGs as this has been shown to be at least twice as effective as growth in other sectors in reducing hunger and poverty.[9] However, given the mounting pressure on global ecosystems, any increase in food production must be achieved in a sustainable and environmentally sound way. To feed a growing global population sustainably, producers need to grow more food while reducing negative environmental impacts such as soil, water and nutrient loss, greenhouse gas emissions, and degradation of ecosystems. This will require a transformation of food systems and agriculture accompanied by the promotion of sustainable living and working practices, improvements in governance and securing the political will to act.

24. There are three particular challenges. First, how to increase food production while using less water, as crops and livestock use 70 percent of all water withdrawals and up to 95 percent in some developing countries. By 2025, 1.8 billion people are projected to be living in countries or regions with absolute water scarcity. Secondly, every year, the world loses or wastes about a third of the food it produces. Consumers must be encouraged and provided with incentives to shift to nutritious and safe diets with a lower environmental footprint. Thirdly, while climate change poses a real threat to global food production, investments in all sectors of agriculture can simultaneously support climate change adaptation and mitigation while improving rural people's livelihoods.

25. Therefore, the challenge for the Asia-Pacific region is to maintain or even increase agricultural growth in order to continue to reduce poverty and hunger, while reducing negative environmental

[8] FAO. 2015b. FAO *and the 17 Sustainable Development Goals*. http://www.fao.org/3/a-i4997e.pdf
[9] World Bank. 2008. *World Development Report 2008: Agriculture for Development.*

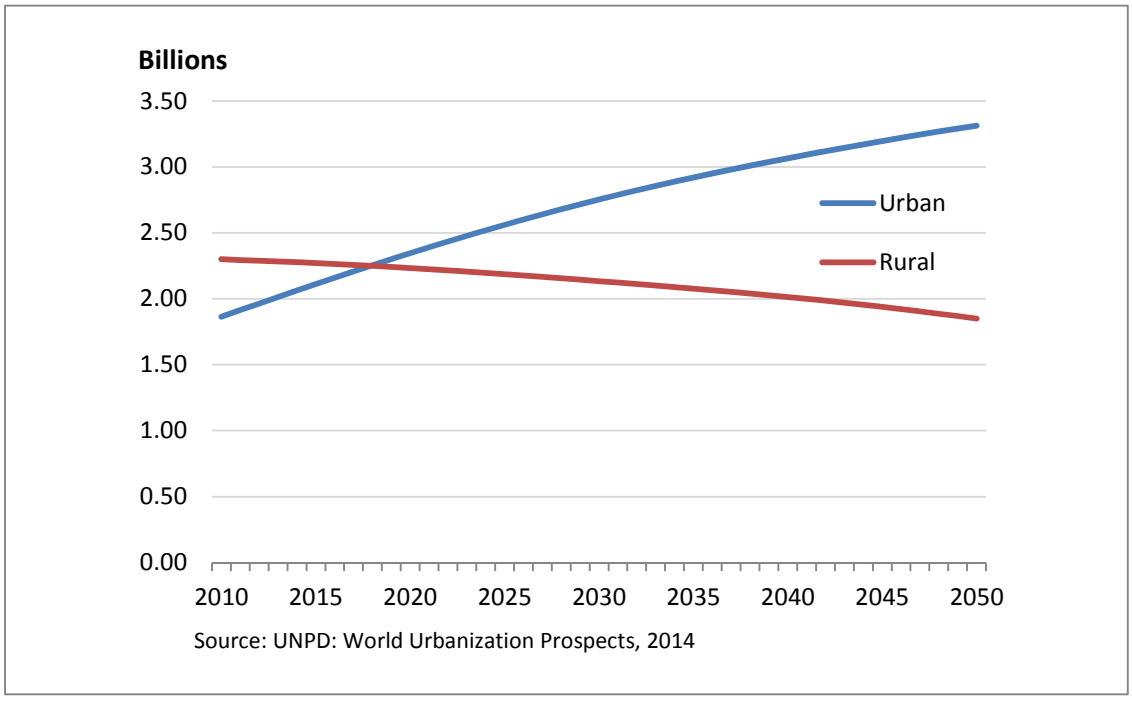
impacts and degradation of ecosystems. This must go hand in hand with efforts to reduce food loss and waste. This section analyses some challenges and uncertainties in this endeavour. A twin track approach, which combines income generating investments in rural and urban areas with measures to strengthen social protection offers the best hope.

A. Population

26. A growing population requires more food even if everything else is equal. However, everything else is not equal: as household incomes rise, people's tastes and preferences shift towards livestock products, fruits and vegetables, sugar, oils and fats, etc. As shown above, this is already happening in countries like China and as people's household incomes increase in other countries in the region, this trend is likely to intensify.

27. Figure 8 below shows what is likely to happen to population growth in the region over the next 35 years or so. It is expected that one billion people (half the global increase) will be added to the region's population by 2050. It is noteworthy that the urban and rural populations are already almost equal and the urban population is expected to outstrip the rural to the point that by 2050 over 60 percent of the region's population (about 3.3 billion people) will be living in urban areas. This will have profound consequences for food security and nutrition, food systems, food safety, food trade, etc.

Figure 8: Urban and rural population for Asia: 2010-2015

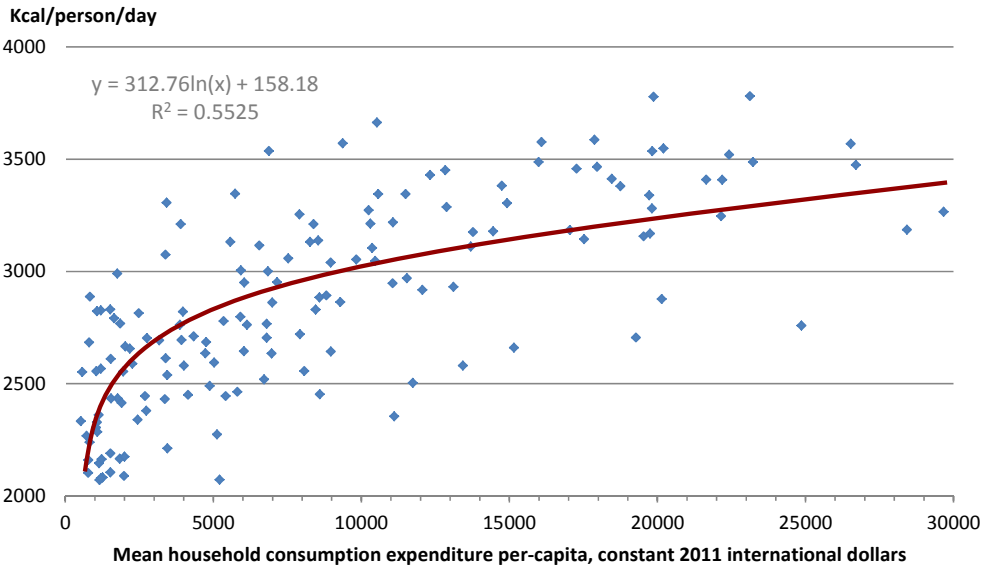


B. Food demand

28. Not only will the population of the region be larger and increasingly urban, but it will also be wealthier. This also has implications for food demand. Figure 9 below shows what happens to the per-capita demand for food, measured in kcal/person/day, as per-capita household consumption expenditure (which is a proxy for income) increases. As households get richer starting from a low level and increase their total expenditure, the first thing they spend on is food. As a result, food consumption rises very sharply as household expenditure increases from low levels to about 4 000 international dollars, and then begins to level off, i.e. continues to grow but at a slower rate. Today, some of the large developing countries of the region are beginning to approach income levels at which the growth rate of demand for food should begin to slow down. For example, China's per-capita

consumption expenditure averaged over 2010-12 was about 3 400 and India's about 2 700 international dollars per year.

Figure 9: Food consumption per-capita and household consumption expenditure per-capita (PPP 2011 prices) for 150 countries, 2010-12

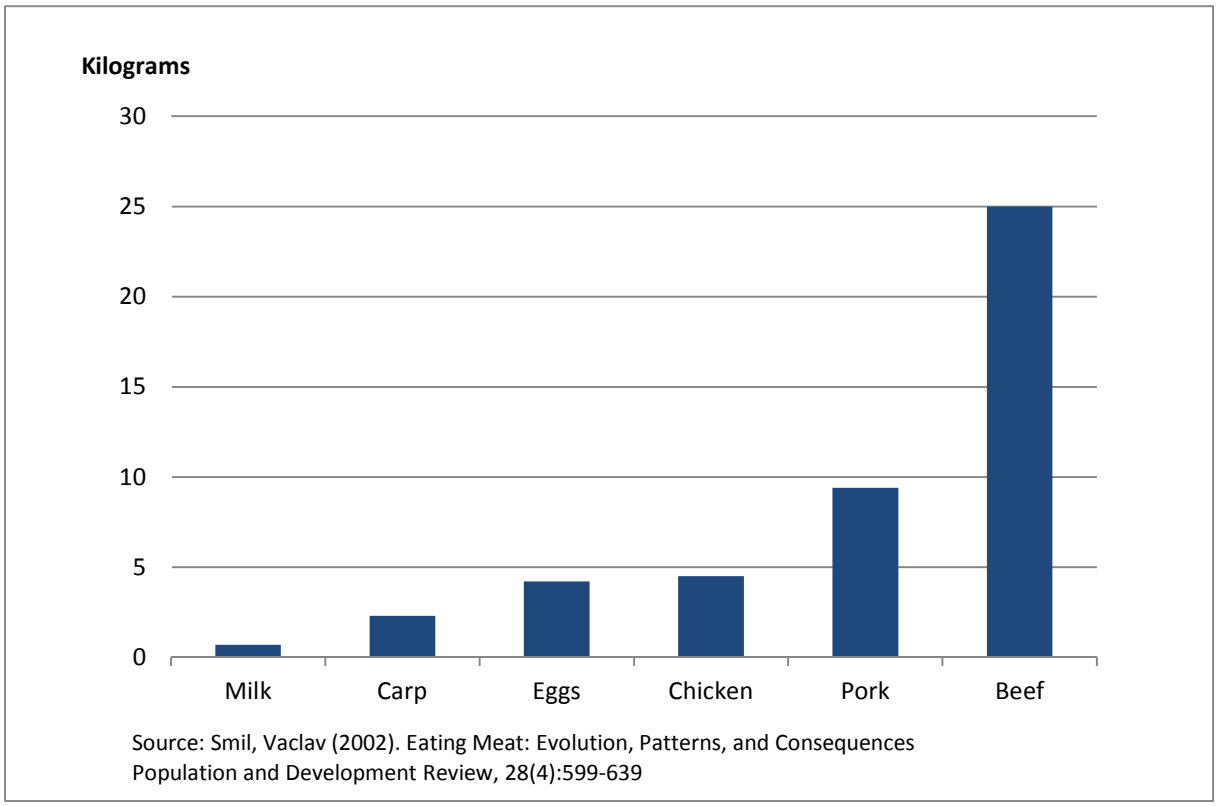


Source: World Development Indicators, download 12 Nov 2015
FAO Food Balance Sheets, download 3 Dec 2015

29. These changes usually occur in conjunction with a change in food consumption patterns towards livestock products. However, grains are required to feed animals in order to produce livestock products. Therefore, there is an element of competition between people and animals with respect to grains as they can either be eaten directly by people or fed to animals. Figure 10 below shows the grain required as feed for producing 1 kg of edible weight of different kinds of animal products. From Figure 10 it is clear that beef production requires the greatest quantity of feedgrains, with pork in second place. The lowest feedgrain requirements are for milk, fish, eggs and chicken.

30. To sum up, population growth, income growth and urbanization will lead to changes in food demand patterns away from cereals towards livestock products, oils and fats, sugar and fruits and vegetables. Moreover, as more people live in cities, value addition through food processing, transportation, storage, packaging and distribution is expected to increase. Concerns for food safety arising from intensive production, long storage, longer distribution channels and other factors will grow, and substantial investments in these areas will be needed. The other issue is that more food is eaten outside the home in the cities, further increases in the prevalence of overweight and obesity remain a distinct possibility.

Figure 10: Feed conversion rate – kilograms of feed per kilogram of edible weight



Source: Smil, Vaclav (2002). Eating Meat: Evolution, Patterns, and Consequences Population and Development Review, 28(4):599-639

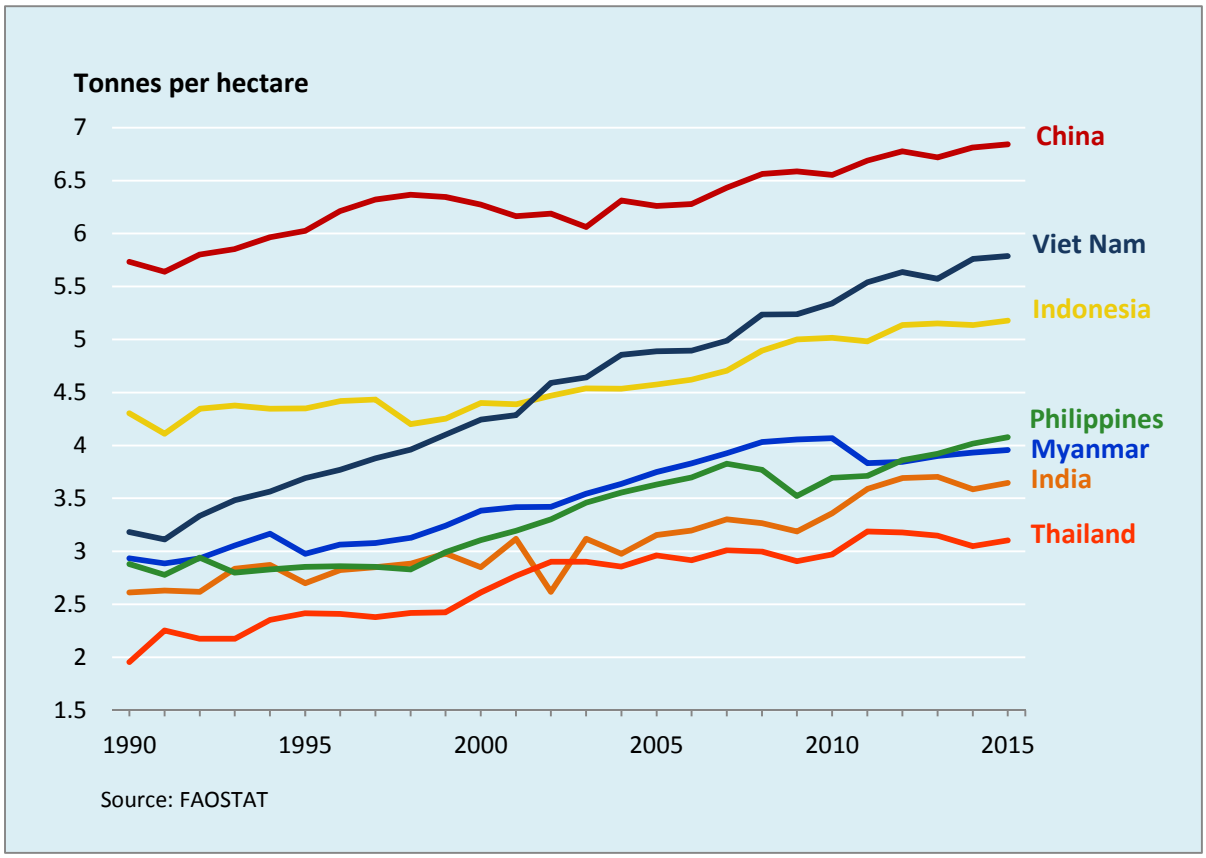
C. The implications for crop production

31. In line with the projected changes in food consumption patterns, the production of livestock products, vegetable oils, sugar and fruits and vegetables is expected to grow rapidly. Livestock production (meat, milk and eggs) is expected to nearly treble in Southern Asia and increase by 80 percent in East Asia (including the Eastern Asia, South-Eastern Asia and Oceania subregions). World production of oilcrops is expected to increase by about 85 percent by 2050 and of sugar by about 77 percent.[10]

32. Yield increases will be needed to produce the vast bulk (nearly 90 percent) of the growth in production by 2050 as the scope for expansion of arable land in Asia and the Pacific region is fairly limited, and the quality of land is declining. In order to realize sufficient yield growth, the region needs to invest heavily in agricultural research. Figure 11 below shows, for illustrative purposes, the evolution of paddy yields in a number of large Asian countries. It is clear from the graph that there are large yield gaps between countries. Even if these gaps cannot be closed completely, there is still scope for achieving large production increases. The yield gap in paddy rice between Myanmar and Viet Nam, for example, is almost 2 tonnes per hectare. If the gap could be closed by 1 tonne per hectare, several million additional tonnes of paddy should be produced. Therefore, at least as far as rice production for food use is concerned, there is not much immediate cause for concern, particularly in view of the fact that rice consumption per head is declining in most countries of the region. Closing the yield gap will require policy changes which change the structure of incentives for paddy farmers and also increase investment, both public and private, in agriculture.

[10] Alexandratos, N. and J. Bruinsma. 2012. World Agriculture towards 2030/2050: The 2012 Revision. ESA Working Paper No. 12-03. June 2012. http://www.fao.org/docrep/016/ap106e/ap106e.pdf

Figure 11: Rice paddy yield in selected Asian countries, 1990 to 2015



33. Agriculture currently uses 70 percent of the region's water resources, but the demand by other users is increasing. FAO projects that only a small amount of additional land will be equipped for irrigation by 2050 in Asia and the Pacific. Compared to 48 and 53 million hectares of land equipped with irrigation in East Asia (including Eastern and South-Eastern Asia) and South Asia respectively from 1961/63 to 2005/07, only 8 and 4 million hectares respectively are projected to be added by 2050.[11]

D. Climate change

34. The Asia-Pacific region is extremely vulnerable to climate change which will affect millions of rural poor people. Climate models predict temperature increases in the Asia-Pacific region of around 0.5-2.0 C by 2030, which may result in greater rainfall concentration during the summer monsoon and decline in winter rainfall. The majority of the approximately 500 million rural poor in the region are subsistence farmers dependent on rain-fed agriculture. If the monsoons fail, they will be devastated. While a few countries have strengthened their capacity to adapt to climate change, the majority have limited options to build resilience to climate change. There may be serious losses of high-value agricultural lands and crop stress from increase in temperatures could lead to reductions in yields. The region is also likely to witness an increase in sea level of around 3-16 cm by 2030, putting low-lying coastal areas – some of them heavily populated – and small island developing states at high risk. Climate change will also put additional pressure on natural ecosystems such as the forests,

[11] Alexandratos and Bruinsma. 2008. Chapter 4.

mangroves, coral reefs and wetlands. There is already evidence that the Asia-Pacific region is experiencing an intensification and frequency of many extreme weather events such as heat waves, tropical cyclones, droughts, floods, snow avalanches, and severe storm surges, increasing the vulnerability to food insecurity of people in the region.

E. Cross-cutting issues: gender

35. In Asia and the Pacific region rural women play a key role in food systems and rural household livelihood and reproduction, holding main responsibilities in food production, sale and procurement, food preparation and distribution, family food and nutrition security, as well as child rearing and care giving. The female share of the agriculture labour force ranges from 35 percent in Southern Asia, to 43 percent in Southeast Asia, to 48 percent in East Asia and 52 percent in the Pacific. As men migrate to urban areas to take up non-farm employment, women are left to engage more extensively in crop production for household consumption and sale. Empowering and investing in rural women has been shown to increase agriculture productivity, reduce hunger and malnutrition, improve rural livelihoods, and build resilience. Furthermore, statistics do not account for women's unpaid and under-reported contributions to household economies.

36. Yet, despite their critical contributions, women still face many challenges towards the realization of their full human and productive potential. They have limited access to and control over productive resources, particularly land and water, and services and assets such as credit, extension, education and technologies, and are more likely than men to be confined to part-time, seasonal and low-paying jobs. They are also held back by mobility and time constraints and limited decision-making power and voice. Moreover, many forms of discrimination against them persist in the countries of the region. Conditions have often deteriorated (e.g. in relation to nutrition, poverty, effects of climate change, etc.) and new challenges have arisen (e.g. land grabbing, decreasing availability of and access to natural resources, depletion of natural resources, market and trade liberalization, outmigration).There is a need for specific attention to closing the gender gap for development in the region as well as concerted action to advance equality of voice, agency and access to resources and services between rural women and men.

37. Gender equality and rural women's empowerment are central to FAO's mandate to eliminate poverty and achieve food security and nutrition for all through sustainable agricultural production and management of natural resources.

F. Cross-cutting issues: statistics

38. An assessment completed by FAO in 2012 showed that, on average, established systems of official statistics only provided between 40 and 60 percent of the core data required by governments, NGOs and international agencies to make informed decisions in their respective spheres of activity. In recent years, the availability and quality of data has not kept pace with the requirements of users as a result of weaknesses in institutional infrastructure, statistical methods and practices, and human and financial resources allocated to collection and dissemination of Statistics. The Global Strategy to Improve Agricultural and Rural Statistics (GS) is a global initiative being implemented by FAO in collaboration with the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and the Asian Development Bank (ADB). The GS aims to rebuild the capacities of statistical systems producing agricultural statistics to meet core and emerging data requirements and to monitor the SDGs. These objectives will be achieved through technical assistance, training and research. Implementation of the GS in Asia and the Pacific is guided by a Regional Action Plan for Asia and the Pacific with an initial target to reach 20 countries by 2017. Implementation has thus far started with in-depth country level assessments of capacity to produce agricultural and rural statistics in 15 countries.

39. While the ongoing efforts of FAO's regular programme and Global Strategy are working to build country capacity to meet their core data requirements, the monitoring framework (indicators and

reporting frequency) and reporting requirements of the SDGs place heavy demands on the statistical system. Regional institutions are expected to play a key role in building the capacities of the national statistical systems to fulfil their reporting obligations and accountability to the SDGs. The FAO regional office stands ready to support national efforts in this regard.

V. National and regional policies, actions, commitments and initiatives

40. Governments in Asia and the Pacific region have adopted various policies and made institutional arrangements to support the agriculture sector and increase efficiency, such as agricultural development policies and plans to boost food and agricultural production, and improve the functioning of markets to ensure an efficient flow of commodities from farms to markets. Many governments have corrected past policy distortions biased against agriculture and created a more level playing field for agriculture vis-à-vis the industrial sector.

41. In addition to these farm support policies, many governments have institutional mechanisms to provide staple grains at subsidized prices to low-income households on a regular basis. For example, India passed the National Food Security Act in 2013, one of the largest social protection programmes in the world. It seeks to provide for food and nutritional security by ensuring access to an adequate quantity of quality food at affordable prices to people. Many countries, especially importers, also maintain strategic food reserves to be able to intervene in the market and stabilize prices when deemed necessary, thus preserving access to food.

42. As regards utilization, a number of countries are implementing nutrition enhancement programmes, such as school gardens and school meal programmes, to promote education and address stunting, short-term undernutrition and deficiencies in key micronutrients such as vitamin A, iodine and iron.

43. Rice, as the staple grain of the majority of the people in the region, is a “sensitive commodity” in trade agreements signed by many countries in Asia and the Pacific region. Maintaining or achieving rice self-sufficiency is a major national priority and policy platform of governments, as is the case in Indonesia and the Philippines.

44. Pacific Health Ministers have made commitments to reducing obesity levels in their National Health Strategies and in Non-Communicable Disease (NCD) and Nutrition Plans of Action. The approaches considered have included measures such as nutrition education and advocacy on diet and physical activity; use of legislation to mandate maximum salt and other content in food products; and import bans on certain foods high in saturated fat, such as turkey tails and mutton flaps.

45. At the 69th Session of the UNESCAP in 2013 , the Asia-Pacific countries launched the Regional Zero Hunger Challenge (ZHC) for ending hunger, food insecurity and malnutrition by 2025. The five pillars of ZHC are: (i) 100 percent access to adequate food all year round, (ii) Zero stunted children less than 2 years of age, (iii) All food systems are sustainable, (iv) 100 percent increase in smallholder productivity and income, and (v) Zero loss or waste of food. Several countries of the region have either launched or are preparing to launch national Zero Hunger Challenge campaigns.

46. In order to assist its member countries to take the challenge forward, FAO has formulated, and is implementing, the Regional Initiative on Support to the Zero Hunger Challenge in Asia and the Pacific. The Regional Initiative places emphasis on three specific and complementary areas of work identified on the basis of their critical importance for achieving the ZHC as well as of FAO’s comparative advantages and experience in the region; a) formulating or operationalizing national food security and nutrition policies and investment plans; b) improving capacity for measurement and calculation of undernourishment; and c) improving child nutrition and reducing stunting.

VI. Conclusions

47. Ending poverty and hunger is viable and affordable. A combination of investments in social protection and additional pro-poor development is the best way to quickly take people out of hunger and extreme poverty. Social protection, when combined with rural development policies and targeted nutrition initiatives, supports farmers and other poor rural households in overcoming financial constraints and better managing risks, with positive impacts on food production and farm-level investment in agriculture.

48. Up to now, there has been insufficient investment specifically targeting the food security and nutrition of the extreme poor, who are largely rural people. A new study by FAO, IFAD and WFP[12] estimates the cost of additional average annual investments needed to eliminate extreme poverty and hunger to be US$265 billion per year between 2016 and 2030. Out of this, some US$198 billion will be for pro-poor investments in the productive sectors – US$140 billion for rural development and agriculture and US$58 billion for urban areas. The remaining US$67 billion are needed for social protection programmes, of which US$41 billion will go to rural areas, and US$26 billion to urban areas. It is noteworthy that US$265 billion is equivalent to barely 0.31 percent of global GDP.

49. Pro-poor investments in the productive sectors help to sustain growth of employment and incomes. Investments in social protection such as school feeding, cash transfers and health care provide some form of income security and access to better nutrition, health care, education and decent employment. They not only protect the food security of the poor in the short-term, but encourage them to undertake more productive but also more risky activities, secure in knowing that they will not starve if the investments do not work out. The amount of incremental investment required is small, but may still be beyond the capacity of some governments. Accordingly, the international community may wish to find ways to augment the flow of financial resources to these countries. Moreover, assistance needs not necessarily be monetary. Technical assistance can be equally useful. As the incomes of the poor increase due to the returns on the additional pro-poor investment, the amount of social protection needed to close the poverty gap declines accordingly as a proportion of GDP and possibly also in absolute terms.

50. The SDGs challenge us to become the first generation in human history to eliminate the scourges of hunger and poverty. We have the knowledge and the means to do this. What is needed is the political will.

[12] FAO, IFAD and WFP. 2015. *Achieving Zero Hunger: the critical role of investments in social protection and agriculture*. Rome, FAO.