

Healthy diets for all: A key to meeting the SDGs

This policy brief is a call to action for policymakers at all levels to recognize the central role of high-quality diets and nutrition in achieving the 2030 Agenda for Sustainable Development.

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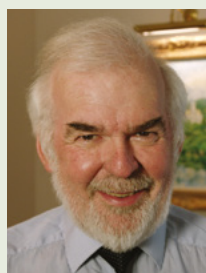
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Executive Summary

This policy brief is a call to action for policymakers at all levels to recognize the central role of high-quality diets and nutrition in achieving the 2030 Agenda for Sustainable Development.

Achieving high-quality diets for all is critically important to the delivery of the Sustainable Development Goals (SDGs). Healthy diets provide a foundation to support successful progress toward targets in health, agriculture, inequality, poverty and sustainable consumption. Poor nutrition is associated with low educational attainment, poor physical growth and low labour productivity, yet the delivery of healthy diets remains invisible in terms of SDG language and is not mentioned in any of the SDG targets.

The importance of healthy, high-quality diets is further reinforced by four key facts:

- **There is a deepening nutrition crisis.** Malnutrition in all its forms already affects one in three people worldwide – if population growth and climate change increase as predicted, this could rise to one in two.
- **Six of the top nine risk factors to global health are now related to diet.** The risk that poor diets pose to mortality and morbidity is now greater than the risks of air pollution, alcohol, drug and tobacco use combined.
- **The effects of poor diets and nutrition risk locking individuals and countries into long-term disadvantage.** For example, child stunting can have life-long effects in terms of sub-optimal cognitive development, ill-health, impaired physical growth and reduced earning potential.
- **Malnutrition severely impacts the productivity of many countries and, in the long term, threatens inclusive growth.** Across Africa and Asia, the estimated impact of undernutrition on gross domestic product (GDP) is 11% every year.

Addressing poor quality diets and malnutrition is critical to meeting many of the SDGs, and not just SDG2 "End hunger, achieve food security and improved nutrition, and promote sustainable agriculture".¹ This will help release the brake on progress and accelerate the delivery of the global goals: ensuring high-quality diets will help unlock the development potential of individuals, boost economic productivity and reduce demands on expenditure in areas such as health and social protection.

🌿 **To advance progress on the SDGs we must prioritize diet quality and nutrition in national plans with clear implementation strategies and committed leadership.** 🌿

H.E. John Kufuor, Former President of Ghana and Global Panel Co-Chair

¹ See Table 1 of the full brief



Achieving high-quality diets for all requires concerted action across several sectors. Six priorities for policymakers are:

- ① Pay explicit attention to diet quality in developing plans to meet the Sustainable Development Goals.
- ② Adopt a food systems approach to improving diets and meeting the SDGs.
- ③ Focus on improving diets for infants, young children, adolescent girls and women.
- ④ Address barriers and shocks impeding access to healthy diets for vulnerable groups.
- ⑤ Widen national policy approaches to the interpretation of SDG2 to enable policy action to ensure well-functioning food systems.
- ⑥ Step up efforts to collect and report data on diet quality.

1. Introduction

On September 25 2015, the 193 member states of the UN General Assembly formally adopted a new sustainable development agenda, defined by 17 global goals to end poverty, protect the planet and ensure prosperity for all.¹ Each global goal has a number of targets for 2030. Building on the Millennium Development Goals (MDGs), they include new areas of focus such as climate change, inequality, innovation, sustainable consumption and peace. The goals are interconnected – often meeting the targets for one will involve tackling issues more commonly associated with another.

The 17 Sustainable Development Goals (SDGs) present a major political challenge in terms of scope and scale. While some progress is being made on the back of commitments for the MDGs, the pace of action is still far too slow to achieve all goals by 2030. In his July 2017 statement, UN Secretary-General António Guterres urged government leaders to “drive implementation of the SDGs at a faster rate”.

The Global Panel on Agriculture and Food Systems for Nutrition has the view that the slow and uneven progress is due in large part to the continued 'siloed' approach to policymaking, despite an emphasis on the need for cross-sectoral working in the UN Resolution on the 2030 Agenda for Sustainable Development.² The conventional way of tackling health problems, for example, is to focus primarily on health sector investments, just as efforts to target illiteracy generally pay more attention to building schools and training teachers. Sector-specific programmes have been important in shaping today's world but have not generated the synergies that will enable us to address the magnitude of future challenges with the urgency required.

The world of today is characterized by complex, interlinked and dynamic systems which engage all sectors simultaneously, often reaching across national and regional borders. The core problems that sit at the heart of each SDG have become increasingly multi-faceted, and require action at all levels – from household to community to nation – and across multiple

“ The evidence is clear and compelling. Malnutrition in all its forms locks countries into long-term disadvantages, undermining efforts to address poverty and inequality and achieve the SDGs. ”

José Graziano da Silva, Director General, Food and Agricultural Organization (FAO); and Panel Member

sectors. Approaches to defining solutions must step up to the changing nature of the challenges; integrated multi-sectoral strategies are essential.

One critically important policy area that weaves in and out of the sustainable development agenda, touching a dozen or more individual SDGs, is the provision of healthy diets. Invisible in terms of SDG language and not mentioned among the many targets, healthy diets are a foundation underpinning successful progress toward targets in health, agriculture, inequality, poverty and sustainable consumption. Failure to recognize the importance of healthy, high-quality diets in addressing so many development challenges – for example low educational attainment, poor physical growth, low labour productivity and more – risks missing the opportunity for governments and other stakeholders to invest in the essential policy actions which cut across conventional silos.

This policy brief is a call to action for policymakers at all levels to recognize the central role of high-quality diets and nutrition in achieving the 2030 Agenda for Sustainable Development. As the evidence presented in the Global Panel's Foresight Report on Food Systems and Diets³ makes clear, unless world leaders do more to improve diets, everyone will pay a heavy price – in terms of increased mortality and morbidity, economic losses and degradation of the environment, seriously impeding chances for progress across the SDGs.



2. Why does diet quality matter to the SDGs?

Diet quality (see Box 1) is directly linked to SDG2 which aims to “End hunger, achieve food security and improved nutrition, and promote sustainable agriculture”. However, it also supports poverty reduction (SDG1), health and well-being (SDG3), cognitive development and learning (SDG4), reduced inequality (SDGs 5 and 10) and improved work and productivity (SDG8). Diets and food production also interact with patterns of consumption and waste, impact the global climate and affect the use of marine and terrestrial resources (SDGs 12, 13, 14 and 15). But diet quality is not mentioned once in the SDGs.

Healthy diets do not ‘just happen’. Meals represent a common human experience which is nevertheless special to time, place and culture. What people actually eat results from a complex set of interconnected production, marketing and retail systems. What is eaten (or not) is influenced by personal preference, purchasing power, knowledge, social and religious norms, accessibility, advertising and constraints linked to available time and space for preparation. At the same time, what is eaten (or not) has a very significant influence on the global burden of disease (see below).

The failure to deliver high-quality diets is putting a brake on the progress of almost all of the global goals. The need to redress this fundamental gap is the core message of this brief. The following observations reinforce this message:

There is a deepening nutrition crisis. Despite progress in some areas, such as the reduced prevalence of stunting, three billion people from all of the world’s 193 countries (i.e. more than one



in three individuals) currently have low-quality diets (see Box 2 for information on current diets and trends). Over the next 20 years, multiple forms of malnutrition will pose increasingly serious challenges to policymakers:³

- 815 million people currently experience hunger on a daily basis⁵ – and in 2030, there will still be at least 653 million calorie-deficient people.
- More than 2 billion people lack vital micronutrients (e.g. iron, zinc, vitamin A) affecting health and life expectancy.⁶
- The prevalence of overweight and obesity and associated non-communicable diseases (NCDs) – e.g. type 2 diabetes and cardiovascular disease – are increasing in every region, and most rapidly in low- and middle-income countries (LMICs).^{5,7} The number of people affected is projected to increase from 1.33 billion in 2005 to 3.28 billion in 2030.⁸



Box 1. What constitutes a high-quality diet?

A range of criteria can be used to characterize high-quality diets, and are summarized in the Global Panel’s 2016 Foresight report.

According to World Health Organization (WHO), ‘healthy diets’ should:⁴

- Start early in life – notably with breastfeeding.
- Balance intake and expenditure of energy (calories).
- Include fruit, vegetables, legumes, nuts and wholegrains.
- Include at least 400g of fruits or vegetables per day (excluding starchy roots such as cassava and potatoes).
- Limit fat to no more than 30% of total energy intake. There should also be a shift from saturated to unsaturated fats and towards the elimination of industrial trans fats.
- Limit free sugars to less than 10% of total energy intake – or less than 5% for additional health benefits.
- Limit salt to less than 5g per day – to reduce the incidence of hypertension, heart disease and stroke in adults.

Box 2. Dietary data and trends³

Infants and young children: Less than half of all babies aged 0-6 months are being exclusively breastfed as per WHO recommended practice.

Women and adolescent girls: A review of 85 studies from low- and middle-income countries found that the diets of more than half of the young women and adolescent girls surveyed did not meet their micronutrient needs.

General population:

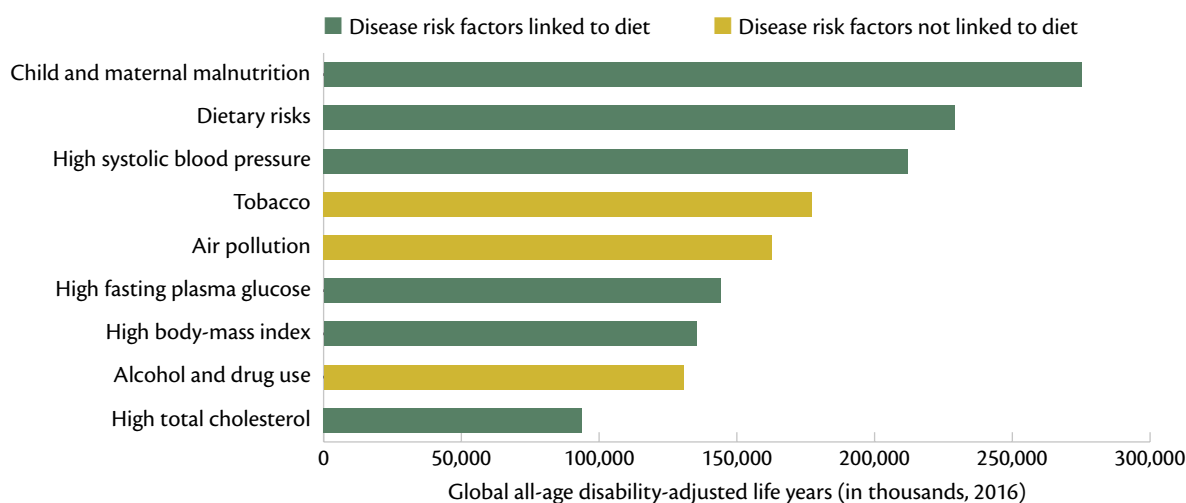
- **Fruit and vegetable** consumption is below WHO recommended levels in every region except East Asia.
- **Vegetable consumption** is lowest in South-East Asia and parts of the European Union. It declined in several regions between 1990 and 2013, including South-East Asia, North America and Latin America and the Caribbean.
- **Trans fat** consumption is highest in South Asia.
- **Ultra-processed food purchases** have levelled off in high-income countries, but are growing rapidly in low-, middle- and upper-middle-income countries.
- **Red meat consumption** in Sub-Saharan Africa and South Asia declined between 1990 and 2013.
- **Sugar-sweetened beverage** levels are higher in North America, Latin America and the Caribbean than in any other region. The upper-middle-income countries are where consumption is growing most rapidly.
- **Salt/sodium** consumption is above WHO recommended levels in East Asia and South-East Asia.

Rising food demand linked to population growth and poverty reduction, combined with climate change, will place increasing stress on food systems, particularly in Africa and Asia. These two continents are expected to be home to an additional 2 billion people by 2050.⁹ If these pressures increase as predicted, malnutrition will affect one in two people worldwide.¹⁰

Six of the top nine risk factors to global health are now related to diet. Major pathways include diet-related NCDs such as type 2 diabetes and cardiovascular disease, as well as nutrient deficiencies associated with maternal and child undernutrition.¹¹ Overall, the risk that poor diets pose to mortality and morbidity is now greater than the risks of air pollution, alcohol, drug and tobacco use combined (see Figure 1). Good nutrition is also essential to the health of the human immune system¹² and poor nutrition amplifies the health consequences of diseases such as HIV/AIDS, malaria and measles.

The effects of poor diets and nutrition risk locking individuals and countries into long-term disadvantage. Child stunting can have life-long effects in terms of sub-optimal cognitive development, ill-health, impaired physical growth and reduced earning potential.¹³ The growing epidemic of overweight and obesity is likewise driving an epidemic of NCDs. The multiple burdens posed by malnutrition in all its forms, underpinned in many cases by poor-quality diets, affects all countries: in 2016, 49% of children under five years who were overweight lived in Asia and 24% in Africa.¹⁴ Importantly, no country has successfully reduced the prevalence of increasing overweight and obesity once it has been allowed to develop, with only two countries – the United Kingdom and Italy – showing signs of stabilization.¹⁵

Figure 1. Six of the top nine risk factors driving the global burden of disease are related to diet.



Source: Global Burden of Disease Study 2016 Collaborators (2017, Table 4).

Note: The graph shows global disability-adjusted life years (DALYs) attributed to level 2 risk factors in 2016 for both sexes combined.



Malnutrition severely impacts the productivity of many countries and, in the long term, threatens inclusive growth. Across Africa and Asia, the estimated impact of undernutrition on gross domestic product (GDP) is 11% every year – more than the annual economic downturn caused by the global financial crisis of 2008-11.¹⁰ The economic losses due to wasting alone have been calculated as US\$4.6 billion in Bangladesh and more than US\$3 billion in Ethiopia and the Democratic Republic of Congo.¹⁶

Despite a steady reduction in the prevalence of stunting among children, the proportion of undernourished people actually rose in 2016. The Global Panel considers that meeting the SDGs without addressing malnutrition in all its forms will be very difficult to achieve. Major efforts will be required to achieve high-quality diets for all. This will be essential both to deliver SDG2 fully and to allow further progress on other SDGs, particularly those relating to poverty, inequality, gender equality and environmental sustainability (see Box 3).

Box 3: Healthy diets and progress on SDGs: Country examples

Egypt

Egypt faces major diet-related public health challenges that have critical implications for development and economic prosperity. Stunting affected 22.3% of children under five in 2015.^{17,10}

At the same time, the country has one of the highest rates of female overweight and obesity in the world. According to the 2015 Demographic Health Survey, half of women aged 15-59 were obese and an additional 26% were overweight.¹⁸ The prevalence of anaemia was also one of the highest in 2013, affecting 34.5% of women of reproductive age.¹⁰

A possible explanation for these trends may lie with the shifts in dietary patterns (towards more highly processed, fatty and sugary foods), increased consumption of food outside the home and limited physical activity.¹⁹ In addition, evidence shows that the subsidy system used to mitigate the impacts of high food prices during economic crises may have discouraged good nutrition by incentivizing over-consumption of cheap, calorie-rich foods and unbalanced diets.²⁰

The considerable burden associated with the health, social and economic costs imposed by all forms of malnutrition is likely to be a major impediment to Egypt's progress in addressing several SDGs: notably SDG1 (eradicating poverty), SDG3 (health and well-being), SDG4 (education), SDG5 (gender equality) and SDG8 (productive employment). The losses associated with undernutrition were estimated at US\$3.6 billion in 2009²¹ (1.8% of its GDP that year). Diet-

related NCDs associated with obesity, such as type 2 diabetes, also continue to put substantial pressure on the country's health system – Egypt ranked among the world's top ten countries in terms of number of adults with diabetes in 2015.²²

Bangladesh

Bangladesh made significant progress in meeting the MDGs.²³ It has achieved impressive gains in key sustainable development indicators (e.g. reducing the proportion of population below the national poverty line, improving child education, decreasing infant mortality, preventing malarial deaths and increasing access to improved water and sanitation).²⁴

The country has also made strong progress on nutrition in the last 25 years. Stunting prevalence in children under five years declined from 55% in 1997 to 36% in 2014.^{25,26} This achievement has been reported as “one of the fastest prolonged reductions in child undernutrition in recorded history”.²⁷ However, limited improvement has been achieved in the quality and diversity of diets which are essential to good nutrition. For example, between 2011 and 2015, there was little reduction in the proportion of households that consumed low-quality diets.²⁸ Despite the achievements made by government to improve the availability of a diverse food supply through improved agricultural production and trade, domestic production in Bangladesh has been unable to meet consumer needs, notably in the production of pulses.²⁹

3. Improving diet quality to meet the SDGs – Turning a brake into an accelerator

Table 1 illustrates the diverse ways in which poor diets and malnutrition act as a brake on the achievement of specific SDGs and highlights actions that could improve diets, enabling governments to accelerate progress for many of the SDGs. In particular, healthier diets will help unlock people’s personal development potential and, more broadly, engender economic productivity and efficiency. Together, these actions will reduce the growing demands for state expenditure in areas such as health and social protection and will permit investments to support higher rates of inclusive economic growth and environmental conservation.

The past few years have seen a marked improvement in how policymakers have begun to prioritize and fund nutrition interventions in response to a range of recent initiatives. Following the first Nutrition for Growth Summit (N4G1) in 2013, world leaders committed to accelerate progress towards achieving the World Health Assembly (WHA) global nutrition targets by 2025. Other commitments have been made through the Scaling Up Nutrition (SUN) Movement and the Second International Conference on Nutrition (ICN2) Rome Declaration

on Nutrition. More recently, the UN General Assembly declared 2016-25 the UN Decade of Action on Nutrition, creating a major opportunity to encourage action on reducing hunger and improving nutrition. SDG2 is itself concerned with ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture, although it does not specifically mention the importance of either healthy diets or well-functioning food systems in meeting the goal. The WHO has also developed an Urban and Peri-Urban Food and Nutrition Action Plan which aims to promote health and quality of life through an integrated, comprehensive food and nutrition policy.³⁰

These are welcome developments, which show that the world is paying more attention to nutrition. However, despite progress in some areas, several key dietary indicators are clearly going in the wrong direction (see Box 2). The Global Panel’s Foresight report shows how multiple forms of malnutrition will pose increasingly serious challenges to policymakers over the next 20 years. Against this background, Section 4 sets out what needs to be done to address the provision of healthy diets within the context of the SDGs.

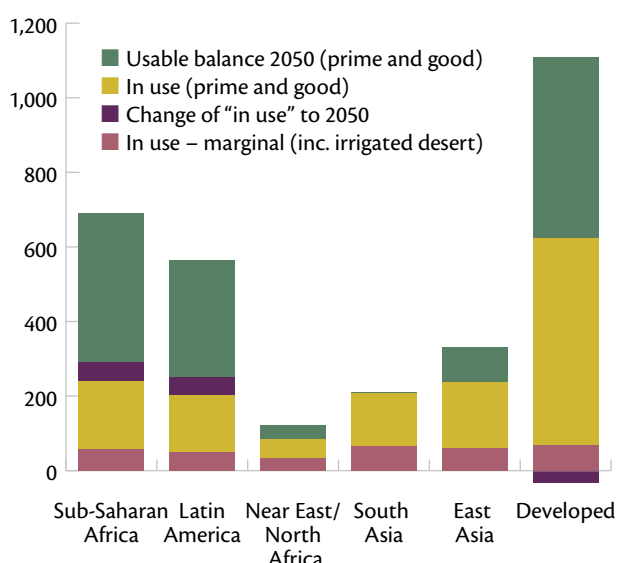
Box 4. Sustainable diets

The current world population of 7.6 billion is projected to increase to 9.3 billion by 2050,⁶⁷ with most of the growth occurring in lower-income countries.⁹ With current patterns of consumption, this means that global food production in 2050 may need to be 60% higher than that of 2005/2007.⁶⁸

At the same time, water and land resources will come under greater stress. According to the FAO, “the net-land under crops may have to increase by some 70 million hectares (ha) by 2050 (increase in the developing countries, decline in the developed).⁶⁸ However, just 13 countries account for 60% of the 1.4 million ha of suitable unexploited land. The distribution of productive land is also very unequal at the regional level (Figure 2).

The global food system already uses around 70% of the world’s extracted fresh water⁶⁹. Renewable water resources are extremely scarce in regions such as Near East and North Africa and Northern China, where they are most needed.⁶⁸ For reasons such as this, the capacity of global agriculture to produce enough food for the growing population is increasingly being questioned. Climate change is also expected to increase further the pressure on the production of staple crops and nutrient-rich foods.⁷⁰

Figure 2. Land in use at present and increase to 2050.



Source: Alexandratos & Bruinsma (2012, Figure 1.7)



Table 1. Diet quality and delivery of the SDGs

SUSTAINABLE DEVELOPMENT GOALS	HOW POOR DIETS AND NUTRITION TODAY ARE IMPEDING PROGRESS IN MEETING THE SDGs	HOW HEALTHY DIETS AND BETTER NUTRITION CAN CONTRIBUTE TO MEETING THE SDGs
 <p>SDG1. End poverty in all its forms everywhere</p>	<p>The poor are at particularly high risk of malnutrition, but malnutrition also fuels greater poverty.</p> <p>According to the 2017 Global Hunger Index, it is those “with the least social, economic or political power – those who are discriminated against or disadvantaged, including women, ethnic minorities, indigenous people, rural dwellers, and the poor – who suffer from hunger and malnutrition”.³¹</p> <p>At the same time, malnutrition fuels greater poverty. For example, stunting affects cognitive development with implications for future earning potential. According to World Bank estimates, a 1% loss in adult height due to childhood stunting is associated with a 1.4% loss in economic productivity.³² Evidence also suggests that stunted children on average earn 20% less as adults compared to non-stunted individuals.³³</p>	<p>Ensuring high-quality diets for the poor would deliver diverse benefits for example through gains in labour productivity and future earning potential.⁷⁷</p> <p>In terms of household income, each added cm of adult height is associated with an almost 5% increase in wage rates.³⁴</p>
 <p>SDG2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	<p>Food security and improved nutrition go hand in hand.</p> <p>Neither can be realised without well-functioning food systems which prioritize diets that deliver the availability and accessibility of safe, affordable, and nutritious foods for all. Fixing today's failing food systems will require coordinated efforts which go beyond increasing agricultural production of staple crops to include, for example, food transformation and consumer demand, market and trade systems, and the food environment. The 2014 ICN2 Rome Declaration on Nutrition places emphasis on the need for “coherent public policies from production to consumption and across relevant sectors to provide year-round access to food that meets people’s nutrition needs and promote safe and diversified healthy diets”.³⁵</p> <p>Without accelerated progress, the SDG of zero hunger by 2030 will not be met, nor will current growth rates in levels of overweight or obesity be brought under control for healthy lives (SDG3) to be achieved.⁵</p>	<p>Delivering high-quality diets will engender a healthier and more productive workforce, leading to increased prosperity, reduced hunger and better food security.</p> <p>A well-nourished workforce is essential for a productive, diverse and more prosperous agricultural sector. This workforce currently involves more than a billion workers.³⁶ This will change in the coming decades as there will be fewer people employed on farms and more in the post-farm-gate food sector.</p> <p>More generally, healthy diets will continue to be essential for building the kind of urban and rural workforces needed in the 21st century: well-educated (SDG4), capable of developing and using new technologies (SDG12) and able to participate actively in changing economies and societies (SDG8).³⁷</p> <p>Food and nutrition security – the result of adequate access to healthy diets – will also promote political stability and the development of peaceful societies (SDG16).³⁸</p>

SUSTAINABLE
DEVELOPMENT
GOALS

HOW POOR DIETS AND NUTRITION
TODAY ARE IMPEDING PROGRESS
IN MEETING THE SDGs

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SDG3. Ensure healthy lives and promote well-being for all at all ages

Poor diets and malnutrition fundamentally affect health and well-being through the lifecourse.

Six of the top nine risk factors driving the global burden of disease are now related to diet.¹¹

Wasting and low birthweight affects a child's survival rate³⁹ – sub-optimal breastfeeding alone is responsible for almost 12% of total deaths.⁴⁰

Both stunting and obesity place children in a lifetime of increased risks of NCDs such as type 2 diabetes and hypertension.^{41, 42}

Poor nutrition in pregnant women can impair foetal development with possible lifetime effects.⁴³ For example, maternal protein restriction during pregnancy increases the risk of higher systolic blood pressure in childhood⁴⁴ and of cardiovascular disease later in life⁴⁵.

Good nutrition significantly reduces the risk of morbidity and mortality for a range of diseases affecting people of all ages.¹¹

Good maternal nutrition reduces risks of low birth weight and promotes nourishment through breastfeeding – both of which are important to ensure new-born babies get off to the best possible start in life and avoid long-term health impacts.^{46, 47}



SDG4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all

Poor nutrition significantly impairs a person's ability to benefit from education.

Stunting is a well-established risk marker for poor child development. Stunting before the age of two years predicts lower cognitive and educational outcomes in later childhood and adolescence.^{48, 40}

Recent longitudinal studies from Brazil, Guatemala, India, the Philippines and South Africa, showed that stunting in children under two years was associated with one year less in school, compared to non-stunted individuals.⁴⁹

Iron, iodine and other micronutrient deficiencies, which negatively impact cognitive development, affect about 40% of preschool children and 2 billion people worldwide.⁵¹

Good nutrition supports better education, which leads to improved dietary and health choices, which in turn leads to better birth outcomes and enhanced education for the next generation.⁵⁰

Improving linear growth for children under two years by one standard deviation adds half a grade to school attainment.⁴⁹

Providing nutritionally balanced school meals with complementary nutrition education and health measures can deliver improved school performance, and nutrition literacy as well as employment and income in later life.⁷⁷



SDG5. Achieve gender equality and empower all women and girls

Poor female nutrition early in life impacts learning potential, increases reproductive and maternal health risks and reduces productivity.

Women in many low- and middle-income countries typically eat a lower quantity and variety of nutritious foods than their male counterparts – even though, at specific stages in the lifecycle, women require more dietary iron than men and more protein when pregnant or breastfeeding.^{52, 53}

In a recent major review of diet quality in adolescent girls (10-20 years) in a wide range of LMICs, over half of the young women and adolescent girls surveyed were not able to meet their micronutrient needs.⁵⁴

Ensuring high-quality diets for girls and female adolescents would help unlock their potential to perform well at school and in the workforce.^{55, 3}

Table 1. Diet quality and delivery of the SDGs (continued)

SUSTAINABLE DEVELOPMENT GOALS	HOW POOR DIETS AND NUTRITION TODAY ARE IMPEDING PROGRESS IN MEETING THE SDGs	HOW HEALTHY DIETS AND BETTER NUTRITION CAN CONTRIBUTE TO MEETING THE SDGs
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p> <p>SDG8. Promote sustained, inclusive and sustainable growth, full and productive employment, decent work for all</p>	<p>Malnutrition, in all its forms, carries huge direct and indirect costs to individuals, families and communities.</p> <p>The cost to low-income nations of productivity foregone due to undernutrition has been estimated as 3 to 16% (or more) of GDP.⁷⁷ Stunting alone can reduce a country's GDP by 3%.³²</p>	<p>Healthy diets for all would reduce all aspects of the triple burden of malnutrition – and stimulate productivity through healthier workforces.</p> <p>The goal of eliminating malnutrition in Africa and Asia could unlock the equivalent of 11% in lost GDP each year – allowing greater investment in policy areas that promote growth – for example, education and training, infrastructure investment, sanitation, water and healthcare.³</p>
 <p>10 REDUCED INEQUALITIES</p> <p>SDG10. Reduce inequality within and among countries</p>	<p>Children who are stunted today will be disadvantaged through their lifetimes compared to healthy individuals. Worse, the effects of stunting can be passed from one generation to another.</p> <p>As noted above, stunting is associated with diminished cognitive development and learning capacity, reduced earnings and increased risks of nutrition-related chronic diseases, such as type 2 diabetes, hypertension and obesity in future.^{41, 48, 40}</p> <p>Girls who are born malnourished and become stunted as children often grow up to become malnourished mothers who in turn give birth to malnourished babies.⁴⁰</p> <p>In 2016, 66% and 77% of all stunted and wasted children under five, respectively, lived in lower-middle-income countries, even though only 47% of all children under five lived in these countries.⁵⁶ Without action, current global trends project 127 million stunted under-fives in 2025.⁵⁷</p>	<p>Addressing stunting through better diets and nutrition would help address inequality as stunting disproportionately affects low-income groups.⁷⁷</p> <p>It would also help break the cycle whereby poor nutrition leads to poorer cognitive development and reduced earning potential through life, which in turn, makes it more difficult for the poor to have adequate nutrition.³</p>
 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> <p>SDG12. Ensure sustainable consumption and production patterns</p>	<p>The kinds of foods we eat and how they are produced have a wide range of impacts on the environment. At the same time, climate change and natural resource depletion are placing multiple stresses on food systems.</p> <p>In addition, an estimated one third of all food produced – equivalent to 1.3 billion tonnes, worth around US\$1 trillion – is wasted each year by consumers and retailers or through spoilage arising from poor transportation and harvesting practices.⁵⁸</p> <p>Over-consumption of food in general, and calorie-dense foods in particular, is a key driver of overweight and obesity.⁵⁹ The extra food production needed to meet this demand places unnecessary stress on land, water, energy and other natural resources – the food sector is responsible for around 30% of total global energy consumption.⁶⁰</p>	<p>Reducing food waste and over-consumption would have an immediate and direct effect on the delivery of SDG12.</p> <p>Food systems that enable consumers to make healthy dietary choices will encourage sustainable consumption practices, limit rises in overweight and obesity, and reduce the many stresses food production, transport and storage place on the environment.^{3, 61}</p>

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SDG13. Take urgent action to combat climate change and its impacts

Food production, and food systems more generally, have a profound effect on greenhouse gas emissions.

It has been estimated that the global food system, from the manufacture of fertilizer to food storage and packaging, is responsible for up to one third of all human-caused greenhouse gas emissions.⁶² Conversely, climate change and extreme weather events, as well as the earth's compromised ecosystems, will increasingly affect food security and food commodity prices, with consequences for diets and malnutrition.⁶³

A projected 51% increase in food-associated greenhouse gas emissions by 2050 would be reduced to a 7% increase if diets in line with the WHO and World Cancer Research Fund (WCRF) dietary guidelines were adopted globally.⁶⁴

Research on crop traits associated with nutrient quality would support the objective of achieving agriculture resilient to climate change.⁶²



SDG14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

SDG15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

The world is facing a nutrition crisis as it struggles to feed and nourish sustainably an increasingly large and more urbanized population – an extra 2.5 billion will live in towns and cities by 2050.⁶⁵

The resulting increases in food demand and changing dietary choices are driving food production, which in turn, is placing ever greater pressures on the earth's land use and ecosystem services, notably water supply, soil quality, biodiversity and the health of the oceans and marine resources (See Box 4).

Better informed consumer demand for high-quality, diverse, safe diets can be used to stimulate demand for food products linked to sustainable production.⁶⁶

There is also a growing consensus on the need to price scarce resources, such as water to incentivize efficient resource use.³

A global analysis of the carbon and water footprint of different foods concludes that there are many synergies between a diet that is both good for health and the environment, as long as the most sustainable production choices are made for each food group.⁸²



4. Priorities for action

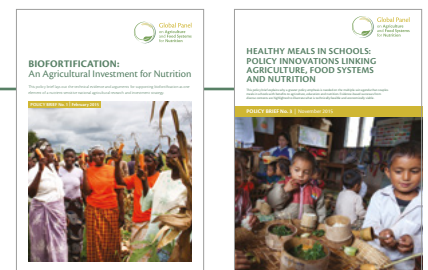
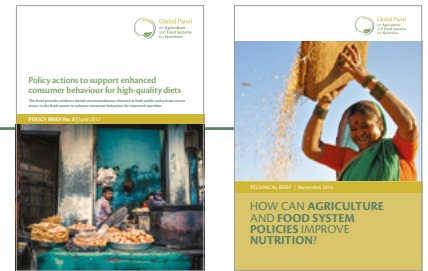
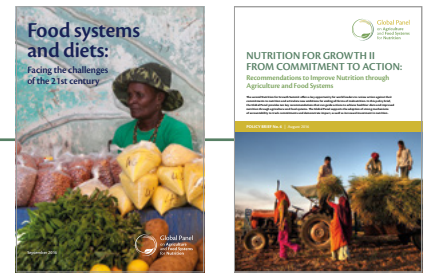
While improving diet quality is not highlighted in the SDGs as a specific goal or target, making progress in this area is essential, not just for SDG2 but for the 2030 Sustainable Development Agenda as a whole (as Table 1 illustrates). Taking action to deliver healthy diets will require concerted action across many different sectors.

For example, improving dietary diversity will require more than simply increasing the diversity of crops produced. Actions across the food system are needed to promote the production and affordability of nutrient-dense foods (especially fruits and vegetables), address issues of food safety, reduce food waste, shape consumer demand, and increase and stabilize consumers' purchasing power. These actions will require policymakers to redouble their efforts to "connect and break down traditional sector silos" as recommended by the 2030 Sustainable Development Agenda resolution. High-level leadership will be required to bring together diverse parts of governments to achieve the necessary synergies.

Because food systems extend beyond national borders, policies and strategies to deliver healthy diets will need to be developed at regional as well as national levels. For example, agreements at the regional level can harmonize norms and standards for food safety and food fortification. The delivery of healthy diets at country level could benefit substantially from these forms of international partnerships (SDG17).

While policies and actions will depend heavily on local contexts, the Global Panel recommends the following priorities for policymakers to accelerate progress across the SDGs and highlights links to previous Panel briefs which expand on the key issues:

- 1 **Pay explicit attention to diet quality in developing plans to meet the Sustainable Development Goals.** Putting diet quality³ at the centre of national plans will help to release the brakes on efforts to achieve the 2030 Sustainable Development Agenda as a whole and facilitate progress on multiple SDGs. This will require consultation and collaboration among actors in different sectors (health, education, agriculture, industry and trade) and the full support of leaders with different perspectives from government, business, civil society and the international community.⁷¹
- 2 **Adopt a food systems approach to improving diets and meeting the SDGs.** Efforts to improve diet quality will require coordinated action across several policy domains. For example, a consumer behaviour policy⁶⁶ that promotes nutritious foods will be more successful if agricultural policies have improved production of those foods, and market or social protection policies have improved access, making them more widely available and affordable. This requires policymakers to identify evidence-based and coherent interventions across the food system⁷² as well as to plan and cooperate across traditionally isolated parts of government, while also embracing the private sector.
- 3 **Focus on improving diets for infants, young children, adolescent girls and women.** Policies to secure diet quality for infants and young children are woefully inadequate in many countries, leaving many with life-long implications for health and cognitive development. Women and adolescent girls are particularly at risk from the health impacts of low-quality diets, while the quality of diets in pregnancy is important for foetal development and the health of newborn.⁷³
- 4 **Address barriers and shocks impeding access to healthy diets for vulnerable groups.** The 2030 Sustainable Development Agenda makes an explicit pledge to “leave no one behind”. Safety net programmes can play an important role in protecting the diets of vulnerable consumers, although these should not be seen as a substitute for addressing the underlying causes of food insecurity. Food price volatility,⁷⁴ which is a particularly serious problem for poor urban households,⁷⁵ threatens access to diverse and nutrient-dense foods. Public and private investments in efficient food markets and trade systems, transparent market information and stable food reserves are fundamental to reducing price volatility.
- 5 **Widen national policy approaches to the interpretation of SDG2 to enable policy action to ensure well-functioning food systems which deliver safe and healthy diets for all, and which address all forms of malnutrition.**⁷⁶ In particular, policy development needs to give careful consideration to underweight, micronutrient and vitamin deficiencies, and the growing challenge of overweight and obesity which is affecting all countries. The latter is a particular concern in view of the severe burden of associated non-communicable diseases. Tracking the proportion of national budgets⁷⁷ allocated across different sectors to improve high-quality diets and nutrition is recommended.
- 6 **Step up efforts to collect and report data on diet quality.** If policymakers are unable to measure the elements that contribute to diet quality and identify who has access to high-quality diets, then progress will be impeded. Seeking the appropriate metrics⁷⁸ for national government action is a priority above and beyond the SDGs. Dietary diversity is strongly associated with both the nutrition and socio-economic status of women and children^{79, 80, 81} and can be tracked using metrics such as the Minimum Dietary Diversity for Women, and Infant and Young Child Minimum Dietary Diversity indicators. New diet quality indicators that measure the consumption of items such as sugar, salt and trans fats are urgently needed to take account of the risks of non-communicable diseases.



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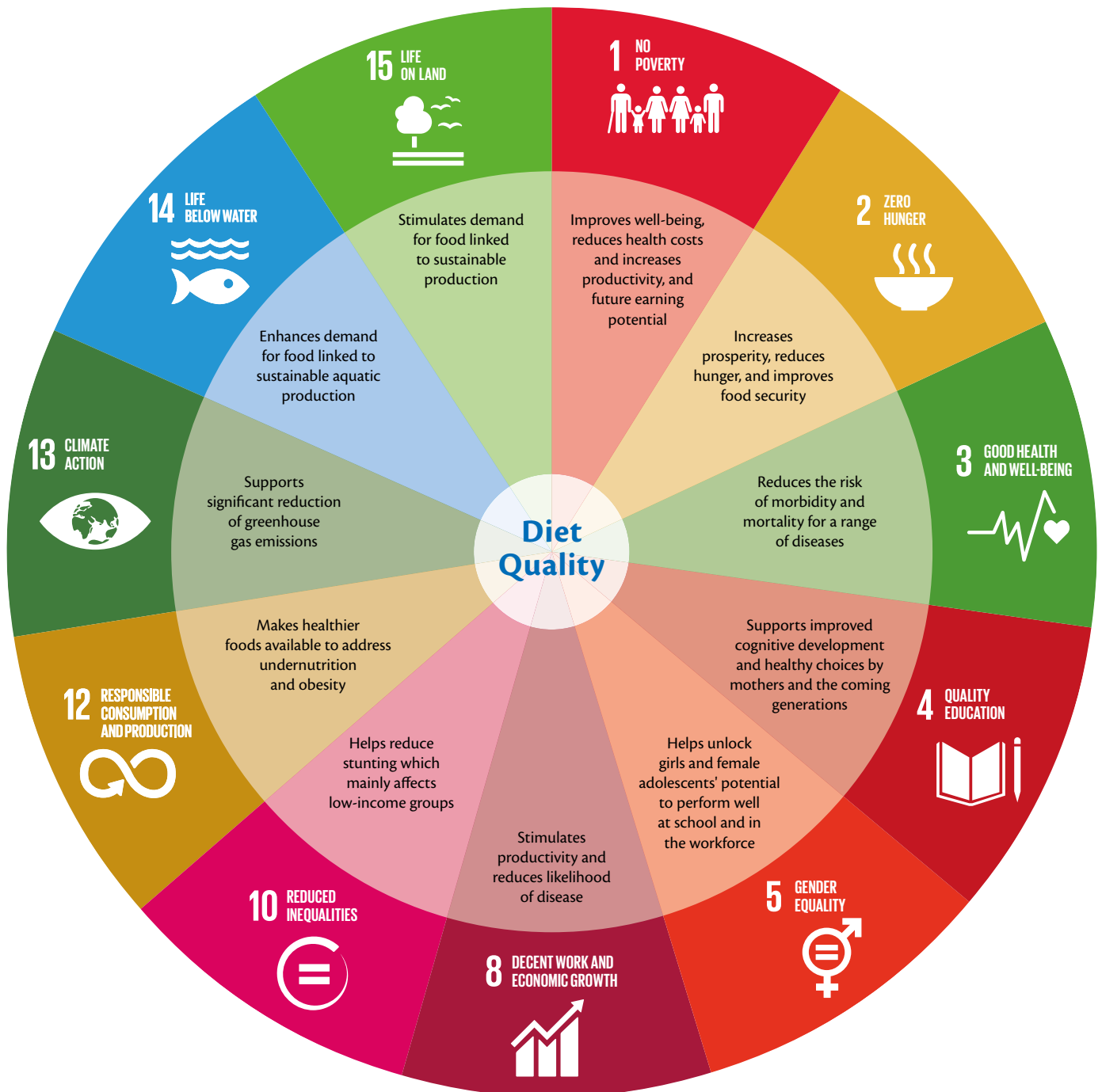
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Meeting the SDGs: Why diet quality matters

The Global Panel's policy brief *Healthy diets for all: A Key to Meeting the SDGs* calls for policymakers at all levels to recognize the central role of high-quality diets and nutrition in achieving the 2030 Agenda for Sustainable Development.



The Global Panel on Agriculture and Food Systems for Nutrition supports the Sustainable Development Goals.

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