2017 HLPF Thematic review of SDG2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture<sup>1</sup>

## 1. Status of progress on SDG 2

#### i. Overview

SDG2 highlights the complex inter-linkages between food security, nutrition, rural transformation and sustainable agriculture. SDG2 links the eradication of hunger and of malnutrition to a transformation in agriculture and food systems, and to the empowerment of rural people, women and men alike, as critical agents of change. Agriculture plays a key and direct role in achieving SDG2, but it is also central to achieving SDG1 on eradicating extreme poverty, and several other targets, especially those related to health, water, biodiversity, sustainable cities, sustainable energy, and climate change.

SDG2 and SDG1 are intrinsically linked. Over 70% of the world's extreme poor live in rural areas. They rely on agriculture as their main source of living, struggle to access productive resources, and are highly vulnerable to climate and other shocks. They are often the first victims of natural resources degradation, and are impacted by crisis more severely than any other segment of the population.

The world is facing an unprecedented number of protracted crises, where progress to end poverty and food insecurity is threatened or reversed, and where prolonged, targeted support is needed to address immediate needs as well as to enhance the resilience of populations and ecosystems.

Achieving the "zero hunger" vision under Agenda 2030 also requires social protection and food systems that are economically efficient, socially inclusive, and environmentally sustainable. To ensure that everyone has access to sufficient nutritious food today and tomorrow, requires widespread promotion of sustainable agriculture and conservation of biodiversity; enhanced livelihoods of smallholder farmers, including fishers, foresters and pastoralists; and increased investments in agriculture, markets, agribusinesses and related infrastructures.

In a context of rapid urbanization, accelerating efforts around SDG1 and SDG2 also requires efforts to improve urban-rural linkages through investments in food systems capable of supplying urban

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markets with nutritious and affordable food and expanding economic opportunity for rural and periurban populations along the supply chain.

#### ii. Current situation and lessons learned

Countries are following diverse pathways to "domesticate" the SDGs. The strong interlinkage between goals and targets presents challenges which many governments are addressing through the establishment of national platforms for developing more integrated programmes and policies. Surveys conducted in early 2017 by DOCO and FAO among others indicate that countries are advancing quickly in the process of selecting national targets under the SDGs. Coordination bodies have been established in most countries, and, in LDCs, local UN offices are providing substantial support to the SDG assessment and implementation processes.

An important follow-up action has been the decision of the UN General Assembly to declare 2016-2025 the UN Decade of Action on Nutrition. The Nutrition Decade capitalizes on the clarion call of targets 2.1 and 2.2 of the 2030 Agenda, and affords an unprecedented opportunity for commitments to accelerate evidence-based action at all levels, enhance collaboration across all stakeholders, and to improve monitoring and shared learning for achieving the nutrition-related SDG targets. The Committee on World Food Security (CFS) has also developed policy products aimed at supporting countries in achieving SDG2 (and others) through cross cutting and comprehensive policies related to food security, nutrition and sustainable agriculture.

The surveys also indicate that countries are experiencing difficulties in addressing the interactions between SDG2 and other goals and targets. A key risk is that sectoral perspectives could undermine the holistic and integrated development vision of the 2030 Agenda and lead to business-as-usual. There is also a need to further strengthen national capacities for food security assessments, statistical capacity and data generation/collection for decision-making. Greater effort may be required of partners supporting governments to ensure that planners recognize the large contribution SDG2 targets can make to a variety of national objectives.

Despite important progress, the current pace and scope of implementation is unlikely to promote the transformational change needed to realize the objectives of SDG2. According to the most recent data and analysis presented in the State of Food Insecurity in the World (SOFI) 2015, if current trends continue, SDG2 targets will not be achieved in many parts of the world. Large segments of the world's population, particularly in sub-Saharan Africa and South Asia, will remain under- or malnourished by 2030 and even by 2050.

Similarly, the proportion and number of children affected by stunting are decreasing but not fast enough, particularly in Africa, in order to attain the World Health Assembly's global target of a 40 percent reduction in the number of stunted children by 2025. Estimates published in the Lancet earlier this year indicate that improving rates of breastfeeding could prevent 820,000 child deaths each year. Breastfeeding decreases the prevalence of overweight or obesity later in life by 26%. In 2015 global child stunting, wasting and overweight rates were 23% (164 million), 7.4% (50 million) and 6.2% (42 million).

At the same time, on current trends, the number of children affected by overweight will continue to increase rapidly, putting considerable burden on development and health efforts. Greater efforts are also required to ensure agricultural producers, especially women, have access to land, finance, technology, markets, information and other means of implementation necessary to implement sustainable agricultural practices and improve livelihoods, incomes and resilience.

The 2030 Agenda recognizes peace is a fundamental condition for sustainable development and the eradication of hunger. The humanitarian system currently faces the prospect of responding to four conflict-induced famines, while also facing protracted crises and mass population movements. While the four contexts are distinctive and unrelated, there are some commonalities: persistent conflict and drought are among the principal drivers of food insecurity.

Conflict is the major cause of the historically unprecedented levels of humanitarian need in the world today. More than 125 million people are currently directly affected by humanitarian crises, over 65 million are displaced by conflict, out of which 21 million are refugees, 41 million internally displaced, 3 million seeking asylum. In addition, each year an average of 25 million people flee natural disasters. Impacts of such massive displacement reverberate strongly across the globe. Addressing the root causes of conflict, especially by ensuring secure access to land and water, as well as other essential services, is crucial for establishing the durable conditions for peace.

Protracted crises call for specially designed and targeted assistance that addresses the immediate need to save lives and alleviate suffering by meeting survival needs, while also boosting resilience and the capacity to absorb, prepare for, and prevent crises. . To ensure no-one is left behind, greater collaboration between development and humanitarian actors in pursuit of these collective outcomes is required.

Improving resource mobilization and allocation is crucial for effective implementation of the portfolio of policies, instruments and programmes that are needed to achieve SDG 2. The resources and tools currently available are not adequate for meeting the long-term needs of the poor and vulnerable populations. FAO, IFAD and WFP estimated in 2015 that additional annual investment of USD 265 billion is needed to defeat extreme poverty and hunger by 2030, as compared to a "business as usual" scenario. This amount includes investment in both social protection programmes (USD 67 billion) and pro-poor productive activities (USD 198 billion). While middle income countries can mobilize these investments out of their own resources, low-income countries will require assistance. There is also need for the international community to invest more in recovery from disasters and conflicts, and in the financing of risk reduction, and address the drivers of vulnerability and risk.

Robust, accountable multi-stakeholder platforms and partnerships are needed to support holistic, well-balanced approaches to achieving the SDG2 and related targets. Enhanced governance and multi-stakeholder coordination mechanisms should include inter-sectoral dialogue and support institutional development that incentivizes stakeholders to work together to develop common solutions towards shared objectives. These multi-stakeholder mechanisms can also be used to identify and mobilize the capacities, information, technologies, financial requirements and access to

productive resources that are needed to implement and sustain the agreed strategies. UN institutions can play a unique role as a trusted and neutral facilitator that provides and upholds inter-governmentally agreed norms and standards, monitors commitments and tracks results, and promotes institutional adaptation and strengthening.

SDG2 monitoring at country level offers opportunities to focus efforts at country level, and to inform and shape policy processes. Preliminary analysis of country experiences show that many countries are focusing their attention on monitoring and reporting and are asking for support in adapting their statistical capacity to the new challenges. Regular national assessments using the new indicators can help direct attention to the policy adjustments and associated programmes that are needed to achieve the 2030 Agenda. This shows the potential power of regular, timely and expanded measurement under the SDGs to contribute to transformational change. Some SDG 2 indicators are relatively well established, such as for food security and nutrition, but more accelerated efforts need to be made to develop and apply cost-effective monitoring and reporting methods for others, especially for smallholder income and productivity, and sustainable agriculture.

## 2. SDG2 implementation - Progress on targets<sup>2</sup>

#### **Target 2.1 Ending hunger**

The proportion of undernourished (hungry) people in the world, as measured by the prevalence of undernourishment (POU) indicator, declined from 15 per cent in 2000-2002 to 11 per cent in 2014-2016, but more than 790 million people worldwide still suffer from hunger. Another measure, the Food Insecurity Experience Scale (FIES) provides estimates about the **adequacy of people's access to food**. The FIES snapshot in 2015 shows that 1 in 5 people in the world is experiencing moderate or severe food insecurity, of whom approximately 650 million -1 in 11 - suffer from severe food insecurity. Food insecurity rates appear to be slightly higher among women than men. People in conflict affected states are up to three times more likely to be undernourished than those who are living in more stable developing countries.

Harmful effects of climate change as well as persistent political instability and conflict result in increased food insecurity and malnutrition. Africa suffers from the highest levels of food insecurity, with close to half the population experiencing moderate or severe levels of food insecurity and more than one in five reporting experiences that indicate a condition of severe food insecurity. Without dedicated efforts to improve access to food, including through inclusive governance and shock-responsive social protection systems, climate and conflict risks could undermine global progress in achieving SDG2.

## **Target 2.2 Ending all forms of malnutrition**

Globally in 2016, 7.7% or 51.7 million of children under five years old were wasted (weight-for-height below -2 SD of the WHO child growth standards median). This prevalence indicates that the

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<sup>&</sup>lt;sup>2</sup> See Annex I for SDG2 targets

World is not meeting the global target, which is to reduce and maintain wasting below 5%. In Asia, 9.9% of children (or almost 36 million) are wasted. In Africa, 7.4% (or 14 million) are wasted.

Child stunting portrays linear growth and measures long-term growth faltering. If current trends continue, there will be 130 million stunted children by 2025, about 30 million above the global target, which is 40% reduction in numbers of stunted children compared to a baseline of 165 million in 2012. Currently, 59 million children that are stunted live in Africa, 87 million in Asia, 6 million in Latin America, and the remaining 3 million in Oceania and developed countries.

Obesity in adults nearly doubled between 1980 and 2014; in 2014 11% of men and 15% of women were obese. The prevalence of overweight and obesity is rising rapidly particularly in low- and middle-income countries, with a small difference between the richest and poorest in most countries. Most overweight children under 5 live in low- and middle-income countries, and the increase in overweight prevalence extends to adults, with maternal overweight reaching more than 80 percent in some high-burden countries.

## Target 2.3 Doubling productivity and incomes of small-scale food producers

Small farms produce a significant proportion of the food in the world. Although global numbers on this contribution are not readily available, numbers from household surveys for about 20 developing countries indicate that small farms run by families may produce above 60 or even 70 percent of the food produced in these countries.

Many small farmers and their households are themselves poor and food insecure, at risk of malnutrition, with limited access to markets and to productive assets and services. They are vulnerable to shocks and their economic choices are highly constrained. Tackling the multiple challenge of producing more food, in term of quantity, diversity and quality, creating more remunerative work, reducing rural poverty, enhancing food security and nutrition and preserving the natural resource base should therefore consider small family farmers, with a particular focus on women, as key targets in agriculture policies. Yet, in many cases agriculture policies do not differentiate between different types of farmers and, by focusing on production targets, tend to favour larger holdings.

Available evidence is limited, and urgent, scaled- up action is required to characterize small and medium producers. More work is also needed to produce comprehensive data on small-scale food producers' agricultural productivity, livelihoods, market activities, and use of natural resources, especially in the poorest areas. Disaggregation by gender should be a priority.

### Target 2.4 Sustainable food production systems and resilient agricultural practices

Agriculture occupies more than one-third of land in most countries of the world and is a major consumer of biodiversity, but if managed sustainably agriculture can also contribute to important

ecosystem functions. These include climate change resilience and mitigation, maintenance of water quality, erosion control, biological pest control and pollination.

However, today, 33 percent of land is moderately to highly degraded, and conditions are getting worse in far more cases than they are improving. An estimated two-thirds of the global population – over 4 billion people – live in areas with severe water shortages for at least one month each year, and a growing number of regions are facing water scarcity due to excessive water use in agriculture. Groundwater is being depleted, polluted, or salinized in ways disproportionately affecting the poor and vulnerable. The global extent of wetlands is estimated to have declined between 64-71% in the 20th century, and wetland losses and degradation continue worldwide.

Agricultural greenhouse gas emissions from crop and livestock production grew by 14 percent between 2001 and 2011. It is estimated that 20-25 percent of total greenhouse gas emissions are directly caused by agriculture, including deforestation. In return, higher temperature and increased climate variability and weather-related disasters affect agriculture and threaten the stability of food prices. Smallholder farmers in developing countries are the most at risk, as their sensitivity to extreme events is usually low. In its 2014 Assessment, the IPCC estimates that climate change could increase the risk of hunger and malnutrition by up to 20 percent by 2050. The likelihood of increased variability and extreme events means that management of risk, both locally and internationally, is crucial. The Paris Agreement highlights the need to enhance early warning systems, emergency preparedness, measures to address slow-onset events, comprehensive risk assessment and management, climate risk insurance, and the resilience of communities, livelihoods and ecosystems. Partnerships and knowledge sharing are critical to drive positive change.

Countries are progressively integrating principles of sustainability in their agriculture policies and programmes. The 2030 Agenda offers line agencies an opportunity to look at agriculture through the lens of the multiple economic, social and environmental functions it performs, and to develop tools and incentives that balance trade-offs between the different dimensions of sustainability. Better tools and evidence are urgently needed to monitor progress towards sustainable agriculture and resilient food systems.

#### **Target 2.5 Maintaining genetic diversity**

Biodiversity is key to food security and nutrition, and to ensuring sustainable increases in agricultural production. Genetic resources provide the material for selection on higher productivity and lower use of chemical inputs, resulting in less depletion of natural resources. It is particularly important as a tool for adaptation of food production to climate change, including higher temperatures, less water, increased salinity, etc. The differences in nutrient content between species and varieties can be used to fight malnutrition, including micronutrient deficiencies.

The CBD's Cancun Declaration (2016) expresses concern over the negative impacts on biodiversity caused by degradation and fragmentation of ecosystems, unsustainable land use changes, overexploitation of natural resources, illegal harvesting and trade of species, introduction of invasive alien species, pollution of air, soil, inland waters and oceans, climate change and desertification. Parties committed to mainstreaming of biodiversity across agricultural sectors.

SDG target 2.5 focuses on 3 issues: maintaining genetic diversity for food and agriculture through sustainable use and development/breeding, conservation in case the resources are no longer used, and ensuring access and benefit sharing.

The indicator for plant genetic resources addresses the state of ex-situ conservation, which is most easy to measure because of well-documented genebanks, and assumes that genebanks are a sufficient representation of the diversity found in farmers' fields. At the end of 2016, seeds and other planting materials of 4.7 million accessions of plant genetic resources for food and agriculture (PGRFA), including cultivars and crop wild relatives (CWR), were conserved in 602 genebanks of 82 countries and 14 regional and international centres. Increases occurred in all the regions, with the highest in accessions being in Africa and the Oceania. However, significant scope for safeguarding CWR and enhancing the required national capacities still remain especially as their natural habitats are increasingly under threat.

For animal genetic resources, the risk status of reported breed populations in the field is assessed in the indicator. As of February 2017, across the world, when excluding extinct breeds, 20% of breeds occurring in only one country are classified as at-risk, 13% as not at-risk; and 67% of unknown status. With the exception of Northern America and Europe, the risk status of at least 86% of local breeds is considered to be unknown. Compared to the results from 2016, the percentage of breeds with unknown risk status increased in 2017 (65% in 2016) while the percentage of breed not at risk decreased (16% in 2016) and the percentage of breeds at risk remained stable. The high degree of uncertainty in these results show the urgent need for improved collection of national livestock census data on breed level.

#### **Target 2.a Increasing investments**

Accelerated growth in the agricultural and rural economies is essential for breaking the vicious cycle of extreme poverty, undernourishment and malnutrition. Economic development and public investment in agriculture are highly correlated. Those parts of the world where agricultural capital per worker and public investments in agriculture have stagnated are the centres of extreme poverty and hunger today.

Farmers are the largest investors in agriculture in developing countries and must be central to any strategy for increasing investment in the sector, but if they are to invest more in agriculture they need a supportive policy environment based on economic incentives and ancillary public and private investments in infrastructure, market development, and essential services. Public sector expenditures are essential to address market failures and encourage development of the productive capacities of the agricultural and rural households.

Yet, the gap between agriculture's contribution to the economy and its share of government expenditures is increasing: the agriculture orientation index (AOI) – which measures agriculture's share of government expenditures relative to its share of GDP — fell from 0.38 in 2001 to 0.24 in 2013 and 0.21 in 2015 worldwide. For the 2013-2015 period, the AOI was highest in North America and Europe (0.39), followed by Western Asia and Northern Africa (0.38) and Eastern and Southeastern Asia (0.37); and lowest in Sub-Saharan Africa (0.17) and Latin America and the Caribbean (0.15).

The widening gap between agriculture's contribution to the economy and its share of government expenditures cannot be offset by increasing ODA. Though Total Official Flows (TOFs) (official development assistance plus other official flows) to the agriculture sector has substantially increased in both relative and absolute terms between 2006 and 2015, the increase, USD 5 billion, cannot offset the decline in national expenditure in agriculture. The upward trend of allocating TOFs to agriculture reflects increasing recognition of the critical role agriculture can play as an engine for sustainable development, consequently achieving SGDs.

#### Target 2.b Correcting and preventing trade restrictions and distortions

WTO decided to eliminate export subsidy for agricultural commodities at its 10th Ministerial Conference in Nairobi in December 2015. The decision calls for abolishing of all sorts of export subsidies, including export credit, export credit guarantees, or insurance programs for agricultural products. Estimates on agricultural producer support as a measure of protection reveals a slow move towards less support to agriculture, paving the way for a levelling of global agricultural trade. Taking the case of EU (28 countries) and the USA, agricultural producer support has declined sharply from an average of 27.77% of gross farm receipts in 2000 to as low as 14.18% in 2015.

# Target 2.c Ensuring the proper functioning of food commodity markets and their derivatives

Improved functioning of markets through better monitoring systems and improved access to market and commodity related information is being addressed through strengthening of existing tools and better dissemination of information available. This includes WTO monitoring and mandatory notifications on domestic support, complemented by policy analysis and information collection on policy environments conducive to improved market functioning. Monitoring of food prices is provided by publicly available sources including: food price index (FAO-FPI) monitoring prices monthly, with trends analysed biannually by the Food Outlook publication; reporting on food import bills is provided quarterly by the Crop Prospects and Food Situation publication; and quarterly WFP Global Market Monitor reporting on price trends of staple commodities in approximately 70 countries and monthly country specific market bulletins. The GIEWS Food Price Monitoring and Analysis (FPMA) provides analysis of domestic price trends of basic foods at global level and latest food market policy developments as well as early warnings on exceptionally high food prices at country level that may negatively affect food security.

The G20 Agricultural Market Information System (AMIS), provides regular market updates an online Indicator Portal and extensive market and Policy Database and brings together the stakeholders to identify timely solutions. These combined measures allow countries to timely identify threats and address problems with the support of the international community. It is important to ensure that these actions are sustained and strengthened, and that measures are taken to enhance the accessibility and usability of such information by policy makers and by small farmers themselves.



# 3. Key Findings and Recommendations

- Efforts to end hunger and malnutrition must be accelerated. While the percentage of people suffering from hunger is declining, their total number nearly 800 million people -- remains unacceptably high. Progress in reducing child stunting, estimated at 165 million in 2012, must be accelerated and efforts to address obesity in adults, which nearly doubled between 1980 and 2014, represents a significant public health concern.
- Progress towards sustainable agriculture a key and integral component of SDG2 alongside eradicating hunger and nutrition is slow and uneven. Climate change and unsustainable agricultural practices are increasing the exposure and vulnerability of small-scale food producers to extreme weather events, such as those associated with the 2016 El Niño. Building sustainable agriculture systems, that account for these heightened risks, needs to be a higher priority.
- In recent months, severe food insecurity due to different combinations of environmental stressors, conflict, displacement, and competition over scarce natural resources has affected many millions of women and men. This constitutes today (April 2017) a major humanitarian challenge confronting the international community that requires urgent attention.
- Countries are following diverse pathways to implement policies and programmes to achieve SDG2. The strong interlinkage between SDG2 and related goals and targets presents challenges which many governments are addressing through the establishment of national platforms for developing more integrated policies and programmes. The international community should continue to encourage these efforts and provide space to exchange knowledge and foster productive partnerships.
- There have been encouraging policy developments at the global level relating to SDG2 in the past year including in the context of the G20, G7 and the UNFCCC which should be further built upon. The launch of the UN Decade of Action on Nutrition and the ongoing work of the Committee on World Food Security to promote policy convergence and coordination of efforts around both SDG2 and some of its major enablers, are also important and encouraging.
- Despite these developments, the current pace and scope of implementation of policy and investment initiatives are unlikely to achieve SDG2 and other related aspects of the 2030 Agenda. The transformational change needed to realize the "zero hunger" vision of SDG2 rests on creating food systems that are more efficient, sustainable and resilient, as well as more inclusive of women, youth, small-scale food producers, and people living in poverty.
- In particular, progress on mobilizing means of implementation for SDG2 and related provisions
  in the Addis Ababa Action Agenda, especially investment in sustainable and inclusive agriculture
  to reduce poverty and food insecurity, remains insufficient and needs to be urgently addressed.
- More effective use of inclusive, including gender-inclusive, multi-stakeholder platforms and partnerships are needed to support holistic, well-balanced approaches to achieving SDG2 and its related targets.
- SDG2 monitoring and reporting are high on the agenda of many member states. The follow up
  and review process should be seen as an opportunity for governments and partners to inform
  and shape policy processes, share evidence on best practices and lessons learned, and
  concentrate efforts on proven solutions, and deserves to be supported.



#### **Annex - SDG 2 targets**

- **2.1** by 2030 end hunger and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round
- **2.2** by 2030 end all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons
- **2.3** by 2030 double the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment
- **2.4** by 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality
- **2.5** by 2020 maintain genetic diversity of seeds, cultivated plants, farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge as internationally agreed
- **2.a** increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, in particular in least developed countries
- **2.b.** correct and prevent trade restrictions and distortions in world agricultural markets including by the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round
- **2.c.** adopt measures to ensure the proper functioning of food commodity markets and their derivatives, and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility