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Reviewed Strategic Framework

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Director-General's Foreword

The reviewed Strategic Framework before you is the result of a consultative strategic thinking process that has involved Member States, partners and staff in order to bring into fruition the vision of a sustainable and food secure world.

It looks at the world around us, at the challenges that we face, at the work that we have been doing to determine if and how the path FAO is on needs to be adjusted. Three clear messages emerge from this reflection.

First, FAO is on the right track. Second, FAO is aligned with the 2030 Development Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). Third, FAO adds value to the global efforts in responding to the challenges of our time. I invite you to look at these three messages together since, in the same way as our Strategic Objectives, they are complementary and interlinked.

FAO's reviewed Strategic Framework offers a way forward that does not shy away from the complexity of today's challenges. On the contrary, it recognizes the need for comprehensive approaches in order to best respond. That is the essence of the zero hunger vision that permeates FAO's work: addressing hunger and malnutrition through combined efforts aiming at building resilience, sustainably increasing production, ensuring access to those left furthest behind by strengthening social protection and making food systems more inclusive and, together, creating conditions for today's malnourished to be able to stand on their own in the future.

This same spirit is also embodied in the 2030 Agenda, which puts emphasis on the integrated and indivisible nature of the SDGs and of the need to balance the three dimensions of sustainable development. So, by following its reviewed Strategic Framework FAO remains true to its mission and, in doing so, gives a focused, relevant and needed contribution to the global sustainable development agenda.

More than ever, there is urgency to act. There are nearly 800 million reasons for this. And although 2030 still looms far in the horizon, time does not stand still for anyone. If we truly want to see in 13 years' time a world in which nobody is left behind, it is our responsibility to ensure that every person has the minimum to live in dignity and in peace and the means to thrive through their own efforts and perseverance.

The reviewed Strategic Framework provides a clear understanding of the challenges, of where the Organization fits into the global development picture and how it can contribute to transforming our vision into reality.

More than a reassurance that we are on the track, the Reviewed Strategic Framework strengthens the foundation that will allow us to soldier forward more determinedly, resolutely and boldly.

José Graziano da Silva
Director-General

Table of Contents

Director-General's Foreword.....	2
<i>Executive Summary</i>	4
<i>Introduction</i>	5
I. REVIEWED STRATEGIC FRAMEWORK.....	6
A. FAO's Vision and Global Goals	6
B. Evolving Global Context and Main Challenges for Food and Agriculture.....	6
<i>B.1 Global development context and its relevance to FAO's work.....</i>	<i>6</i>
<i>B.2 Global and regional trends.....</i>	<i>10</i>
<i>B.3 Main global challenges.....</i>	<i>16</i>
C. FAO's Attributes and Core Functions	23
<i>FAO's basic organizational attributes</i>	<i>23</i>
<i>Core Functions – how FAO delivers.....</i>	<i>23</i>
D. Strategic Objectives.....	25
<i>Strategic Objective 1: Contribute to the eradication of hunger, food insecurity and malnutrition</i>	<i>26</i>
<i>Strategic Objective 2: Make agriculture, forestry and fisheries more productive and sustainable</i>	<i>27</i>
<i>Strategic Objective 3: Reduce rural poverty.....</i>	<i>28</i>
<i>Strategic Objective 4: Enable more inclusive and efficient agricultural and food systems.....</i>	<i>29</i>
<i>Strategic Objective 5: Increase the resilience of livelihoods to threats and crises.....</i>	<i>30</i>
<i>Objective 6: Technical quality, statistics and cross-cutting themes (climate change, gender, governance and nutrition).....</i>	<i>31</i>

Executive Summary

FAO has carried out the quadrennial review of its Strategic Framework during 2016-2017 in light of the 2030 Agenda and other important global developments, global and regional trends and major challenges in the areas of FAO's mandate. This document presents the reviewed Strategic Framework, summarizing the Strategic Objectives and cross-cutting themes updated in light of the global developments, trends and challenges and the attributes and core functions of the Organization.

There has been strong and consistent support expressed by the FAO governing bodies during 2015 and 2016 for continuity in the strategic direction of the Organization in order to realize the full impact of the Strategic Framework. At the same time, several important global developments occurred in 2015-2016, in particular the adoption of the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals, and entry into force of the Paris Agreement on climate change, which provide the broad context in which FAO will have to operate and adapt for enhanced delivery and impact.

The **reviewed Strategic Framework** provides the overall strategic direction for the Organization, starting from FAO's Vision and Global Goals, which have not been altered as part of the current review. A consultative strategic thinking process of analytical steps identified: a) main global developments affecting the environment in which FAO operates; b) global trends envisaged to frame agricultural development over the medium term; c) sectoral and regional trends arising from FAO Regional Conferences and Technical Committees; d) main challenges derived from these developments and trends; and e) the implications of these challenges for FAO's Strategic Objectives, Outcomes and Outputs in the context of FAO's basic attributes and approved core functions.

Ten challenges are identified and described, which represent the main development problems that countries and the development community will face in the near future. They formed the basis for the review of the conceptual framework and theory of change of the five current Strategic Objectives (SOs):

- 1. Contribute to the eradication of hunger, food insecurity and malnutrition*
- 2. Make agriculture, forestry and fisheries more productive and sustainable*
- 3. Reduce rural poverty*
- 4. Enable more inclusive and efficient agricultural and food systems*
- 5. Increase the resilience of livelihoods to threats and crises*

FAO must ensure that it has the internal technical capacity and integrity to achieve the expected results. Therefore the Strategic Framework continues to include a sixth objective to ensure technical leadership and the integration of statistics and the cross-cutting issues of climate change, gender, governance, and nutrition in the design and delivery of the Strategic Objectives.

Suggested action by the Conference

The Conference is invited to endorse the reviewed Strategic Framework, in particular FAO's Vision, Global Goals and Objectives.

Introduction

1. This document presents the reviewed Strategic Framework of FAO, which has been developed in the context of recent global developments, global and regional trends and major challenges in the areas of FAO's mandate.
2. As called for in the Basic Texts,¹ since 2010 all of FAO's work is guided by a Strategic Framework prepared for a period of ten to fifteen years, reviewed every four years and including *inter alia* an analysis of the challenges facing food, agriculture and rural development and populations dependent thereon, including consumers; a strategic vision, the goals of Members in areas of FAO's mandate, as well as Strategic Objectives to be achieved by Members and the international community with support from FAO.
3. There has been strong and consistent support expressed by the FAO governing bodies for continuity in the strategic direction of the Organization in order to realize the full impact of the Strategic Framework.
4. The quadrennial review of the FAO Strategic Framework took place during 2016-17 starting from FAO's Vision and Global Goals, which have not been altered as part of the review, through a consultative strategic thinking process.² A series of analytical steps has been used to identify:
 - a) main global developments, setting the overall development context in which FAO operates;
 - b) global trends envisaged to frame agricultural development over the medium term;³
 - a. sectoral and regional trends arising from regional strategic reviews, and discussions and recommendations arising from FAO Regional Conferences⁴ and Technical Committees;⁵
 - c) main challenges, derived from these developments and trends, expected to be faced by countries and development actors in food and agriculture in the coming years;
 - d) the implications of these challenges for FAO's Strategic Objectives, Outcomes and Outputs in the context of FAO's basic attributes and approved core functions.

¹ FAO Basic Texts Volume II.F (CR 10/2009)

² Including through consultation with a Strategy Experts Panel of eminent external experts: Alain De Janvry, Ismahane Elouafi, Shenggen Fan, Gustavo Gordillo, Marion Guillou, Mulu Ketsela and Martin Piñeiro.

³FAO 2016. *The future of food and agriculture – Trends and challenges*. Rome.

⁴ C 2017/14, C 2017/15, C 2017/16, C 2017/17, C 2017/18, C 2017/LIM/1

⁵ C 2017/21, C 2017/22, C 2017/23, C 2017/24

I. REVIEWED STRATEGIC FRAMEWORK

A. FAO's Vision and Global Goals

5. FAO's Vision and Global Goals have been approved by the governing bodies in 2013 as part of the current Strategic Framework, and have not been altered during this review. FAO's vision is "*A world free from hunger and malnutrition where food and agriculture contribute to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner*".

6. The three Global Goals of Members are:

- 1) eradication of hunger, food insecurity and malnutrition, progressively ensuring a world in which people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life;
- 2) elimination of poverty and the driving forward of economic and social progress for all, with increased food production, enhanced rural development and sustainable livelihoods; and
- 3) sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources for the benefit of present and future generations.

7. FAO needs to organize its work in order to help Member Nations achieve these goals individually at the national level, and collectively at the regional and global levels, taking account of the main challenges facing the food and agriculture sector.

B. Evolving Global Context and Main Challenges for Food and Agriculture

8. This section summarizes the global developments that provide the international context in which FAO will operate and assist countries in the near future, the global and regional trends identified, and the main challenges arising from these developments and trends.

B.1 Global development context and its relevance to FAO's work

9. Overall trends and global issues of concern have prompted the global community to act on these through a series of initiatives and agreements to reset the global development agendas. These developments constitute the global context for FAO's work in the future, under the overall umbrella of the *2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs)*, which include the policy commitments and goals of the *Addis Ababa Action Agenda*, and the *Paris Agreement on Climate Change*. Other important developments in the areas of FAO's mandate include the Rome Declaration on Nutrition (Second International Conference on Nutrition) and Decade of Action on Nutrition; entry into force of the Port State Measures Agreement, which is a key element in the fight against illegal, unreported and unregulated fishing; the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030; the New York Declaration for Refugees and Migrants (UN Summit for Refugees and Migrants). Other developments of note include the deliberations of the World Humanitarian Summit, Habitat III which focuses on urbanization, and the XIV World Forestry Congress and United Nations Forum on Forests Ministerial Declaration.

The 2030 Agenda for Sustainable Development

10. The 2030 Agenda for Sustainable Development, which entered into effect on 1 January 2016, is a historic commitment to tackle poverty and hunger, promote sustainable use of natural resources and address climate change through an interconnected set of 17 Sustainable Development Goals (SDGs), recognizing that issues concerning food, livelihoods, and the management of natural resources cannot be addressed separately.

11. To ensure mutual accountability among all stakeholders, the 2030 Agenda calls for a major expansion of the reporting and monitoring framework, capped by a country-led process of follow-up and review that culminates in the High-level Political Forum. In March 2016, the UN Statistical Commission (UNSC) agreed to a global indicator framework with 230 unique indicators "as a practical starting point". Each global indicator will have a 'custodian' agency, expected to:

(i) contribute to statistical capacity building; (ii) collect data from national sources; (iii) provide the storyline for the annual global SDG progress report to be prepared by the UN Secretariat; and (iv) work on further methodological development. Custodians will coordinate with other agencies and stakeholders interested in contributing to the indicator development. FAO has been requested to be the custodian of 21 indicators, and to contribute to another four.

12. Partnerships, and in particular partnerships with the private sector, are expected to play an expanded role under the 2030 Agenda, enabling coordinated action by multiple stakeholders to address the integrated, indivisible and interlinked nature of the SDGs. In particular, partnerships are expected to help facilitate country access to means of implementation, including finance and investment, access to markets and to technology, capacity development, and policy support. UN institutions will be called upon to play a unique role: providing and upholding inter-governmentally agreed norms and standards, monitoring commitments and tracking results, promoting institutional development as a trusted and neutral facilitator.

Addis Ababa Action Agenda

13. The Addis Ababa Action Agenda builds on the two previous conferences on Financing for Development. It addresses all sources of finance and covers cooperation on a range of issues including technology, science, innovation, trade and capacity building. While domestic resource mobilization is central to the agenda, commitments to official development assistance were reaffirmed, particularly for the least developed countries, including pledges to increase South-South and Triangular Cooperation (SSTRC). The outcome document also underscores the importance of aligning private investment with sustainable development, along with public policies and regulatory frameworks to set the right incentives. Additionally, a new mechanism that will facilitate financing for new technologies for developing countries was also agreed.

Paris Agreement on Climate Change

14. In December 2015, the landmark Paris Agreement for climate action was adopted by the UN Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) at its 21st session (COP21). Over 90 percent of all countries who submitted Intended Nationally Determined Contributions (INDCs) towards the COP21 negotiations included agriculture as a sector to be considered for mitigation and/or adaptation. With the signature of the Paris Agreement in April 2016, these contributions became binding Nationally Determined Contributions (NDCs), and the agreement entered into force on 4 November 2016.

15. Food and agricultural systems feature prominently in adaptation and mitigation efforts as defined in over 90% of Nationally Determined Contributions of countries to the Paris Agreement. The role of FAO in supporting countries to realize the ambitions of their NDCs with normative and technical action is universally acknowledged. Food value chain actors, therefore, need to be supported in order to overcome barriers to implementing improved practices and measuring and reporting on their achievements within these systems. The 22nd session of the Conference of the Parties to the UNFCCC in November 2016 focused on implementation of the Paris Agreement, and gave recognition to the prominence of agriculture and related activities in climate action aspirations, particularly in developing countries where agriculture is the mainstay of many economies.

16. Forests will also play an important role in the implementation of this milestone agreement both in mitigation and adaptation efforts. The main mitigation mechanism is Reducing Emissions for Deforestation and Forest Degradation (REDD+). However, the agreement also acknowledges forests' potential for adaptation including joint approaches and the importance of non-carbon benefits. The majority of the NDCs mention forestry and land use mitigation and adaptation measures.

17. The climate regulation and carbon sequestration services provided by oceans, inland waters and aquatic ecosystems featured prominently in COP21, highlighting the urgency of reversing current trends, restoring aquatic ecosystems and their productive capacity. The role of oceans in climate change was recognized for the first time, and presented in the preamble of the Paris Agreement.

18. Climate change poses increasing threats to food security and nutrition and FAO's work will be guided by a Climate Change Strategy and Action Plan integrating this work in all the Strategic Objectives.

Rome Declaration on Nutrition and the Decade of Action on Nutrition

19. At the Second International Conference on Nutrition (ICN2) world leaders adopted the Rome Declaration on Nutrition and the Framework for Action, renewing their commitment to establish and implement policies aimed at eradicating all forms of malnutrition and transforming food systems to make nutritious diets available to all. The ICN2 also confirmed the importance of fish and seafood as a source of nutrition and health for many coastal communities that depend on their proteins and essential micronutrients, in particular for women of child-bearing age and young children and highlighted the unique window of opportunity that fisheries and aquaculture can provide for achieving healthy diets.

20. The Rome Declaration on Nutrition acknowledges the multiple challenges of malnutrition to inclusive and sustainable development and to health. It sets out a common vision for global action to end all forms of malnutrition. The Framework for Action provides a set of voluntary policy options and strategies, in the form of 60 recommended actions, to guide the implementation of the wide-ranging commitments stated in the Rome Declaration on Nutrition.

21. On 1 April 2016, the United Nations General Assembly proclaimed a UN Decade of Action on Nutrition from 2016 to 2025. The resolution for the Decade recognizes the need to eradicate hunger and prevent all forms of malnutrition worldwide, providing an umbrella for a large group of actors to work together to address these and other pressing nutrition issues. FAO and World Health Organization (WHO) will lead the implementation of the Decade of Action on Nutrition in collaboration with UN agencies and other stakeholders.

Port State Measures Agreement

22. The 2009 Port State Measures Agreement (PSMA) to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing entered into force in June 2016 and has become a key driver for the international community's fight against the scourge of IUU fishing. The PSMA, which creates binding obligations, sets standards for the inspection of foreign vessels that seek to enter the port of another State. Importantly, the measures allow a country to block ships it suspects of having engaged in illicit fishing and thereby prevent illegal catches from entering local and international markets. The FAO Committee on Fisheries identified the capacity development needs of developing countries in the effective implementation of the PSMA. Instruments such as the PSMA are key to achieve targets under SDG 14, which has a tighter timeframe (2020) than the rest of the 2030 Agenda.

Sendai Framework for Disaster Risk Reduction

23. The 3rd World Conference on Disaster Risk Reduction, held in Sendai in March 2015, adopted the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030. It builds on the experiences of the Hyogo Framework for Action (2005-2015) and recognizes disaster risk reduction as an important component of sustainable development. The framework addresses disaster risks in scale and temporal dimensions caused by natural and human-induced hazards, as well as related environmental, technological and biological hazards and associated risks. By adopting the SFDRR, countries pledged to enhance efforts to strengthen disaster risk reduction and reduce the losses of lives, assets and livelihoods.

24. Notable innovations of the SFDRR include: the shift to a wider multihazard risk management approach, which includes transboundary, technological and biological hazards and disasters; emphasis on multisectoral engagement in planning and delivery of DRR actions; and recognition of the importance of well-functioning health systems. The framework calls for strengthening the use of science and technology in policy-making and clearly articulates the role of disaster risk governance with a strong emphasis on "Build Back Better" during recovery, rehabilitation and reconstruction. Specific innovative elements of the SFDRR include the call for more coherent risk-sensitive development policies for most vulnerable sectors, including agriculture and food security, and the role of social safety-net mechanisms in the realm of food security and nutrition. The need to protect

agriculture livelihoods and productive assets including livestock, working animals, tools and seeds are specifically addressed.

UN Summit for Refugees and Migrants

25. The UN Summit for Refugees and Migrants took place in September 2016. By adopting the New York Declaration for Refugees and Migrants, Member States have made bold commitments, including: to analyse and respond to the factors which lead or contribute to large movements of people, including by taking measures to implement the 2030 Agenda for Sustainable Development; and to strengthen the awareness of the positive contributions made by migrants to economic and social development. The New York Declaration also contains concrete plans on how to build on these commitments, including starting negotiations leading to an international conference and the adoption of a global compact for safe, orderly and regular migration in 2018; and striving to achieve a more equitable sharing of the burden and responsibility for hosting and supporting the world's refugees by adopting a global compact on refugees. Investing in sustainable agriculture and rural development is an integral part of the solution for migration.

World Humanitarian Summit

26. At the World Humanitarian Summit, held in Istanbul in May 2016, several UN agencies and programmes recognized the need to transcend the humanitarian-development divide, which can no longer be viewed in isolation from broader sustainable development efforts that tackle the root causes of prolonged and recurrent need, and to reduce the human cost of disasters and protracted crises by supporting people, communities and countries at risk, and to build resilience.

Habitat III - United Nations Conference on Housing and Sustainable Urban Development

27. The urbanization process and associated demographic changes are posing unprecedented challenges for hunger, food insecurity and malnutrition in all forms that are being manifested increasingly in urban areas. Food security, malnutrition and hunger in urban areas are receiving growing attention and need to be recognized at international, national, subnational and local levels as key components of sustainable development.

28. The United Nations Conference on Housing and Sustainable Urban Development (Habitat III) held in Quito, Ecuador in October 2016 adopted the New Urban Agenda, which reaffirms global commitment to sustainable urban development. The implementation of the New Urban Agenda contributes to the implementation of the 2030 Agenda for Sustainable Development in an integrated manner, and to the achievement of the SDG Goals and targets, including SDG 11 of making cities and human settlements inclusive, safe, resilient and sustainable. FAO can contribute by promoting sustainable food chains, and strengthening partnership and multi-stakeholder involvement and enhancing the opportunities that urbanization brings to rural development and the inclusion of smallholder farmers into urban food systems.

Sector Specific Global Developments

29. *World Forestry Congress.* The main outcome of the XIV World Forestry Congress held in Durban, South Africa in September 2015 was the Durban Declaration, constituting a new vision of sustainable development for forests and forestry to 2050 and beyond. The vision outlines forestry's contribution to achieving the 2030 Agenda for Sustainable Development. It links forest actions with efforts to achieve food security and integrates them with other forms of land use and with efforts to stabilizing climate change. Because of its comprehensive and forward-looking nature, the vision could also provide a solid input to shaping the international forests agenda.

30. *United Nations Forum on Forests (UNFF11) Resolution.* At its 11th session in 2015 the United Nations Forum on Forests agreed on a Ministerial Declaration entitled "The forests we want: beyond 2015" and a draft resolution on the "International arrangement on forests beyond 2015." The UNFF11 resolution, which was subsequently approved by the 70th UN General Assembly, recommended extending the International Arrangement on Forests until 2030 and strengthening its work in support of the sustainable management of the world's forests. In addition, it calls for strengthening the Collaborative Partnership on Forests to support the UNFF and to engage in joint efforts to implement

sustainable actions on forests and strengthen their contribution to achieving internationally agreed development objectives.

B.2 Global and regional trends

31. FAO publication *The future of food and agriculture – Trends and challenges* presents an analysis of the medium- to long-term trends and challenges the world is facing and is expected to face in areas of key importance to FAO's vision and mandate. In addition, the FAO Regional Conferences considered trends that are regional in nature; and trends and developments that are expected to influence areas of work in agriculture, commodities, fisheries, forestry, and food systems were discussed at each of the FAO Technical Committees in 2016. Based on these reviews, a synthesis of major global and regional trends is presented below.

1) Global and regional growth in population, urbanization and income is driving changes in structure and level of demand for food

32. Numerous studies have identified global and regional population growth as the most important factor driving changes in food and agriculture. Based on the 2016 issue of the OECD-FAO medium-term outlook, population growth, along with income growth will be the two major drivers of global demand for food and affect trends in the utilization of natural resources, biodiversity and the emissions of greenhouse gases (GHG). While population growth rates have fallen over time, year-to-year changes in the number of people has continued to increase until recently. World population in 2050 is projected to be 9.73 billion people, and 11.2 billion in 2100, with more than half of this growth concentrated in sub-Saharan Africa and much of the remainder in Asia.

33. There are variations across regions and within regions, showing Africa and Asia will dominate population growth. Within region variation in population growth rates are remarkable: population growth rates of over 2.5 per annum are expected to continue to 2050 in several African countries. The combined population of these countries reached 320 million in 2015 and is expected to double by 2050 and more than redouble by 2100, reaching 1.8 billion. These rates of increase in population will seriously jeopardize overall development prospects for these countries.

34. Some general trends in rural areas suggest continuing rates of urbanization along with ageing of rural populations and feminization of agriculture due to loss of adult male labour in rural areas. In terms of urbanization, a net addition of 2.4 billion people to urban areas is expected by 2050. Today, more than half of the global population is urban (54%) and by 2050 more than two-thirds of the world population will be living in urban areas. Most urbanization is expected to take place in lower-income countries with direct impacts on food consumption patterns, affecting nutrition, food distribution channels and food production. Over the decades to come, the world will not only be more populous and urban, it will also be demographically older, at least on average. High rates of urbanization will bring about rapid changes in food systems.

35. In terms of income, most global projections include increasing real per capita growth in the coming decades with faster income growth expected for low- and middle-income countries than for high-income countries. An important result of increasing incomes and urbanization is changes in dietary patterns, which are supported by different production systems and have different emission and resource footprints. With population growth concentrated in low-income countries, large increases in demand are expected for staple crops like roots, tubers, and plantains. Income growth and urbanization will drive a shift towards more demand for processed and energy-rich foods (cereals, milk and meat products) and less demand for calorie-rich food. In the currently low-income countries this is expected to be reflected through substantial increases in demand for cereals, milk, and meat products, while in high-income countries demand for fruits and vegetables will outpace demand for other crops.

2) Despite increase in per capita incomes, slower progress in poverty reduction is expected with persistent inequality and grim nutritional outlook

36. While global economic prospects indicate overall economic well-being to increase over time, differences in economic growth rates across regions will remain, with East and South Asia and sub-Saharan Africa being the fastest growing regions (4 percent annually) and Latin America and the

Caribbean growing at 2 percent. With these rates of growth, the gap between East Asia (already the richest low-income region) and other regions are expected to widen. Poverty reduction will proceed more slowly than the high economic growth rates would suggest. In addition, gross inequalities exist both within and across countries, with regional differences.

37. Increasing per capita incomes should lead to improved nutritional outcomes in the future but the outlook is not promising. Despite significant progress over the past two decades, 795 million people still suffer from chronic hunger, 161 million children under the age of five remain chronically malnourished and over 2 billion people are affected by micronutrient deficiencies. At the same time, changes in dietary patterns and the adoption of more sedentary lifestyles have contributed to a staggering 1.9 billion people worldwide being overweight and 600 million obese, which heightens the risk of diet-related non-communicable diseases. If current trends persist, which are worst in middle-income countries, an estimated 11 percent of children under the age of five may be obese by 2025.

3) Changing nature and intensity of competition for natural resources

38. Trends for 2050 suggest growing scarcities of agricultural land, water, forest, marine capture fisheries and biodiversity resources. Competition over natural resources for food and non-food is not new but the nature and the intensity of the competition has changed significantly in several ways during the past decade and the tendency is expected to continue. This competition is driven by accelerated intensification of human activities, with increasing pressures on land, water, biodiversity, energy and nutrients in coming decades for urban expansion, infrastructure, industry, mining, food production, including in-land aquaculture, bioenergy and non-food raw materials, and wood and tertiary products. Consumption of cereals and oilseeds for the production of biofuels has increased, as well as the use of biomass as a substitute for petrochemicals, in the context of a growing interest in bio-economy, i.e. the production of renewable biological resources and their conversion into food, feed, bio-based products and bioenergy, worldwide.

39. Competition over natural resources is exacerbating pressure on natural resources and ecosystems, leading to potential degradation and abandonment and increased competition for not yet degraded and fragile resources. Increased demand for natural resources will likely continue given the above mentioned demographic and economic trends, including changing consumption patterns and bioenergy production. Access to natural resources may also be compromised and gender imbalances and social inequalities may arise.

40. The trend in agricultural water use is also slowing as the performance of irrigation systems and agronomy improve, raising both the productivity of irrigated land and water productivity. But rapid transitions from rural to urban settings are further concentrating patterns of demand. Since agriculture will continue to be the main water user, improved agricultural water use in irrigated agriculture will have a direct impact on local and regional water demands. Allocations of raw water away from agriculture to other higher utility uses – municipal supplies, environmental requirements and hydropower generation – are already taking place, but there is still scope for optimizing these allocations in economic and environmental terms. Non-competing uses of water, such as increasing the use in agriculture of treated wastewater from the urban sector, will become more important.

4) Increasing climate variability and enhanced exposure to extreme weather events

41. Climate change impacts – which include slow onset environmental change processes, increasing climate variability and enhanced exposure to extreme weather events - are expected to intensify over time. Over the last three decades, there has been a rising trend in the occurrence of natural disasters worldwide, with consequent economic damage. This is particularly noteworthy in relation to climatological events such as droughts, hydrological events like floods and meteorological events such as storms. The increase in weather-related events is of significant concern to the agriculture sector, given the sector's dependence on climate. The intensity of these disasters is also increasing, and it may continue to increase as a result of climate change. For some regions, climate change will result in more intense precipitation, leading to more floods, yet longer dry periods between rain events, leading to more drought. The 2015-2016 El Niño was one of the strongest observed over the last 50 years and its impacts were felt worldwide. Droughts are expected to intensify, especially in the subtropics and low- and mid-latitudes.

42. Natural disasters represent a threat to sustainable development and hinder progress towards poverty and hunger eradication, improved nutrition and food security. Geological, climate and weather related disasters continue to affect the lives and livelihoods of men and women worldwide. In particular, natural disasters trap vulnerable people in a cycle of poverty because of their lower levels of resilience and coping capacity. The small island developing states (SIDS) face many shared constraints to their sustainable development: narrow resource bases; volatile market dependencies; high food imports; high costs for energy, transportation and communication; fragile natural environments and so on. These constraints imply increased vulnerability to shocks and limited development of commercially-oriented agriculture, fisheries and forestry sector. The differentiated impact of disasters on men and women is primarily caused by the existing gender inequalities manifested.

43. Agriculture subsectors can be affected differently by natural disasters. Crops tend to be most affected by floods and storms; livestock is overwhelmingly affected by droughts; the fisheries subsector is most affected by tsunamis and storms such as hurricanes and cyclones, while most of the economic impact to forestry is caused by floods and storms (excluding wildfires).

44. Climate change-related extreme weather events are expected to exacerbate a deepening global need for humanitarian assistance, including by contributing to conflict risks and associated pressure on populations to move. Whilst climate change *per se* is not necessarily associated with violence, the intersection between vulnerability to climate change and broader institutional and socio-economic fragility can increase the potential for conflict. This new trend has been referred to as the “climate-conflict nexus” and is characterized by intersection between two key factors: weak institutions and pre-existing social fragility, as well as climate change vulnerability. Countries that are most vulnerable to climate change are often the poorest or most fragile. Where governments are not equipped to manage the impacts of climate change, conflict risks can increase. Noting that agriculture accounts for around 70 percent of water used in the world today, in the context of climate change, access to water is expected to become both increasingly valued and contested, and hence a conflict risk in environments characterized by weak institutions.

5) Growing demand for food, feed and biofuel and need for significant growth in production of crops, livestock and fish

45. In the coming decades, the growing global demand for food, feed and biofuel will have to be met by significant increases in production of all major crops, livestock and fish. Most recent projections of gross agricultural output indicate an increase of 50 percent between 2012 and 2050. Historically, even larger expansion of production has been achieved, coming largely from yield improvements, agricultural area expansion and increased livestock and milk production. Although marine capture fisheries contribution to human food and animal feed supply has levelled off over the last decade, growth in fish supply has been mainly coming from aquaculture and this trend is expected to continue.

46. Average yield growth of major crops at the global level has slowed down compared to historical rates, ranging in the last decade slightly above 1 percent per year. Yields also vary by region, with significant gaps between farmers’ yields and technical potential yields, reflecting largely suboptimal use of inputs and insufficient adoption of most productive technology, often linked to lack of market integration. Research and development (R&D) levels are also low reflected in Agricultural Research Intensity⁶ in most countries being still below recommended levels. Farming practices based on ecosystem approaches, that are labour saving and gender-sensitive, as well as new trends in science and technology innovations for improved agricultural productivity, such as biotech crops, can make substantial contributions to sustainable intensification.

⁶ Expresses national expenditure on public agricultural R&D as a share of agricultural GDP

6) Continuing food price volatility and growing need for investment to defeat extreme poverty and hunger

47. Various outlook publications highlight that many countries, rich and poor alike, never fully recovered from the great recession of 2007-2008. Particularly many OECD⁷ countries continue to suffer from weak investment and a combination of subdued aggregate demand, poor underlying supply-side developments, and low growth in trade and productivity. While overall income growth slowed and investment remained sluggish after 2007-2008, international commodity markets saw a prolonged period of generally higher, albeit also more volatile prices. This also holds for most agriculture commodities. The impacts of these changes on consumers, food security, but also on farmers have been widely discussed and thoroughly analysed in many FAO publications. Drivers of the changes include the global biofuels boom, low stocks for cereals, poor crops and weather shocks, continued food and feed demand from a number of emerging markets, as well as other factors. However, little attention has been given to the impacts of the higher prices on investments in agriculture during the boom years and the likely medium-term impacts of the resulting investment overhang on markets and future prices.

48. FAO, IFAD and WFP estimated that globally, additional annual investment of USD 265 billion are needed on average to defeat extreme poverty and hunger by 2030, as compared to a “business as usual” scenario. This amount comprises both investment in social protection programmes (USD 67 billion) and investment in pro-poor productive activities (USD 198 billion), i.e. activities that provide poor people opportunities to earn, save and invest. This implies a significant increase of annual investment both in social protection and productive activities in rural areas, compared to the “business-as-usual” situation. Low-income countries have little possibilities to mobilize substantial public and private resources to support such investment programmes, thus requiring international financial cooperation.

7) Slowdown of growth in agricultural trade and re-regionalization of trade

49. Growth in agricultural trade has been slowing over the past years and declined sharply in 2015. The proximate factors behind this decline include a lack of progress in multilateral trade negotiations under the auspices of the World Trade Organization (WTO), notably the failure to conclude the Doha Development Agenda; a sharp decline in commodity prices across the entire agricultural spectrum; slower GDP⁸ growth and import substitution of large Asian importers; a partial relapse into protectionist policies (e.g. World Bank data on temporary trade barriers), as well as rising energy and transportation costs.

50. As multilateral trade talks within the WTO could not be brought to a successful conclusion for more than a decade, many countries sought better market access through regional trade agreements (RTAs). Three mega-RTAs have recently been concluded or are under negotiation. These are the Trans-Pacific Partnership, the Regional Comprehensive Economic Partnership, and the Transatlantic Trade and Investment Partnership. All three include, or at least, affect agriculture. They have the potential to further liberalize agricultural trade and inject different disciplines in the rules that countries follow to ensure food safety, animal and plant health, and consistency in food product standards.

⁷ Organization for Economic Co-operation and Development (OECD)

⁸ Gross domestic product (GDP)

8) *Rising incidence of conflicts, protracted crises and impacts on hunger, food security, agricultural development and human displacement*

51. Conflicts are on the rise again and have strong and unambiguous adverse effects on hunger, nutrition and overall sustainable development. Conflict is the major driver of food insecurity and malnutrition. Most conflicts are more violent in rural areas where approximately two-thirds of all deaths in state and non-state armed conflicts take place, heavily impacting agricultural production and livelihoods. The drivers of conflicts range from geopolitical interests, control over resources, ethnic tensions, religious differences, discrimination, poor governance, limited state capacity, population pressure and rapid urbanization, through to other factors such as poverty and youth unemployment. Some conflict drivers specifically relate to FAO's mandate and competencies. These include conflicts that have been driven by *inter alia* competition for land, water and other natural resources, the multiple dimensions of food insecurity, the neglect by governments of marginalized areas, or of environmental mismanagement.

52. The implications of conflict-induced food insecurity are no longer limited to specific countries or regions, but have global impacts. In 2015, over 65 million people worldwide were forcibly displaced, the majority experiencing protracted displacement. The proximate effects of conflicts are increasingly echoed across the broader global landscape as conflict-affected people migrate across and within countries, regions and continents in a bid to manage the risks and consequences of conflict. There is a deepening awareness of how food insecurity in one part of the world can influence social services, political systems and national security elsewhere.

53. Recently, a number of international migration flows have risen particularly fast. Important recent flows include the vast outflows from the Middle East and those from sub-Saharan and Northern Africa to Europe. The most frequently cited reasons for the former flow are conflicts, war or civil strife, those for the latter often pertain to economic reasons, including the growing resource scarcity and resource degradation, deteriorating livelihoods and, as a consequence, food security.

9) *Rising trends in transboundary plant pests and diseases, emerging threats and increasing impacts of zoonotic diseases on human health*

54. The human food chain is under continued threat from an alarming increase in the number of outbreaks of transboundary animal and plant pests and diseases, as well as food safety and radiation events. Avian influenza, foot-and-mouth disease, peste des petits ruminants, locust infestations, wheat, cassava, maize and banana diseases, forest pests and diseases, aquatic diseases, food-borne pathogens and mycotoxins are just some examples of threats to the human food chain that have detrimental effects on food security, human health, livelihoods, national economies and global markets. Climate change is in part responsible for food chain emergencies. While there is clear evidence that climate change is altering the distribution and spread of animal and plant pests and diseases, the full effects are difficult to predict.

55. The world is facing the burden of both old and new human, zoonotic and endemic livestock diseases which threaten household food security and nutrition particularly in poor and vulnerable communities. Increased movement of people, terrestrial and aquatic animals, plants and products in the globalized economy on the one hand, and the concentration and intensification of production systems on the other, have accelerated and enlarged the threat of zoonotic diseases, i.e. infectious diseases of animals that can naturally be transmitted to humans.

56. The burden of zoonotic diseases on human health is not only magnified by the ongoing climate change, but also by increasing antimicrobial resistance (AMR). Antimicrobial resistance is a major global public, animal health and agricultural issue of increasing concern with the potential to reverse gains of modern medicine throughout the 20th century. Antimicrobials are still heavily used not only to preserve human and animal health, but also in the broader context of the livestock and agricultural industry.

10) Worsening prospects for stable and remunerative employment, particularly for youth

57. Although the current generations in - or entering - the labour force in low-income countries are the most educated, their employment and earnings prospects are considered by many as weak, and sometimes worse, than those of their parents. Youth populations in urban areas have been expressing their discontent lately concerning the lack of available labour opportunities and especially poor expectations. Moreover, the majority of people, especially young, living in rural areas are also facing rather worse prospects for stable and remunerative employment opportunities being also less educated compared to their urban counterparts. Most of youth is concentrated in Africa and South Asia and the two regions will continue to house them in the years to come. In the near future, the average age gap with the rest of the world is expected to increase between these regions and the rest of the world.

11) Rapid structural transformation, rural transition and related changes in food systems

58. The demographic and economic trends are accompanied by rural transformation, a typical path of development, resulting in adaptive changes and transition in agricultural production and food systems. This includes employment transition from agriculture to other sectors as economies develop. The paths of agricultural and food system transformation are heterogeneous, specific to the local context and depend strongly on initial conditions, policies followed and the quality of governance. The pattern of transition in agricultural production systems to capital-intensive/market-integrated agriculture has coincided with the rise of rural towns and small urban centres contributing to the transformation and economic and social development of rural areas.

59. Agricultural transition and rural transformations have so far reinforced each other through supply and demand interlinkages with urban areas. Some evidence shows that this transition has contributed to the reduction of poverty and the gaps observed with urban areas in welfare indicators including in health, social and other livelihood aspects. In some cases, reallocation of labour has contributed to reducing productivity in recipient sectors due to the labour-intensive character of the manufacturing, industry and service sectors, especially in the early development stages. However, employment is not always guaranteed for everyone in these transitions and it is important to ensure that no one is left behind in structural transformation processes, particularly the poorest.

12) Rising importance and need for effective governance

60. The reformulation of the global charter for development cooperation and governance defined by the 2030 Agenda has been paralleled by a less visible, but equally profound shift in conceptual thinking about governance among governments, international institutions and the international expert community.

61. During the past decade, the preponderance of expert opinion has moved away from the “good governance” project in favour of a more modest and pragmatic agenda, defined by a commitment to iterative, bottom-up, problem-solving and experimentalist approaches to improved or more effective governance. Today, these new governance approaches are frequently supplemented by political economy analyses that seek to identify and evaluate the roles, interests and likely responses of key stakeholders and institutions. The goal of such analyses are three-fold. First, they provide guidance for the design and evaluation of technical solutions, which have to be informed by a realistic appraisal of the political, economic and social context for which they are being designed; second, they help to identify key stakeholders, including the poor and politically voiceless, that must be consulted and engaged and the vital substantive issues and interests that need to be addressed in the decision-making process to ensure outcomes that are both workable and legitimate; and third, they help provide guidance for institutional adaptation and development.

B.3 Main global challenges

Conclusions emerging from the analysis of global trends and challenges

62. Several conclusions can be drawn from the preceding review and analysis of global trends and developments influencing prospects for food security and sustainable agriculture and food systems.

63. Most importantly, the increase in overall demand for food is expected to continue, which will need to be met with increases in sustainable productivity in an environment of competing demands for scarce natural resources.

64. At the same time, changes in the structural composition of demand and problems of extreme poverty, hunger, food insecurity and under-nourishment persist, and there is an increased prevalence of overweight, obesity and diet-related chronic diseases. Dynamic rural transformation is happening in most developing countries and is expected to continue, impacting agricultural production systems, employment, nutrition and migration and creating challenges for including everyone in the development process.

65. Climate change and increased competition for natural resources will continue to contribute to natural resource degradation and scarcity causing threats to human livelihoods and food security. In addition, natural disasters are increasing in number and intensity, and along with climate change-related extreme weather events are expected to deepen the global need for humanitarian assistance. Transboundary plant and animal pests and diseases and other emerging threats continue to give rise to agricultural and food system crises and impact agricultural productivity and human health which creates a need for resilient food systems. Conflicts are continuing, with wide-spread economic and social consequences, beyond afflicted countries.

66. Rapid changes and transition in food systems increasingly calls for effective national and international governance systems and evidence-based and well-targeted policy responses. In terms of trade and investment, global agricultural trade is not expanding rapidly, regional trade agreements are proliferating and protectionism is on the rise. More investment is needed to support agriculture, food security, social protection and R&D.

Global challenges

67. Based on the conclusions of the analysis of global and regional trends, a set of ten challenges emerges as most pertinent to FAO's work to fight hunger and malnutrition, achieve broad-based food security, improve rural livelihoods, and make agriculture, fisheries and forestry and their natural-resource base more resilient, productive and sustainable, to be addressed in the review of the Strategic Framework.

1. Sustainably improving agricultural productivity to meet increasing demand
2. Ensuring a sustainable natural resource base
3. Addressing climate change and intensification of natural hazards
4. Eradicating extreme and persistent poverty and reducing inequality
5. Ending hunger and all forms of malnutrition
6. Making food systems more efficient, inclusive and resilient
7. Improving income earning opportunities in rural areas and addressing root causes of migration
8. Building resilience to protracted crises, disasters and conflicts
9. Preventing transboundary and emerging agriculture and food system threats
10. Addressing the need for coherent and effective national and international governance

68. Taking account of guidance of the FAO governing bodies to maintain the strategic direction of the Organization, the Strategic Objectives were revisited in order to respond to the challenges in the

overall context of the SDGs. A summary of challenges is provided below and FAO's response to the challenges through its five Strategic Objectives is provided under *Section D*.

Challenge 1: Sustainably improving agricultural productivity to meet increasing demand

69. Demand for food and other agricultural commodities is projected to increase and undergo structural change due to *inter alia* population growth, urbanization, and per capita income increases, while the natural resource base becomes increasingly stressed. Producing more with less while preserving and enhancing the livelihoods of small-scale and family farmers is a key challenge for the future.

70. Major resource-use efficiency improvements and conservation gains will have to be achieved globally, in order to meet food demand, as well as to halt and reverse ecological degradation. While some technological progress has been achieved, yield increases, experienced in previous decades, are slowing down with increasingly evident negative side effects of high chemical inputs in crop production, posing serious sustainability concerns. Investments in agriculture, fishery and forestry and R&D expenditures would need to be stepped up particularly in and for low-income countries. This is required to *inter alia* improve the adoption of sustainable production systems and practices, such as integrated crop-livestock, aquaculture-crop systems, conservation agriculture, agroforestry systems, climate smart agriculture (CSA), nutrition-sensitive agriculture, sustainable forest management, and sustainable fisheries management, in the context of adaptation, mitigation and resilience for farms, ecosystems and communities to climate change, as well as to specific country needs and gender-specific contexts. In addition, as prevailing price incentives and support are not conducive for sustainable agriculture, a readjustment of implicit and explicit subsidies is also needed.

Challenge 2: Ensuring a sustainable natural resource base

71. Projections for 2050 suggest growing scarcity of agricultural land, water, forest, marine capture fisheries, and biodiversity resources. Additional land requirements for agricultural production between now and 2050 are estimated at just under 0.1 billion hectares. It is expected that demand for such land use will decrease in high-income countries, but increase in low-income countries. This modest increase could suggest land availability is not a constraint. In fact, the projection of increased land use for agriculture is based on the notion that most still spare land is not readily accessible, due to the lack of infrastructure, physical remoteness and disconnection from markets, and/or located in disease-prone areas. Furthermore, available spare land is concentrated in few countries only. The land availability constraint underlies the notion that increases in agricultural production to meet rising food demand will mostly have to come from productivity and resource-efficiency improvements.

72. Water availability for agriculture will also become a growing constraint, particularly in areas that use a high proportion of their water resources, exposing production systems to high environmental and social stress and limiting the potential for expanding irrigated areas, and has implications for the ability of women to access productive resources. In fact, the rate of expansion of land under irrigation is already substantially slowing. Future water stress will not only be driven by changes in the demand, but also by changes in the availability of water resources, resulting from changes in precipitation and temperature driven by climate change.

Challenge 3: Addressing climate change and intensification of natural hazards

73. Climate change, along with natural and human-induced disasters, poses multiple concerns: damages and losses; environmental degradation of land, forests, water fish stocks and other natural resources; declining productivity growth rates; and added pressures to already fragile agricultural livelihoods, food and ecological systems. Maintaining the capacity of the planet's natural-resource base to feed the growing world population while reducing agriculture's ecological and climate footprint is key to ensuring the welfare of current and future generations.

74. Food security and human livelihoods will be increasingly jeopardized beyond 2030 due to climate change impacts. Climate change affects food availability and has adverse impacts on yields, including fish stocks and animal health. It limits access to food through negative impacts on rural incomes and livelihoods. Climate change is also seen as a significant "hunger-risk-multiplier" for

which some forecasts anticipate 24 million malnourished children by 2050, almost half of them in sub-Saharan Africa.

75. It is likely that until 2030, adverse impacts of climate trends only slightly outweigh positive ones. Benefits derived from increased plant growth under warmer temperatures will mainly occur in temperate zones of higher latitudes, while adverse impacts will be concentrated in tropical zones at lower latitudes. Over time, beyond 2030, adverse impacts will intensify with significant losses of yields in many parts of the world, no longer compensated by positive yield changes occurring in other parts. Extreme events such as droughts and floods, will intensify and become more frequent.

Challenge 4: Eradicating extreme and persistent poverty and reducing inequality

76. Despite economic growth and a reduction in poverty globally over the last 30 years, about 2.1 billion people still live in poverty with 900 million living in extreme poverty. High and rising inequality is stalling further poverty reduction. Even in countries where poverty has been reduced, inequalities remain pervasive between rural and urban areas, between regions, between ethnic groups, and between men and women. Agriculture plays an important role in pro-poor growth. Reducing rural poverty requires increasing productivity and profitability, linking farmers to markets, providing efficient extension and advisory agricultural services; however, pro-poor growth goes beyond agriculture: reducing rural poverty implies having access to good quality education, economic diversification in rural non-farm income generating activities, supporting job creation, and adequate social protection mechanisms.

77. Extreme poverty is disproportionately concentrated in rural areas, although it has fallen substantially in many regions over the past few decades, especially in East Asia and the Pacific, as well as in South Asia. Across all developing countries, a person living in rural areas is almost three times more likely to live in extreme poverty than someone living in urban areas. This relative deprivation in rural areas is reflected in a wide range of socio-economic welfare indicators. For example, child malnutrition, as measured by the prevalence of underweight in children under five years of age, is worse in rural areas in virtually every country for which data are available. Access to health, education, and basic services is also, typically, significantly better in cities.

78. Most of the world's poor and hungry are rural people who earn meagre livings from agriculture, fishery and forestry. The poor's reliance on agriculture for their livelihoods and the high share of their expenditure on food makes agriculture key to poverty and hunger alleviation interventions. Where growth has been slower, this structural transformation of agriculture has stalled, leaving many in poverty.

79. Women face particular barriers in access to productive resources, economic opportunities and lower participation in decision-making processes, and women farmers face a number of constraints in accessing agricultural inputs, services and markets that make it particularly hard for them to rely on agricultural production as a pathway out of poverty. Women working in agriculture are also found to have less access to credits and agricultural inputs, which is hampering agricultural productivity growth. In sub-Saharan Africa, agricultural productivity levels of female workers are between 20 to 30 percent lower than male workers because of the gender gap in access to resources, according to recent studies.

80. Significant additional investments are needed to defeat extreme poverty and hunger. However, low current levels of capital formation and the limited "fiscal space" in low-income countries imply they may lack the necessary resources to support such investment programmes, and hence may be in need of external support through international financial cooperation.

Challenge 5: Ending hunger and all forms of malnutrition

81. While positive nutritional outcomes are expected to result from average per capita income growth, addressing the triple burden of malnutrition (under-nourishment, micronutrient deficiency, and overweight and obesity) will remain a challenge in the coming decades.

82. With population growth concentrated in low-income countries, large increases in demand are expected for staple crops like roots, tubers, and plantains. Income growth and urbanization will drive

changes in dietary patterns, and in the currently low-income countries this is expected to be reflected in substantial increases in demand for cereals, milk and meat products, while in high-income countries demand for fruits and vegetables will outpace demand for other crops. World population growth is disproportionately concentrated in countries with higher food insecurity and micronutrient deficiencies. At the same time, the shift to higher consumption of animal products and sugar-rich foods combined with urban sedentary lifestyles is increasing risks of overweight and obesity.

83. Improving access to food among vulnerable populations will be the main challenge to be addressed in order to eradicate hunger in the coming decades along with ensuring urban food security, especially in low- and middle-income countries in Asia, Africa, Latin America and the Caribbean. This includes meeting the food and nutritional demands of people with rising incomes and changing diets, as well as the demands of the growing number of poor and hungry. While much attention has been given to increased production on the farm to meet demands, equally critical are the supply chains that connect farmers to urban and affordable access for consumers to nutritious and safe food (e.g. through pricing policies and social protection).

84. The change in dietary patterns is also leaving an increasing footprint on the environment. Different dietary patterns drive different production systems and have different emission and resource footprints. The shift to diets high in animal-protein content (milk and meat, particularly from ruminants) is associated with high environmental costs, particularly higher greenhouse gas emissions (e.g. methane from enteric fermentation, CO₂ release from deforestation for pasture and nitrous oxide emission for feed production). Increased consumption of processed foods requires additional use of water and energy with associated environmental impacts when these resources are not sustainably managed.

85. If production practices are left unchanged, the shift in dietary patterns should be expected to contribute to increases in greenhouse gas emissions, and thus climate change. Climate change may affect nutritional outcomes, through its impacts on micronutrient content of certain foods intake and food safety. In addition, high temperatures and extreme weather events create a more favourable environment for food-borne pathogens such as campylobacter and salmonella, which reduce the ability of those affected to absorb nutrients.

86. Increasing evidence suggests that dietary patterns that have low environmental impacts can also be consistent with good health. For instance, national dietary guidelines to recommend lower red meat consumption, particularly among high-consuming groups, could help limit greenhouse gas emissions. Still, much more research is needed on understanding the links between climate change and nutrition and diets.

Challenge 6: Making food systems more efficient, inclusive and resilient

87. Food systems are changing to reflect a growing dominance of global supply chains in most countries. Food systems are characterized by a coexistence of modern and traditional supply channels. However, they are changing with growing reliance in many regions on global supply chains and large-scale distribution systems (such as supermarket businesses) that are both meeting and fuelling the changes in food demand and dietary preferences. While improving efficiency, the changing nature of food systems is also creating new challenges and concerns regarding the high-calorie, low nutritional content of many food items, access of small-scale producers and family farmers to viable markets, high levels of food loss and waste, incidences of food safety, plant health and animal health issues, and increasing energy-intensity and ecological footprint associated with the lengthening of food chains. To properly understand the implications of these challenges for future food security and nutrition, they will need to be looked at from the perspective of food systems at large, with a particular focus on the impacts on traditional food chains and the producers and consumers who rely upon them.

88. Changes in the nature of farm-market-consumer interactions can be an important source of income growth and job creation in both rural and urban areas. Formal, structured supply chains can increase the efficiency of product flows from inputs to farmers to retail outlets to consumers, but have also been found to pose a challenge to food security, for instance, if distribution systems become concentrated in non-remote and more affluent urban zones. In addition, often the requirement of large supermarkets are more strict, such as requirement for uniformity, consistency, regular supply and large

volume, which may be difficult for small producers to meet. The increasing dominance of structured supply chains is raising increasing concerns for both the efficiency and equity of their consequences. At the same time, local food systems remain important, despite the “supermarket revolution” and the associated rise of modern global food supply chains. Up to 90 percent of food consumption in low-income countries comes from domestic sources in rural areas.

89. In low-income countries, food losses occur throughout food value chains, and result from managerial and technical limitations in harvesting, storage, transportation, processing, packaging and marketing. Food waste in middle- and high-income countries is caused mainly by consumer behaviour and by policies and regulations that address other sectoral priorities. For example, agricultural subsidies may encourage the production of surplus food crops, which reduces both prices and the attention that is paid – along the value chain and by consumers – to food losses and waste. Furthermore, food safety and quality standards may remove food from the supply chain that is still safe for human consumption. At the consumer level, inadequate planning of purchases and failure to use food before its expiry date also lead to food waste.

90. The modernization of food supply chains has been associated with higher GHG emissions from both pre-chain inputs (fertilizers, machinery, pesticides, veterinary products, transport) and post farm-gate activities (transportation, processing and retailing).

91. The challenge for many low and middle-income countries will be to find dynamic pathways that connect local food systems to growing urban markets and seize upon the opportunities those markets provide. Cities contain the lion’s share of demand for high-value products such as fruits, vegetables and dairy, where small-scale and family farmers can have an advantage because the products are labour intensive. Developing food systems that link farmers to cities can have an enormous impact on rural poverty alleviation and agricultural development. Alternative pathways are possible: one is to connect small-scale producers to supermarket supply chains on terms beneficial to them; other options are to give new impetus to local food system developments.

Challenge 7: Improving income earning opportunities in rural areas and addressing root causes of migration

92. Persistent inequalities are leaving too many behind in escaping hunger and rural poverty. Many young people in low-income countries are shying away from working in low-productivity agriculture. In the absence of decent work opportunities and poor access to social services and social protection in rural areas, they become part of growing migratory flows, including international ones, fuelled by pervasive and persistent global inequalities. In many regions, women and older people are the ones left to take care of the farm, but facing major constraints in accessing resources to improve productivity. Finding ways to addressing those inequalities through more inclusive rural transformations and reconfiguration of rural-urban linkages will be a major challenge for the coming decades.

93. Arguably the single biggest global development challenge for the decades to come arises from the need to integrate hundreds of millions of young people into the labour market. Over the next 35 years, the age bracket between 15 and 24 years will rise from the already high level of about 1 billion people in 2015 to 1.2 billion by 2050. Most of these young people will live in sub-Saharan Africa and South Asia. High levels of youth unemployment in rural areas is a key constraint for households to diversify and move out of poverty sustainably. Building human capital through the provision of quality basic social services—particularly education and health—are fundamental building blocks to poverty reduction.

94. In many low- and middle-income countries, population growth is outpacing new job growth and rapid urbanization has not been accompanied by commensurate non-agricultural job growth. Consequently, agriculture and agriculture-related services and food processes will need to continue absorbing a large share of new workers.

95. Migration is part of economic development and the structural transformation of agriculture. In the coming decades however distress migration, both within and across countries, will be accelerated by the world’s increasing population, globalization, climate change and political conflict. Managing

migration flows will require additional efforts including addressing its root causes and increasing access to social protection and employment opportunities in origin and destination countries.

Challenge 8: Building resilience to protracted crises, disasters and conflicts

96. Protracted crises are some of the most challenging contexts in which to fight hunger, malnutrition and poverty. They are driven by a combination of recurring causes – human-made factors and natural hazards (often occurring simultaneously), violent conflict, lengthy food crisis, breakdown of livelihoods and food systems and insufficient governance and institutional capacities to deal with the resulting crisis. Almost half a billion people live in over 20 countries and territories affected by protracted crisis situations, mostly in Africa. Most of these people derive their food, income and well-being from agriculture and related sectors. Two thirds of international humanitarian assistance (or 80 percent of the emergency funds of the OECD member countries) has gone to protracted or recurrent crisis situations which last on average eight or more years.

97. Conflicts, together with protracted crises and natural disasters, are major disablers of agriculture livelihoods, food security and nutrition. They also fuel displacement and migratory flows. In recent decades, the world has seen increased intensity and frequency of conflicts and disasters. More risk-informed, inclusive and equitable resilience and development processes will be essential to preventing rising conflicts around the world.

Challenge 9: Preventing transboundary and emerging agriculture and food system threats

98. Agricultural and food systems are under continued threat from an alarming increase in the number of outbreaks of transboundary animal and plant pests and diseases, as well as food safety and radiation events. Avian influenza, foot-and-mouth disease, peste des petits ruminants, locust infestations, wheat, cassava, maize and banana diseases, forest pests and diseases, aquatic diseases, food-borne pathogens and mycotoxins are just some examples of threats that have detrimental effects on food security, human health, livelihoods, national economies and global markets. Climate change is in part responsible for the rise in food system emergencies.

99. Controlling transboundary plant pests and diseases is a major aspect of plant production productivity as this enables reducing yield losses of crops and pastures. Reducing the use of chemical pesticides and replacing them with biopesticides and biocontrol agents, as part of adoption of integrated production and pest management systems will help contain the risk of occurrence of plants pests and diseases. Likewise, transboundary animal diseases (TADs) are highly contagious epidemic diseases that can spread extremely rapidly, irrespective of national borders. They cause high rates of death and illness in animals. The occurrence of TADs disrupts international and regional livestock markets and trade posing a constant threat to the livelihoods of livestock farmers both in developed, and more severely, in developing countries. Currently, there is insufficient capacity and international coordination to understand the risks, and prevent, control and eradicate emerging TADs.

100. The increased recourse to intensive animal husbandry in response to changing food demand creates risks related to certain health and food safety problems caused by higher point-source pollution, greater use of antibiotics (with associated antibiotic resistance concerns), and potentially greater epidemic zoonotic disease outbreaks. Food-borne diseases are an important cause of morbidity and mortality worldwide, but detailed data on the extent and cost of unsafe food, and especially, the burden arising from parasitic and chemical contaminants in food is still unknown. Food safety may be jeopardized further by unsafe water used for food processing, poor food handling, limited storage facilities, as well as poorly enforced regulatory standards. These risks are compounded by increasing antimicrobial resistance (AMR), which threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses and fungi and could reverse gains of modern medicine. Antimicrobials are still heavily used, not only to preserve human and animal health, but also in the broader context of the livestock and agricultural industry.

Challenge 10: Addressing the need for coherent and effective national and international governance

101. Lastly, yet very important, all of these challenges are largely interconnected. Addressing them will require integrated policy approaches both at national and international levels. Designing such

approaches to respond to the multiplicity of challenges will not be easy given past trajectories of mostly sector-specific policy-making and given major deficiencies in global and national governance mechanisms, regulatory systems, and monitoring and accountability frameworks.

102. The 2030 Agenda and the Paris Agreement on climate change, and other related global agreements and developments, stress the interdependence of the challenges to be addressed. They also recognize the need to combine different actions to achieve linked objectives and that doing so will pose new technical demands on policy-makers at all levels and new demands on institutional arrangements and coordination at various levels of governance. The related challenges include first, combining instruments implemented at different levels of governance in ways that are mutually reinforcing, while inevitable trade-offs are recognized and contained. Second, capitalizing on synergies among SDGs and targets, between different sectoral policies, and between diverse actions undertaken by officials and stakeholders at levels that range from local, municipal, provincial, and national to regional and international.

103. More inclusive governance is essential to improve dialogue about hard policy choices to be made and to avoid marginalization of the poor themselves who lack the political force to influence decisions, and to progressively engage the resources and creativity of the poor in the developmental process. Growing competition over natural resources in situations where the poor or other excluded populations have limited recognition of rights, including informal rights of access to, and use of natural resources, can lead to the rural poor being dispossessed of the natural resources upon which they base their livelihoods (especially in protracted crisis situation and in conflict and disaster-affected areas). Ensuring recognition of these rights, especially through implementation of the Voluntary Guidelines for the Responsible Governance of Tenure of Land, Fisheries, and Forests and to support the progressive realization of the Right to Adequate Food in the context of food security is a vital imperative, and a key governance challenge.

104. Rapid population growth, especially in areas vulnerable to the impacts of climate change, conflicts and fragile institutions presents special governance challenges. When the demand for access to natural resources for development collides with large population movements in response to natural disasters and human-induced crises, the pressure on natural resources can become a source of violent conflict. Improved natural-resource governance based on the concepts of governance of tenure will be needed to establish a flexible framework for mitigating and resolving existential conflicts over access to land, water, fisheries, forests and for protecting biodiversity and ensuring ecosystem services.

105. International cooperation has an important role to play in these contexts. Many resources upon which the agriculture sectors depend – such as water, fish stocks, forests, and ecosystems – are transboundary in nature. Changes in the environment will lead to changes in the availability of these resources and to the migration of species, people and human activities as they seek to adjust to them. In addition, extreme events, such as forest fires, species invasions, and pests and diseases, reach across national boundaries. Policies and institutions dedicated to the prevention and management of specific risks and vulnerabilities that are being affected by climate change are mainly local and national, but they could be more effectively supported by international cooperation and tools.

106. Other areas for improved governance include: financing for inclusive food and agriculture development; meeting employment and migration challenges; addressing shortfalls in the multilateral trading regime in relation to food and agriculture systems; and providing open access to data and statistics to enhance the role of all stakeholders in governance.

C. FAO's Attributes and Core Functions

107. The trends and challenges are broadly defined, and cannot be tackled by FAO alone. In order to understand the implications for FAO's Strategic Framework, these challenges need to be considered in light of FAO's attributes and core functions. This section includes a brief presentation of FAO's attributes and approved core functions.

FAO's basic organizational attributes

108. The most relevant basic attributes and strength of an organization are those that are intrinsic and unique to it, and which define its basic organizational characteristics. There are several basic attributes which are intrinsic and in combination unique to FAO:

- a) it is the United Nations specialized agency in food and agriculture, with a comprehensive mandate from its member countries to work globally on all aspects of food and agriculture (including fisheries, forestry and natural resources' management), food security and nutrition across the humanitarian-development continuum;
- b) its intergovernmental status and neutrality and the authority to provide a neutral platform where nations can call on each other for dialogue and knowledge exchange;
- c) it has the authority to request any Member Nation to submit information relating to the purpose of the Organization;
- d) its Regular Budget is derived from assessed contributions that provide a minimum guaranteed amount of resources that can be committed for priority activities agreed upon by member countries in the governing bodies, complemented by significant voluntary contributions, increasingly mobilized in support of FAO's Strategic Objectives to leverage FAO's knowledge and enhance outreach;
- e) a staff with a broad range of expertise across its areas of mandate – albeit thinly spread - working in an interdisciplinary fashion; and
- f) country-level presence, supported by regional and global teams of experts, to respond to demands articulated by countries and regions.

Core Functions – how FAO delivers

109. Core Functions are the critical means of action employed by FAO to achieve results. Consequently, they represent the types of interventions to which the Organization will give priority in its plan of action. They are areas in which FAO is expected to play a lead, but not necessarily exclusive role. In such cases, FAO needs to work with partners and should intensify its efforts to develop and operationalize strategic partnerships.

- a) *Facilitate and support countries in the development and implementation of normative and standard-setting instruments such as international agreements, codes of conduct, technical standards and others.* This work will be developed at global, regional and national levels through global governance mechanisms, policy dialogue and support and advice, coupled with the development at country level of the necessary policies and institutional capacities for their implementation.
- b) *Assemble, analyze, monitor and improve access to data and information, in areas related to FAO's mandate.* This includes the development of global and regional trends, perspectives and projections and the associated responses by governments and other stakeholders (e.g. policies, legislation and actions) and direct support to countries in the development of institutional capacities to respond to the identified challenges and possible options.
- c) *Facilitate, promote and support policy dialogue at global, regional and country levels.* FAO as an intergovernmental organization is especially well positioned to help countries at national and international levels to organize policy dialogue activities directed to improve the understanding on important issues and to the establishment of agreements between stakeholders and/or countries.

- d) *Advise and support capacity development at country and regional level to prepare, implement, monitor and evaluate evidence-based policies, investments and programmes.* This includes advice and support for activities directed to institutional strengthening, human resources development and direct advice to programme implementation.
- e) *Advise and support activities that assemble, disseminate and improve the uptake of knowledge, technologies and good practices in the areas of FAO's mandate.* FAO as a knowledge Organization needs to be at the forefront of knowledge and technology in all the areas of its mandate and be a source and organizational instrument to support countries in the utilization of available knowledge and technologies for development purposes.
- f) *Facilitate partnerships for food security and nutrition, agriculture and rural development between governments, development partners, civil society and the private sector.* FAO has a broad mandate that includes major development problems that need to be targeted from a broad and comprehensive perspective. However, FAO will focus its work on the areas in which it has special competence and will establish strong partnerships with other organizations to cover other complementary actions required.
- g) *Advocate and communicate at national, regional and global levels in areas of FAO's mandate.* FAO has a main responsibility in providing communication and information services in all areas of its mandate to countries and the development community and to strongly advocate on corporate positions in relation to relevant and urgent development issues.

110. The Core Functions ensure that, within the areas of FAO's mandate, countries at all levels of development, particularly the poorest, have access to knowledge, public goods and services they need. This requires FAO to be a global policy setter, facilitator, partner and coordinator, as well as "doer".

111. To perform these tasks, FAO should: (a) focus on its technical expertise and knowledge and promote good practices available at country level; (b) play a leading role when activities are linked to its mandate; and (c) draw upon its networking and partnerships capacity. Furthermore, in some cases FAO will need to continue to strengthen its capacities, both organizational and human resources to be able to fully implement the Core Functions and in particular to reaffirm its position as the main global player in the provision of public goods and policy advice in the areas of food, agriculture, fisheries and forestry.

112. While the Core Functions are the most important instruments on which FAO will organize and develop its work, each of the five Strategic Objectives embodies the development problems where FAO will concentrate its work through the Strategic Objective programmes. Consequently, the organization and focus of FAO's work developed under each Strategic Objective will be implemented through the application of the seven Core Functions.

D. Strategic Objectives

113. The ten challenges identified and described in *Section B.3*, including the regional trends and specificities, represent the main development problems that countries and the development community will face in the near future. They form the basis for the review of the conceptual framework and theory of change of the five current Strategic Objectives (SOs), within the context of FAO's vision, core functions and attributes:

1: Contribute to the eradication of hunger, food insecurity and malnutrition

2: Make agriculture, forestry and fisheries more productive and sustainable

3: Reduce rural poverty

4: Enable more inclusive and efficient agricultural and food systems

5: Increase the resilience of livelihoods to threats and crises

114. To ensure a robust and practical results-based approach to all of the work of the Organization, FAO must ensure that it has the internal technical capacity and integrity to achieve the expected results. Therefore the Strategic Framework continues to include a sixth objective, *Technical quality, statistics and cross-cutting themes (climate change, gender, governance and nutrition)*, to ensure technical leadership and integration of statistics and the cross-cutting issues of climate change, gender, governance and nutrition in the delivery of the Strategic Objectives.

Alignment of the Strategic Objectives with the Sustainable Development Goals

115. An important consideration in this review of the Strategic Framework was to ensure the alignment of the Strategic Objective results framework with the Sustainable Development Goals in order to effectively assist countries in the achievement of their targets. The 2030 Agenda for Sustainable Development constitutes a new global charter for international development cooperation and governance, and defines the context in which FAO and its member countries will be working toward reaching the SDGs and achieving country specific targets.

116. The second Sustainable Development Goal (SDG 2) explicitly aims to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture simultaneously by 2030. SDG 2 and its related targets reflect the notion that hunger and malnutrition are multifaceted problems and that overcoming these forms of deprivation is a multi-sectoral challenge. Furthermore, the 2030 Agenda recognizes that progress towards many other SDGs, especially the eradication of poverty (SDG 1), access of the rural poor to productive employment and decent work opportunities (SDG 8), response to climate change (SDG 13) and the sustainable use of marine and terrestrial ecosystems (SDG 14 and SDG 15), will depend on the extent to which food insecurity and malnutrition are effectively reduced and sustainable agriculture is promoted. Conversely, progress towards SDG 2 will depend on progress made toward several of the other goals.

117. One of the challenges of the 2030 Agenda for FAO is to think beyond the resources it uniquely controls to ask more challenging questions about how it can more effectively catalyse action by others and build key partnerships with development partners, including the Rome-based and other UN agencies. The Organization is also being called upon to help governments and regional and global institutions cope with the complexity of the new agenda by breaking down the complicated tasks they have set for themselves into discrete, solvable problems. In this regard, the MTP 2018-21 presents the expected contribution of each of the SOs to Members' achievement of the SDGs.

118. In the context of SDGs, it is important to recall that FAO's vision on cross-cutting issues is an effective approach to ensure close alignment of the SDGs not only in each SO but also across all SOs. FAO's cross-cutting issues of climate change, gender, governance and nutrition, as well statistics are prominent across several SDGs and their strong integration in FAO's programmes is crucial in assisting countries in achieving the SDGs.

119. Below, a short narrative for each SO and Objective 6 outlines the areas of focus and expected Outcomes in light of the developments, trends and challenges in the overall context of the SDGs.

***Strategic Objective 1: Contribute to the eradication of hunger,
food insecurity and malnutrition***

120. Despite significant progress in development indicators over the past two decades, chronic hunger, undernutrition among children under five years of age and micronutrient deficiencies remain widespread. At the same time the world now witnesses the parallel emergence of overweight, and obesity among all population groups, as well as diet-related non-communicable diseases as major public health challenges.

121. While the world produces enough food to feed everyone adequately, still many do not have the means to produce it, or the resources to purchase it, in good quantity and quality. Beyond the ethical dimensions of the problem, the human, social and economic costs to society at large are enormous: lost productivity, health-related problems, reduced well-being, decreased learning ability and reduced fulfilment of human potential. In addition, most countries are burdened by more than one form of malnutrition, which may co-exist within the same country, community, household or individual.

122. Under a “business-as-usual” scenario, the SDG to end hunger by 2030 (SDG 2) will not be achieved and, large segments of the world’s population, particularly in sub-Saharan Africa and South Asia, will remain undernourished by 2030 and even by 2050. Similarly, global trends in the prevalence 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 nutrition target of a 40 percent reduction in the number of stunted children by 2025.

123. FAO will support countries to effectively implement the 2030 Agenda for Sustainable Development, especially regarding SDG 2. The focus of SO1 is on FAO’s contribution to the sustainable eradication of hunger, food insecurity and all forms of malnutrition, including under-nourishment, micronutrient deficiencies and problems of overweight, obesity and diet-related non-communicable diseases. This work will contribute to targets of SDG 2 and SDG 3, while targets contained within other Sustainable Development Goals, including SDGs 13, 14 and 15, are also considered to be instrumental for the achievement of this Objective.

124. Addressing the root causes of hunger, food insecurity and malnutrition requires that a number of elements be in place, namely: political commitment; common understanding of problems and solutions based on sound data, information and analysis; inclusive governance mechanisms and stakeholder coordination; a coherent framework of policies, programmes and investments; leveraging food and agricultural systems for better nutrition; addressing the gender gap. These elements constitute the pillars of the SO1 programme.

125. It is important to bring the full potential of the food and agricultural system to bear on all forms of malnutrition, exploiting opportunities and creating incentives so that the system produces positive nutrition outcomes. More coherent policies, programmes and investments can ensure that action is taken by relevant actors across the entire system to improve nutrition, including at the stages of production, harvesting, storage, processing, marketing and consumption.

126. As a global organization, FAO uses its work at global and regional levels as a lever for raising political commitment and developing capacities at country level. In this context, FAO will contribute to the eradication of hunger, food insecurity and malnutrition (Strategic Objective 1) through four Outcomes:

- 1.1: Countries made explicit political commitment** to eradicate hunger, food insecurity and malnutrition by 2030
- 1.2: Countries implemented inclusive governance and coordination mechanisms** for eradicating hunger, food insecurity and all forms of malnutrition by 2030
- 1.3: Countries made decisions based on evidence** for the eradication of hunger, food insecurity and all forms of malnutrition by 2030
- 1.4: Countries implemented effective policies, strategies and investment programmes** to eradicate hunger, food insecurity and all forms of malnutrition by 2030

Strategic Objective 2: Make agriculture, forestry and fisheries more productive and sustainable

127. Sustainable agriculture is at the core of the SDGs, and the extent to which the agricultural sectors - agriculture, forestry and fisheries - can respond to meet the increasing demand for food, feed, fibre in a more productive and sustainable way is crucial. This increasing demand will also undergo structural changes due to *inter alia* population growth, urbanization, migration, changing diets and per capita income increases, while the natural resource base will become increasingly stressed, and conflict for resources will further escalate in the next decades.

128. Meeting these challenges will contribute to: ensuring food security and nutrition, and sustainable agriculture (SDG 2), improved water use efficiency (SDG 6), combating climate change (SDG 13), conserving marine resources (SDG 14), and terrestrial ecosystems, land restoration and biodiversity (SDG 15).

129. The transition to sustainable agriculture, forestry and fisheries, in order to sustainably increase production and productivity and address climate change and environmental degradation issues, requires an effective enabling environment and includes four areas: (i) sustainable production systems, practices and related innovations; (ii) development of policies, investment strategies and strengthening governance mechanisms; (iii) effective implementation of policies and international instruments; and (iv) evidence-based decision-making.

130. In this context, FAO will help member countries achieve more productive and sustainable food and agriculture through a broader food systems' approach as follows:

- a) supporting producers, as key partners, with emphasis on gender equality to become agents of change and innovators, enabling them to achieve higher production and productivity in a sustainable way;
- b) supporting governments to establish enabling environments, including the development of conducive policies, investment plans, programmes and governance mechanisms on sustainable agriculture, forestry and fisheries, and addressing climate change and environmental degradation in a cross-sectoral, integrated and participatory way;
- c) supporting governments to strengthen policy implementation, including through international and regional instruments relevant to sustainable agriculture, forestry and fisheries;
- d) promoting the use of knowledge and information for evidence-based decision-making, including support to countries to monitor the SDGs.

131. The transition to sustainable food and agriculture will provide an opportunity for applying policies, strategies, governance, international frameworks, and instruments and investment mechanisms that are more integrated and cross-sectoral. Multi-stakeholder policy dialogues, platforms and approaches will create synergies, address trade-offs and ensure economic, social equity and improved livelihoods, which are closely linked to the value chain and access to market, and rural economy issues relating to off-farm income generation, land tenure and migration.

132. FAO will contribute to making agriculture, forestry and fisheries more productive and sustainable (Strategic Objective 2) through four Outcomes:

- 2.1:** Countries adopted practices to **increase productivity sustainably** while addressing climate change and environmental degradation in agriculture, forestry and fisheries
- 2.2:** Countries **developed or improved policies and governance mechanisms** to address sustainable production, climate change and environmental degradation in agriculture, fisheries and forestry
- 2.3:** Countries improved **implementation of policies and international instruments** for sustainable agriculture, fisheries and forestry
- 2.4:** Countries **made decisions based on evidence** for sustainable agriculture, fisheries and forestry while addressing climate change and environmental degradation

Strategic Objective 3: Reduce rural poverty

133. Eliminating poverty and driving forward economic and social progress for all is one of three global goals of FAO, along with eradicating hunger, food insecurity and malnutrition and promoting sustainable management of natural resources. They are also key components of the SDGs. Two thirds of the extreme poor live in rural areas, and most depend at least partly on agriculture - crop, livestock, fishing or forestry resources - for their livelihoods and food security.

134. While over the coming decades the number of people working in agriculture will decline, today, and for many decades to come, particularly in sub-Saharan Africa the majority of the extreme poor live in rural areas and depend at least partly on agriculture and natural resources for food and income. The rural poor also include workers that hold precarious, poorly paid, informal jobs or are unable to find employment, particularly among rural women and youth. High levels of youth unemployment in rural areas, particularly in the Middle East, North Africa and sub-Saharan Africa, is a key constraint for households to diversify and move out of poverty.

135. Women's economic empowerment plays a central role in poverty reduction. Women face particular barriers in access to productive resources, decent employment and equal wages. Assisting women in developing their full economic potential will be a game changer for poverty reduction. Increasing women's level of decision-making, skills and employment opportunities, as well as access to social protection and services, such as child care, is fundamental to rural poverty reduction. More broadly, addressing gender discrimination in countries' legal frameworks that prevent their access to productive resources and economic opportunities and participation will be also necessary.

136. Through the explicit focus of SO3 on rural poverty reduction through inclusive rural transformation, FAO plays a strategic role in linking two goals of the 2030 Sustainable Development Agenda: SDG 1 for eradicating extreme poverty and reducing by 50 percent the share of the world's population in poverty; and SDG 2 for ending hunger and ensuring access to nutritious and sufficient food, as well as contributing to SDG 5 gender equality and women's empowerment; SDG 8 employment and decent work; and SDG 10 reducing inequality.

137. FAO is strategically placed to support governments to improve the livelihoods of poor and extreme poor rural households through policies, strategies and programmes that strengthen institutions and promote social empowerment and inclusion; promote pro-poor sustainable agricultural production and increases in productivity, income diversification and decent employment in the farm and non-farm economy; and enable access to social protection. In this regard, SO3 targets a diverse spectrum of households living in rural poverty and proposes a broad approach with differentiated strategies to support the livelihoods and empowerment of poor rural households. Given the multiple pathways out of poverty and multiple conditioning factors, a broad, multi-sectoral approach to poverty, with differentiated strategies, is necessary for successful rural poverty reduction. This set of policies should foster inclusive structural and rural transformation and economic growth, enabling the poor to actively participate in, and significantly benefit from economic activity, while addressing the root causes of migration.

138. FAO will contribute to the reduction of rural poverty (Strategic Objective 3) through four Outcomes:

- 3.1: Rural poor and rural poor organizations** empowered to access productive resources, services and markets
- 3.2: Countries enhanced access of the rural poor to productive employment and decent work opportunities**, particularly among youth and women
- 3.3: Countries enhanced access of the rural poor to social protection systems**
- 3.4: Countries strengthened capacities to design, implement and evaluate gender equitable multi-sectoral policies, strategies and programmes** to contribute to the achievement of SDG 1

Strategic Objective 4: Enable more inclusive and efficient agricultural and food systems

139. The post-production aggregation, processing, distribution, consumption and disposal of goods that originate from agriculture, forestry, aquaculture or fisheries⁹ together form a critical, but often neglected, component of agricultural and food systems that provides the focus for Strategic Objective 4. This component of agricultural and food systems includes the individuals, agro-enterprises and support services (finance, investments and other services) and their linkages, including the value chains, that deliver specific products to intermediate and end markets. These interlinked elements and structures are embedded in an environment of policies, strategies, laws and regulations, and public infrastructure provision that together initiate, support or inhibit changes in agricultural and food systems.

140. The way in which agricultural and food systems develop over the next 15 years will therefore be a key determinant in the extent to which food insecurity and malnutrition can be eliminated (SDG 2) and more sustainable consumption promoted (SDG 12); in the provision of sources of employment and income, particularly for women and youth (SDG 8); in the extent to which pressures on the use of the natural resource base can be reduced (SDGs 13, 14 and 15); in the degree to which improvements in the equity and equality of resource use can be achieved (SDGs 5, 9 and 10); in ensuring access to affordable, reliable, sustainable and modern energy for all (SDG 7); and in the contributions that can be made to the development of more sustainable cities (SDG 11). Agricultural and food systems, by connecting diverse sets of actors, also provide a key entry point for developing and strengthening partnerships and investments required to deliver the SDGs (SDG 17).

141. Developments in agricultural and food systems will be driven primarily by actions taken to meet the requirements of consumers - not just those requirements characterized in terms of quality, safety and price, but also in the way in which products are produced, transformed and used, reflecting concerns related to food loss and waste and to climate change. Patterns of demand are rapidly changing, but with significant heterogeneity in both speed and impact across and within regions. These changing consumer requirements are resulting in unprecedented challenges to agricultural and food systems development, and these challenges are manifested in different ways in different market segments.

142. Along with positive results brought about by developments in food systems, there have also been unintended consequences, resulting in several challenges to achieving broad-based development. A key challenge that has hindered the realization of more positive outcomes is the lack of coherent approaches to agricultural and food systems development involving diverse and often new sets of actors. Reconciling different objectives, interests and trade-offs requires coordinated action to ensure that agricultural and food systems develop in a way that allows for efficiency gains to be made, but at the same time facilitates inclusiveness, better nutritional outcomes, greater resilience, and reduces the pressure on the natural resource base.

143. FAO will enable the development of more inclusive and efficient agricultural and food systems (Strategic Objective 4) through four Outcomes:

- 4.1:** International standards, agreements and voluntary guidelines formulated to improve countries' access to, and functioning of international markets
- 4.2:** Countries designed and implemented **policies, regulatory frameworks and institutional arrangements** supportive of inclusive and efficient agrifood systems development
- 4.3:** Countries enhanced **public and private sector capacities and increased investments** to promote inclusive agro-enterprises and value chain development
- 4.4:** Countries **made decisions based on evidence** to support agrifood systems development

⁹ Agricultural and food systems are defined as including both formal and informal market channels and non-market based components (self-consumption and community-based consumption)

Strategic Objective 5: Increase the resilience of livelihoods to threats and crises

144. Over the past decade, natural disasters caused around USD 1.3 trillion in damages and affected 2.7 billion people. Disaster impacts on agriculture also have direct effects on agro-ecosystem resources, livelihoods, food security and nutrition and undermine national development gains that have taken years to build, in addition to having immediate effects on lives and livelihoods, as well as on natural resources and built environment. Humanitarian appeals have increased by 550 percent over the past ten years, reaching a record USD 20 billion in 2015. Of this, 41 percent were needed for food assistance, which includes a small fraction for agriculture livelihoods protection. Responding to crises is not enough and must be coupled with efforts to address their root causes, the underlying vulnerabilities and the risks to which people are increasingly exposed. Proactive investment at scale must be done to prevent disasters or crises and mitigate their impact and, when unavoidable, assist in the emergency preparedness for the agriculture sector and response to save and restore agriculture-based livelihoods. Countries and communities must have reinforced capacities to better anticipate threats, absorb shocks and transform or reshape development pathways.

145. Today, the livelihoods of more than 2.5 billion people worldwide depend on agriculture for income, food, well-being and dignity. They generate more than half of the global agricultural production and are particularly at risk from disasters and crises. Among the multiple types of hazards that can trigger disasters and crises, FAO contributes to the achievement of resilience of most vulnerable countries and communities to natural hazards, including climate change-induced extreme events, food chain threats, including animal and plant diseases and pests, as well as protracted crisis situations, including socio-economic crises and violent conflicts.

146. The ability to eradicate hunger and feed a growing population by 2030 depends on fostering the unique skills of small-scale farmers, fishers, herders and forest-dependent communities to produce more food and manage the natural resource base we all rely on. In addition to the triple challenge faced in small-scale agriculture in developing countries to produce more food; provide more jobs and income; and manage the natural resources in a sustainable way, the magnitude, frequency and impact of disasters and crisis is on the rise, in particular those related to climate change, conflicts and food chain threats.

147. The main focus of SO5 is to increase the resilience of agricultural livelihoods to threats and crises and responding when they occur. Building upon the Sendai Framework, there is a broader recognition that humanitarian assistance should be combined with resilience building of communities and countries at risk or in crises. Within this framework, along with the quest to end poverty and to eradicate hunger (SDGs 1 and 2), the international community has reinforced its commitment to adopt new ways of working to strengthen the coherence between humanitarian response and resilience building interventions for long-term development actions. The work under SO5 will contribute directly to targets under SDGs 1, 2, 10, 11, 13, 15 and 16.

148. The economic, social and environmental dimensions of sustainable development must be complemented by disaster and crisis resilience (including emergency response) in order to be viable. Increasing the resilience of agriculture-based livelihoods of smallholders is a powerful and essential means to reach the Sustainable Development Goals and to leave no one behind.

149. FAO will contribute to the increased resilience of livelihoods to threats and crises (Strategic Objective 5) through four Outcomes:

5.1: Countries adopted or implemented **legal, policy and institutional systems and frameworks** for risk reduction and crisis management

5.2: Countries **made use of regular information and early warning** against potential, known and emerging threats

5.3: Countries **reduced risks and vulnerability at household and community level**

5.4: Countries prepared for, and managed **effective responses to disasters and crises**

Objective 6: Technical quality, statistics and cross-cutting themes (climate change, gender, governance and nutrition)

150. Objective 6 ensures the quality and integrity of FAO's technical knowledge and services in six key areas cutting across the Strategic Objectives.

- a) *Technical leadership*: ensures excellence of technical knowledge through technical leadership and quality control by technical divisions, supports corporate technical networks and the delivery of technical expertise to corporate programmes, maintains capacity to identify and respond to emerging issues and make advances on fundamental challenges in the main disciplines through the Technical Committees, and prepares high-quality corporate flagship publications.
- b) *Statistics*: ensures the quality and integrity of the data produced and analyzed by the Organization, including aspects of standardized methodologies, country statistical capacity data quality and statistical governance and coordination.
- c) *Climate change*: ensures technical leadership for FAO's work on climate change to enhance national capacity to address climate change and agriculture, improve the integration of food security, agriculture, forestry and fisheries considerations into international governance on climate change, and strengthen FAO's own coordination and capacity to deliver its work on climate change across the Strategic Objectives through the Climate Change Strategy and Plan of Action..
- d) *Gender*: ensures coherence of strategy and approaches, and quality services to work on gender equality and women's empowerment across the Strategic Objectives.
- e) *Governance*: ensures coherence of strategy and approaches, and quality of services related to global governance and coordination of policy and governance across the Strategic Objectives.
- f) *Nutrition*: ensures technical leadership for FAO's work on nutrition, policy and operational coordination in the UN system, facilitation of mainstreaming nutrition across Strategic Objectives, as well as technical support to resource mobilization and nutrition communication, and liaising with UN agencies to compile reports on the implementation of the commitments of the Rome Declaration on Nutrition.

151. The strategy and expected Outcomes for statistics and the four cross-cutting themes (climate, change, gender, governance, nutrition) are outlined below.

Statistics

152. High-quality statistics are essential for designing and targeting policies to reduce hunger, malnutrition, rural poverty, and promoting the sustainable use of natural resources, including sustainable increase in production and productivity to address climate change and environmental degradation. They provide the foundation for evidence-based decision-making for governments and the international community, and play a critical role in measuring and monitoring progress towards national and international development goals and targets. This is particularly relevant within the context of the 2030 Agenda and its monitoring framework, which represents an immense challenge for countries and a serious test for national statistical capacity and resources.

153. FAO's work on the collection and dissemination of statistical information on food and agriculture represents a core element of the Organization's mandate. FAO is recognized as having a fundamental role in developing global standards, methods and tools for food and agriculture statistics. This work is ultimately aimed at improving the availability and quality of national data, as well as their international comparability and interoperability across different statistical domains. FAO supports the adoption of these global standards by implementing a fully integrated and coordinated approach to statistical capacity development which is aligned to country strategies and priorities, and the demands of the 2030 Agenda.

154. FAO's statistical capacity development strategy is based on the recognition that improving the capacity of member countries in the collection, dissemination and use of basic food and agricultural data is essential to make the best analytical and decision-making support tools available, both at the national and global level. Under the 2030 Agenda, the FAO statistical system has a substantial and challenging role to play in supporting countries to collect data and monitor the SDGs. FAO acknowledges the magnitude of the responsibility of monitoring up to 26 indicators and has consistently emphasized the need to establish partnerships with other UN agencies.

155. Statistics play a dual role in FAO's Strategic Framework: they contribute directly to specific Outputs and Outcomes of the Strategic Objectives, and they create the internal and external enabling environments that facilitate the delivery of corporate results under Objective 6. In order to ensure that data and statistics are increasingly and effectively used in decision-making processes, FAO aims to improve its data relevance and timeliness and to conduct regular consultations with users to better understand their needs and to provide training to data producers to enhance their communication capacities.

Cross-cutting themes

156. The cross-cutting themes represent four recognized key issues - climate change, gender, governance and nutrition - that cut across all Strategic Objectives, and which need to be fully integrated in the programmatic work, to reflect a common perspective and approach.

Climate change

157. Agriculture's role in adapting to, and mitigating climate change has gained prominence in recent years. FAO contributed to the development of the 5th Assessment report of the Intergovernmental Panel on Climate Change (IPCC), and actively participates in international climate change governance and initiatives. In a rapidly changing landscape of international cooperation, positioning FAO to help tackle climate change is pivotal for achieving the Strategic Objectives. In 2015 climate change was established as a cross-cutting theme of FAO's Strategic Framework.

158. The FAO Climate Change Strategy guides FAO's action to achieve three mutually reinforcing outcomes: (a) enhanced national capacity on climate change through provision of technical knowledge and expertise; (b) improved integration of food security and nutrition, agriculture, forestry and fisheries considerations within the international agenda on climate change; and (c) strengthened coordination and delivery of FAO work.

159. The Plan of Action of the FAO Climate Change Strategy¹⁰ is an integral part of the Strategic Framework and Medium Term Plan. The Plan of Action sets out for each of the expected climate outcomes the action to be taken by FAO through the Strategic Objective programmes and Objective 6.

Gender

160. Achieving food security and nutrition for all depends, to a great extent, on the equality of rights and opportunities women and men have and on their capacity to thrive as actors within their social and economic contexts. Rural women are resourceful economic agents who contribute to the income of families and the growth of communities in multiple ways. Moreover, rural women play a major role in household food security and nutrition and support their households and communities by dedicating time to preserving culture and tradition and ensuring the provision of basic resources, such as water, fuel, healthcare and education.

161. Across all regions, women face a more limited access to productive resources and inputs, services, information and social networks. They are also less represented in local institutions and governance mechanisms and have weaker decision-making power. This gender gap not only undermines their potential, but it also imposes high costs on the agricultural sector and the broader economy and society as a whole.

162. The international community, through the 2030 Agenda, has catalysed great political attention on the urgency to address gender inequalities and the uneven distribution of capacities, opportunities,

¹⁰ PC 121/2 and <http://www.fao.org/climate-change/>

wealth, power and voice between women and men. The principle of “leaving no one behind” guides every goal of the 2030 Agenda. The focus on gender equality and women’s empowerment is thus explicit across all the SDGs, both as a stand-alone Goal on Gender Equality and as a cross-cutting theme with more than 30 related targets.

163. FAO is aligned to the international SDG framework and recognizes that the agriculture sector is underperforming in many developing countries because half of its farmers – women - are not adequately supported and are still facing more constraints in accessing the productive resources and services they need to be more productive. Closing the “gender gap” would generate significant gains for the agricultural sector, raising total agricultural output and reducing overall food and nutrition insecurity in developing countries.

164. Addressing the gender gap is particularly critical in light of global and regional challenges linked to economic and political insecurity, demographic pressure, climate change and the depletion of the natural resource base that countries and rural communities are facing. FAO supports countries in closing the gender gaps that persist in the access to productive resources, services and economic opportunities, for achieving a world free from hunger and malnutrition.

Governance

165. The ambitious objectives of the 2030 Agenda present complex governance challenges to governments and their partners. To eradicate hunger and malnutrition, for example, comprehensive and integrated approaches are required to engage an array of public and private actors whose participation is necessary to enhance both the legitimacy and the effectiveness of solutions adopted. Addressing issues related to the growing interconnection between the environmental, production and consumption spheres, similarly, requires unprecedented levels of inter-sectoral collaboration at all levels. Working with partners to make institutions and governance mechanisms more flexible and better adapted to the demands of the SDGs, the Paris Agreement, and major regional agreements, such as the Malabo Declaration, is an additional challenge. FAO works with governments to support policy dialogue with a view to identifying key challenges and alternative solutions. FAO plays a key role in creatively using experiences of other countries, and improved coordination among diverse stakeholders, sectors and disciplines in the design and implementation of policies and strategies relevant to its mandate. The goal is to enable effective problem solving while working towards the realization of multiple, and sometimes conflicting objectives affecting food and agriculture.

166. Two critical trends have reshaped the environment for FAO’s work on governance. First, the 2030 Agenda for Sustainable Development has provided a new global charter for international development cooperation and governance. First, from a governance perspective, the most salient demands of the new Agenda include: a call for more integrative approaches to development; a strong commitment to national decision-making and greater ownership and self-reliance by Member States; a greatly enhanced emphasis on promoting partnerships with the private sector as a key modality for mobilizing means of implementation; a clear demand for greater UN system coherence; and a commitment to a greatly enlarged system of monitoring and reporting to enable mutual accountability among all stakeholders. FAO serves as a primary institution in the global architecture of food and agriculture, providing norms, standards, and data for enabling, monitoring, and evaluating actions by many stakeholders, led by governments, to achieve the Sustainable Development Goals.

167. Second, during the past decade, expert opinion has moved from the once predominant commitment to “good governance” toward a more modest and pragmatic agenda, defined by a commitment to government-owned, bottom-up, problem-solving approaches. These approaches, while retaining the normative commitment to all three dimensions of sustainable development – social, economic and environmental - follow an open, non-prescriptive and analytical path. Governments lead the process, defining the objectives to be achieved and selecting the pathways to be followed. At the request of governments, FAO supports use of political economy analyses to identify and evaluate the roles, interests, and likely responses of key stakeholders and institutions to policy change. It also supports the formulation of approaches to cope with often conflicting ideas, interests, values and preferences of different social and political actors.

168. FAO is engaged in working with local, national, regional and global governance processes to highlight the potential contribution of food and agriculture to many of the greatest challenges facing countries today: ending hunger and poverty, transforming food systems for nutrition, mitigating and adapting to climate change, ending protracted conflict over access to land and water. Working closely with governments and with other key stakeholders in a variety of settings, FAO's interventions seek to address specific capacity and process issues in ways that can improve the outcomes of interactions between multiple actors.

Nutrition

169. Improving nutrition and reducing the health and social costs due to malnutrition require a multisectoral approach that begins with a primary role for the food and agriculture sector to feed the people well by increasing availability, affordability and consumption of diverse, safe, nutritious foods and diets all year round. This should be aligned with dietary recommendations and environmental sustainability, and is complemented by interventions in public health, education, sanitation and hygiene, and other areas.

170. Through the food environment, the food system influences consumers' dietary patterns and nutritional status. To address the triple burden of malnutrition through the entire food system – from inputs and production, processing, storage, transport and retailing, to consumption – the elimination of food loss and waste has a considerable potential to increase the efficiency and sustainability of the whole food chain, while filling the nutrient gap.

171. As a direct follow-up to the ICN2 and the recommendation of the Council, nutrition was included as a cross-cutting theme within the reviewed MTP 2014-17. The substantive areas to be covered for nutrition include overall technical leadership for FAO's work on nutrition, policy and operational coordination in the UN system, facilitation of mainstreaming across the Strategic Objectives, as well as technical support to resource mobilization and nutrition communication. The core programmatic activities for improved nutrition and the corresponding resources for nutrition work will remain under the Strategic Objectives.

172. FAO gives increased attention to nutrition by addressing the long-term economic, social and environmental bases of food security and nutrition, in particular those related directly to the concept of sustainable food systems and value chains, including nutrition-sensitive agriculture. This has enabled FAO to engage as a leader in the global initiatives and governance mechanisms for improved nutrition, as well as helping countries to achieve their nutrition-related goals through planning, implementation and monitoring of FAO's work through the Strategic Objectives.