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Global trends and future challenges for the work of the Organization

Executive summary

In January 2012, FAO launched a Strategic Thinking Process to determine the future strategic direction and priorities of the Organization. Its prime objective is to support the development of FAO's main strategy and programming documents, including revision of the Strategic Framework 2010-2019, preparation of the Medium Term Plan 2014-17 and further adjustments to the Programme of Work and Budget 2012-13. A broad and participative approach is being undertaken, which includes consultation with staff, inputs by a Strategy Experts Panel, discussion with partner organizations, and ample dialogue with Members.

This document is submitted to the Regional Conferences as the first major milestone of dialogue with FAO Members. It presents the major global trends that have been identified as the main drivers of change, and the main global challenges that are derived from those trends and represent the possible priority areas of future work for FAO. These challenges include:

- Increasing the production of agriculture, forestry and fisheries and its contribution to economic growth and development, while ensuring sustainable ecosystem management and strategies for adaptation to, and mitigation of climatic change
- Eradicating food insecurity, nutrient deficiencies and unsafe food in the face of increasing food prices and high price volatility
- Rationalizing food consumption and nutrition
- Improving the livelihood of the population living in rural areas, including smallholder farmers, foresters and fisher folk, and in particular women, in the context of urbanization and changing agrarian structures
- To ensure fairer and more inclusive food and agriculture systems at local, national and international levels
- To increase resilience of livelihoods to agriculture and food security threats and shocks

- To strengthen governance mechanisms for the needs for food, agriculture, forestry and fisheries systems at national, regional and global levels

The main challenges will be considered in the next major step of the process in defining the Strategic Objectives which will guide the overall plan of work of the Organization.

Guidance sought

The selection and characterization of the Strategic Objectives will be informed by regional specificities and accordingly, the following guidance is sought from the Regional Conferences:

a) Advice on the extent to which the main challenges identified in this document are consistent with the conditions in the region, within the context of FAO's Vision and Goals and the major global trends;

b) Suggestions on regional specificities that should be incorporated in each one of the identified main challenges, and which should be taken into account in formulating FAO's Strategic Objectives.

Introduction

1. FAO has organized a process leading to the formulation of a revised Strategic Framework 2010-2019 and the Medium Term Plan 2014-2017[1]. The process will also inform further adjustments to the Programme of Work and Budget 2012-13, which are being developed in conjunction with other major initiatives relating to decentralization and completion of the Immediate Plan of Action for FAO Renewal, all of which will be subject to review by the governing bodies of FAO during 2012-13 (see Annex). A first step in this process is to provide the main directions and content for the preparation of the official documents to be considered by the governing bodies of the Organization.

2. For the preparation of these documents, the Director-General has launched a broad and participative Strategic Thinking Process that includes participation and consultation with staff, inputs by a Strategy Experts Panel, consultation with other partner organizations and ample consultation and dialogue with Member Nations.

3. This document is a first step in the process and it is mainly intended for an initial and informal consultation and dialogue with Member Nations in the context of the Regional Conferences.

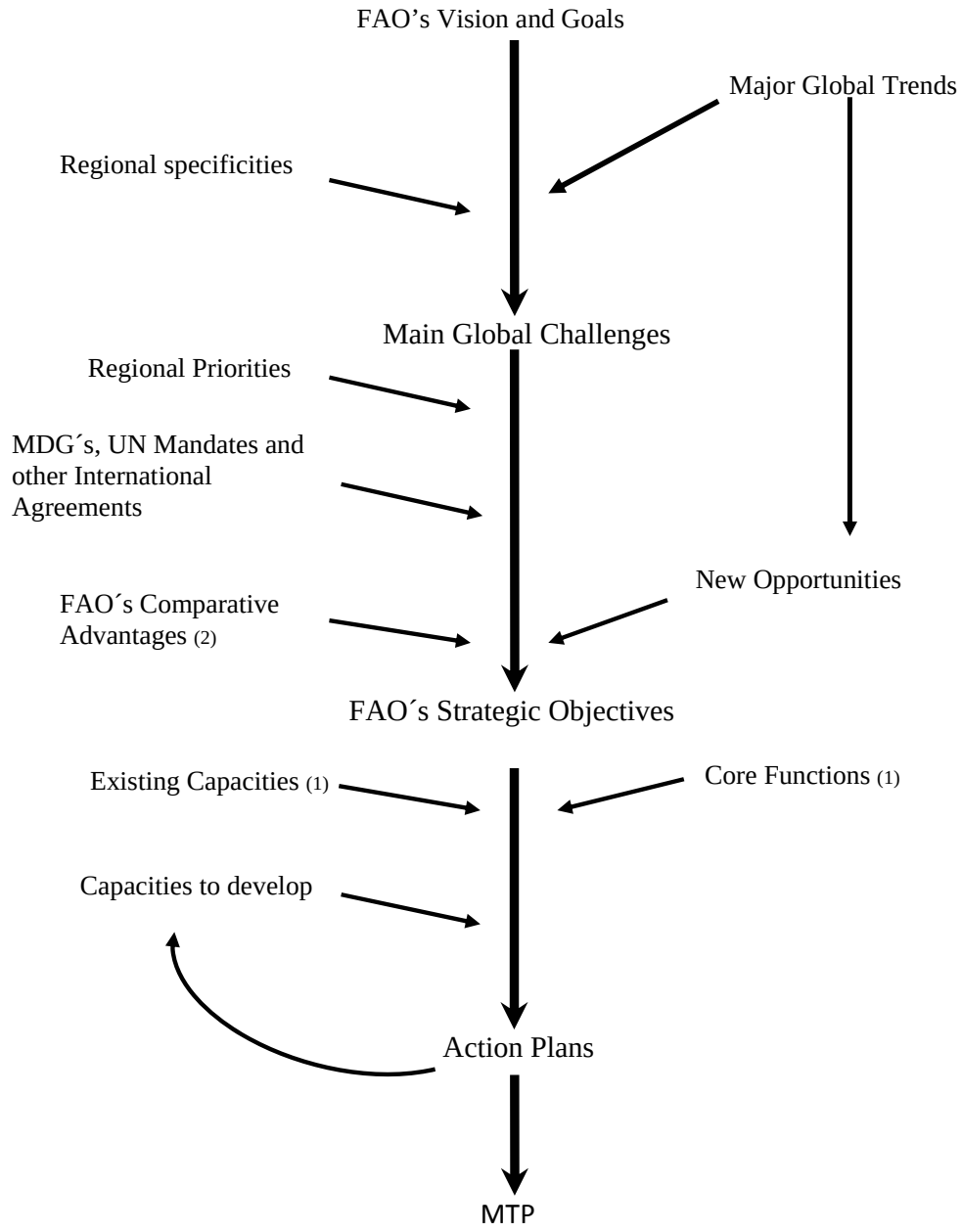
A. The Strategic Thinking Process

4. The Strategic Thinking Process, with the different steps and components, is described in Figure 1. It has a sequence of major steps starting with the Vision and Global Goals that the governing bodies have defined for FAO and flows down to the operational plan represented by the Medium Term Plan (MTP).

5. Each of these steps requires specific tasks to be developed during the Strategic Thinking Process. This paper analyzes in particular the first two steps in the process, which are: a) the Major Global Trends that have been identified as the main drivers of change; and b) the Main Global Challenges that are derived from those trends and represent the possible priority areas of future work for FAO.

[1] CL 143/13, para. 7 and CL 143/REP, para. 13 c)

Figure 1: Strategic Thinking Process



(1) Will be revisited

(2) In comparison to other organizations including NGOs

B. Vision and Goals

6. FAO's Vision and Global Goals have been approved by the governing bodies as part of the current Strategic Framework.[2] The three Global Goals are: a) reduction of the absolute number of people suffering from hunger, 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; b) 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 c) 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.

C. Major Global Trends

8. To identify and select the areas of work in which FAO will concentrate its efforts in order to contribute to the achievement of the Global Goals of the Organization and the priorities selected by Member Nations, an analysis has been developed on two groups of external trends: a) the macro-economic, social and political context; and b) some major Global Trends that will shape the conditions under which the world is expected to develop in the near future, and agricultural development is expected to take place. These Global Trends will have a direct incidence on the general areas of FAO's mandate.

C.1. Macroeconomic, social and political trends

9. A small number of contextual elements or Macro Trends with wide and diffuse economic and political implications have been identified and described, covering: population dynamics; global financial crisis, growth and poverty; changing geo-economic balances; structural unemployment, especially of young populations; emerging global middle class, transparency and information; and disasters under construction, compounded by political instability. Summary write-ups of these Macro Trends are available as Web Annexes to this document on the Internet Web site of the 2012 Regional Conferences at www.fao.org/bodies/rc2012/en (only English).

C.2 Major global trends with direct implications on the areas of FAO's mandate

10. The global scenario is changing rapidly. Social and economic forces have, through globalization, a wide and profound impact in the world we live. These trends change the economic and social environment in which agriculture and rural life take place and present a number of opportunities, but also new problems and needs that must be addressed in order to achieve the desired Global Goals. Although there are many important global trends, and there are many different ways in which they can be described and characterized, there are some that are especially relevant for agriculture and rural life. Identifying major trends that are especially relevant for agriculture, describing and characterizing them and understanding the way they will affect agriculture and rural life is the first task that has been developed. These global trends have incorporated relevant regional specificities suggested by the Regional Offices and will be further fine-tuned by other relevant regional specificities that may emerge from the deliberations of the Regional Conferences.

11. A review of the recent literature on this general subject, and the work developed by FAO's "Trends Group"[3], has led to the identification of 9 major global trends that need to be brought into the analysis because they are especially relevant to FAO's Vision and Goals and will directly impact on agriculture and rural life. Complete write-ups of these Trends are available as Web Annexes to this document on the FAO Web site at www.fao.org/bodies/rc2012/larc32/en (only English) .

[2] C 2009/3, paras. 53-54

[3] Piero Conforti, ESA; Vincent Gitz, AGND; Alexandre Meybeck, AGD; Astrid Agostini, TCID; Jennifer Nyberg, DDK; Sally Bunning, NRL; Olivier Dubois, NRC; Sylvie Wabbes Candotti, TCEO; David Palmer, NRC; Audun Lem, FIPM; Ewald Rametsteiner, FOEP; Salomon Salcedo, RLC; Andoniram Sanches, RLC; David Sedek, REU; Sumiter Broca, RAP; James Teft, RAF; Nasredin Elamin, RNE

1) Food demand is increasing while patterns of food consumption are changing towards more livestock products, vegetable oils and sugar

12. Global food demand is increasingly driven by population, economic growth and urbanization, particularly in developing countries. This trend is expected to continue for the next decades reaching a 70 percent increase in total food demand by 2050. At the same time dietary patterns are changing towards more livestock products, including fish, vegetable oils and, to a lesser extent, sugar; a trend that is accentuated by the increasing homogeneity of life habits between urban and rural population facilitated by communications technology. These three food groups together now provide 29 percent of total food consumption in the developing countries. Their share is projected to rise further to 35 percent in 2030. However, these changes are not universal and wide inter-regional and inter-country diversity remains in the share of different commodity groups in total food consumption. The new consumption patterns also imply a larger role for processed foods which create new opportunities for value-added and income-generating activities.

13. In spite of these global trends, there are vast numbers of undernourished and malnourished people that depend on an increasing supply of food at reasonable prices. Undernourished people have been estimated at 925 million, while micronutrient malnutrition or "hidden hunger" affects around 2 billion people.

14. One important instrument to meet this increasing demand and to decrease the pressure for more food production is to diminish food losses. It has been estimated that one-third of total food production is lost or wasted during the processing, marketing and consumption steps.

15. Another important issue is that as a consequence of urbanization, food insecurity will increasingly appear as an urban problem, which will make it more visible and politically sensitive and will require different types of interventions. Simultaneously, it will also increase consumers' voice and choices, through market and political actions, in relation to qualitative and food safety characteristics of food.

16. Finally, an emerging problem of growing significance in the developed and developing world is the growing number of overweight and obese people. This situation is turning into a major health problem concern.

2) Growing competition and diminishing quality and quantity of natural resources and loss of ecosystem services

17. Trends for 2050 suggest growing scarcities of agricultural land, water, forest, marine capture fishery and biodiversity resources. This is driven by accelerated intensification of human activities with increasing pressure on natural agricultural resources which threatens to alter the earth’s ecological functioning in a harmful way, and at the same time making more difficult overall economic sustainability. Competition over natural resources for food and non-food products is not new, but the nature and the intensity of the competition has changed significantly in several ways during the past decade, which is a tendency that is expected to continue. Consumption of cereals and oilseeds for the production of biofuels has increased, as well as other uses such as biomass as a substitute for petrochemicals.

18. This competition may take away resources from the production of food, thus influencing food prices, but it will provide additional income opportunities for the rural sector increasing the contribution of agriculture to economic activity. Competition for land is increasing for city enlargements, infrastructure, industry, mining, food production, bio-energy and non-food raw materials, wood and tertiary and other products. Depletion of natural resources will imply increasing environmental social and economic costs of ecosystem services, reduced resilience and increased vulnerability of small-scale farmers. The impact of this process will be felt in a reduced capacity of communities and countries to ensure food security and improve the livelihood of rural populations

19. These issues are all related to difficult choices between sustainability and production, between the productions of different products that use natural resources, between different ways of producing and so on. Strong governance mechanisms will be necessary at national, regional and international levels to strike the appropriate balance between conflicting needs and opportunities and to implement sound natural resources property rights frameworks.

3) Energy security and scarcity

20. The International Energy Agency suggests that global primary energy demand will increase by a third during the period 2008-2035 and that today's developing countries will account for a large proportion of this demand increase. Fossil fuels, coal, oil and gas ranked by relative importance are expected to contribute to around 81 percent of these requirements under present public policies. Renewable energy, including biomass, contributed in 2011 to an estimated 16 percent of total energy needs and this contribution is projected to increase. The increase of wood energy for traditional uses has severe health impacts and may cause deforestation, while its increased use for modern heating and electricity production in OECD countries may contribute to additional pressure on land for new plantations

21. The gap between energy demand and access is large and demand is expected to rapidly increase as population and income per capita grow in developing countries and global trade of agricultural products demands more transportation. It has been estimated that about one-fifth of world population lacks access to electricity. The cost of producing oil and gas is expected to increase, contributing to upward pressure on its price to consumers. High energy prices will have a negative effect on agricultural production costs and food security around the world.

22. Agriculture and energy are closely interlinked, but the nature and strength of the linkages has varied over time. The use of fossil fuels in agriculture has contributed to feeding the world through mechanization, fertilizers and improved processing and transportation. As a result there is a strong link between energy and food prices and the recent increase in the use of biofuels has strengthened this relationship. Most of the additional 70 percent food production needed to feed the world in 2050 will have to come from agricultural intensification. The combined increased energy needs and significant dependence on fossil fuel for food production are a cause of concern in terms of sustainability, achieving food security and the negative effects on climate change. As a result, due consideration to the way agriculture develops in the future is crucial. In particular the agrifood chain will have to become gradually decoupled from fossil fuel dependence so that it delivers more food with less and cleaner energy. In this way, agriculture will also become an important part of the global strategy on climate change mitigation and adaptation. Bioenergy can be an important part of this strategy and, at the same time, an additional source of economic activity and rural incomes.

4) Food price increases and high price volatility

23. In recent years increased food prices and their wide, short-run variability (volatility) have triggered worldwide concern about threats to food security and have shaken the complacency caused by many years of falling commodity prices. Up until 2006, the cost of the global food basket had fallen by almost a half over the previous thirty years, when adjusted for inflation. Declining real prices in agriculture over the long-term resulted from technological advances and a relatively slow demand growth. Recent price increases and their high volatility may be explained by several causes, including supply shocks, low stocks, rising energy prices, trade restrictions applied by some countries in response to the food crisis and increased global demand. Estimates indicate that these conditions will not change in the near future and that consequently prices are likely to remain on a high plateau compared to previous decades, and that the high volatility observed will also continue. In the longer term, the relationship between demand and supply remains uncertain and will mainly depend on two broad processes. On the one hand, the evolution of global demand, which will be strongly influenced by economic growth and income per capita increases in the developing world, and the potential increase of the production of alternative non-food agricultural products. On the other hand, how food supplies increase in response to that demand. Although FAO's baseline projections indicate that, under plausible assumptions on yield improvements and rates of expansion in land and water use it should be possible to meet food demands, this path is surrounded with considerable uncertainties especially because of the additional constraints derived from environmental concerns. Significant efforts in investments, technological innovation and policies to support sustainable agricultural development are needed to achieve this required production. In addition, the evolution of demand and supply will be highly diverse on a regional basis which implies that trade is likely to increase.

24. High price volatility has mostly negative consequences, as markets participants have difficulty planning ahead and adjusting to fluctuating market signals. Longer-term, higher commodity prices could benefit producers around the world and net food exporting countries, but will negatively affect world consumers, increase food insecurity for poor consumers, and negatively affect the macroeconomic position

of net importing countries. These positive and negative effects have led many developing countries, after 2008, to implement policies to restrict trade and/or regulate internal prices.

5) Changing agrarian structures, agro-industrialization and globalization of food production

25. The evolution of food production systems over the last decades has been characterized by an increased integration between agriculture, fishery and forestry with other economic activities. The emergence of complex and diverse agro-industrial production chains has implied qualitative and quantitative changes in the demand for primary products, as well as income distribution across sectors and population groups. As a consequence, the distribution of productive resources has been changing, starting with an increasing presence of large-scale primary producers along with small-scale operations. The increase in the number of large-sized farming firms, which are more capital intensive and based on contractual arrangements for acquiring labour and farm services, has been documented in the land abundant regions, particularly in Latin America, Eastern Europe, Central Asia, Southeast Asia and more recently in some parts of sub-Saharan Africa. This trend stems from economies of scale, but is also a response to market failures in credit and insurance and to counteract market power along the production chain.

26. These changes are similar to those taking place in the agro-industrial sector where large agribusiness firms, including wood based industries, concentrate a growing proportion of manufacturing, distribution and retail of food products. This vertical integration occurs at the national level and at the global level in the development of large and complex global value chains, and in many cases includes a growing participation of transnational firms. The potential consequences of the agro-industrial development and increased foreign presence in developing countries can be manifold. On the one hand, they represent new opportunities for economic activity and growth. On the other, under certain conditions, they can result in the displacement of local firms and difficulties for small primary producers that may have difficulties in meeting quantitative requirements and more stringent, qualitative standards. This may result in the fragmentation of the microeconomic segment of the production chains. In addition, these processes of structural transformations modify market functioning and the distribution of rents between the different participants in the value chain at national level and in the international market. Furthermore, food systems must respond to the very different demands and needs of different social sectors. All these potential undesirable conditions represent new and important challenges in regards to policies, public goods and good governance that are necessary to improve market access and market transparency for the development and well-being of small and family farmers, and the new opportunities for product differentiation and value-added activities, including compliance with food safety regulations. The successful implementation of the required policies, for which strong governance is needed, will determine the final outcome of agro-industrialization in developing countries.

6) Changing patterns in agricultural trade and the evolution of trade policies

27. Three major trends characterized agricultural and fisheries trade over the past decade:

a) Significant increases in volumes exchanged, which have been considerable, but less than they would have been in the absence of a high protectionism. At constant prices, total agricultural exports have increased from USD 3.5 billion in 1961-1963 to about USD 110 billion in 2009, which is a trend that is expected to continue. This increase reflects more intraregional trade and also more trade between distant countries. Developing countries have participated actively in this trade expansion.

b) Fundamental changes in regards to the origin and destination of trade flows of some major agricultural commodities have occurred. Poorer developing countries, notably the Least Developed Country group, have become large net importers, while emerging economies in Latin America, Eastern Europe and Asia have emerged as large net exporters, especially of cereals and oil seeds, reducing the role of OECD countries, a tendency that it is also expected to continue.

c) Policies evolving towards more openness, while at the same time promoting a host of regional and preferential agreements which in the last few years have become more prominent than multilateral coordination. Although it is difficult to predict the possible evolution of the multilateral trade agreement as a consequence of the Doha negotiations, the situation does not look promising. Furthermore, as a consequence of the 2008 food crisis, a number of countries, most notably in Latin America, Eastern Europe and Asia, have implemented protectionist

measures to control internal food prices and have increased the role of the governments through commercial and trade policies.

28. These trends are likely to extend in the future and will bring forward and/or strengthen a number of trade issues such as: a) the increasing product differentiation and concerns for safety issues will lead to more use of standards including private standards. The relative roles of governments and the private sector is also bound to change; b) themes like the carbon footprint of products will become more relevant and consequently environmental issues are likely to be translated into trade regulations; c) impact of trade in food security and the importance of commercial policies in developing countries; d) the growing size of firms operating in the agrifood sector and the growing complexity of production chains will generate concerns on market power and call for actions to regulate it; and e) large emerging agricultural countries, both on the import and export side of the market, show a recently growing public presence which changes the structure and functioning of international markets.

29. Most of these issues involve complex policy questions that countries will have to deal with. This implies that policy research and policy advice on trade matters will cover a wider field and extend beyond the traditional and dominant issues related to tariff protection and subsidies. Developing countries will need to prepare themselves for these new challenges.

7) Climate change will have a growing impact in agriculture

30. Climate change is now evident and is expected to increase in the decades to come, in spite of the measures that may be taken to mitigate it. It already impacts on agriculture, forests and ocean fisheries and these impacts are expected to increase in the future with variations between subsectors and regions. The Intergovernmental Panel on Climate Change (IPCC) 2007 report indicates that warming of the climate system is unequivocal and a warming of about 0.2 degrees centigrade per decade is projected for a range of emission scenarios.

31. Global warming will affect agriculture in a number of ways, including: a) very likely increase in the frequency of hot extremes, heat waves and heavy precipitation; b) likely increase in tropical cyclone intensity; and c) very likely precipitation increases in high altitudes and likely decrease in most subtropical land regions.

32. The impact on extreme events is much discussed. However the IPCC's Special Report entitled "Managing the Risks and Extreme Events and Disasters to Advance Climate Change Adaptation" released in December 2011 shows evidence that some extremes have changed as a result of anthropogenic influences, including increases in atmospheric concentration of greenhouse gases.

33. Vulnerable communities and people in fragile environments, such as dry lands, mountain areas and costal zones will be particularly affected. Adverse effect of climate change will also impact food security, especially as some of the most vulnerable countries are already food insecure. These effects will be very diverse among regions and countries. Mitigation strategies in agriculture and adaptation to climate change and creating greater resilience is a growing concern and needs a strong collective action at national, regional and global levels.

8) Science and technology, as a main source of agricultural productivity, and production increases are progressively becoming a private good, and the processes are dominated by the private sector

34. Most of the increases in global agricultural production and productivity have been based in increases of yields per hectare. Cereals and oilseeds have played a major role in this process. However, exponential yield rates have down from 3.2 percent per year in 1960 to 1.5 percent in 2000. Furthermore, trends in yields are very variable and heterogeneous, both regionally and also for different cereals, showing the uneven impact of modern varieties and associated technological innovations. An observation of the sources of improved farm productivity suggests that future yield increases will rely heavily on the development of adapted and improved varieties and on their appropriate diffusion and use. The emergence of biotechnology as a major source of innovation in agriculture has displaced the “technological space” in the direction of the private sector.

35. Although public investment in agricultural research and development (R&D) has grown worldwide from about USD 16 billion in 1981 to USD 23 billion in 2000, private sector investments have grown faster to reach USD 16 billion in 2000 or 40 percent of total. Total investment in agricultural R&D is concentrated

in a few countries. About 50 percent of public investment is made in five countries: USA, Japan, China, India and Brazil, and 93 percent of private investment is carried out in developed countries. The opportunities given by propriety biotechnological products and the size and easy access to markets explain these large investments by the private sector, which is concentrated in grains and market-oriented production conditions. As intellectual protection instruments become more standard, the magnitude of the investments needed increases, and the complexity of science makes essential high managerial capacities. These trends will most likely consolidate. The organization of science and the interface between policy and science become more important and open. These are important areas of work for FAO that could be developed in close partnership with the CGIAR. In particular strengthening national research institutions, developing public policies related to science and innovation, and increasing public investments and partnerships with the private sector will be needed for a more universal utilization of the potential of innovations for increasing food production and poverty reduction in the developing world.

9) Evolving development environment: increased recognition of the centrality of governance and a commitment to country-led development processes

36. During the last decade the development environment has changed in many ways. On the one hand, at national and international level a wide range of stakeholders, including the private sector, civil society, NGOs and foundations are increasingly recognized as having a legitimate voice in deliberations. New mechanisms are being put in place to involve their representatives in decision-making processes, as well as in the implementation of jointly developed activities. It is further recognized that in order to achieve global, regional and national development goals, not least to achieve food security and reduce poverty, the participation of actors well beyond the agricultural sector is required, further broadening the range of stakeholders and competing views and interests. A heightened focus on cross-cutting issues, such as gender and the environment adds further complexity. This increasing complexity calls for better and stronger governance and on building effective, efficient and accountable institutions and fostering participation, equity, transparency and evidence based information and decision making.

37. A second important change is the general recognition that successful development processes must be driven and owned by countries themselves, and that this requires coherent country strategies and programmes. These perceptions were explicitly articulated in a series of international fora (Rome 2002, Paris 2005, Accra 2008 and Busan 2011). This new development environment has created new policy and institutional needs, and at the same time has generated new opportunities for action at country, regional and global levels which have important implications for multilateral organizations in general, and FAO in particular.

10) Increased vulnerability due to natural and man-made disasters and crisis

38. The multiple threats to food and nutrition security, their negative and cumulative impact, and the clear links between shocks and hunger reveal the fragility of current food production systems and their vulnerability to disasters, crisis and conflicts. Disasters have adversely affected the lives and livelihoods of millions over the past years with particular deleterious consequences for the poor and politically marginalized. The impacts of the catastrophic large scale mega-disasters such as the earthquake in Haiti in January 2010 and floods in Pakistan in July 2010 show how disaster risk and poverty are closely interlinked. The 2011 Horn of Africa drought crisis stresses the interconnection between natural disaster and conflict situations, amplifying the impact of the drought. In 2011, floods in Australia, the earthquake in New Zealand, and the earthquake, tsunami and nuclear disaster wreaking havoc in Japan are a stark reminder that developed countries are also highly exposed.

39. Less visible internationally, hundreds of smaller disasters associated with climate variability have caused enormous damages and losses. The past 20 years have seen an exponential increase in the number of local areas reporting negative impact on human and natural resources. These events reveal how disasters are continuously constructed through a combination of risk drivers (i.e. degradation of hazard-regulating ecosystems such as wetlands, mangroves and forests; high levels of relative poverty; and badly managed urban and regional development) and compounded by conflicts. Moreover, there are emerging risks and new vulnerabilities associated with the complexity and interdependency of technological and ecological systems on which societies depend. The risks associated to increased incidence and spread to new geographic areas of transboundary plant pests and animal diseases, are also looming ahead.

40. The exposure of people to a wide range of emerging risks which are magnified and made more frequent as a consequence of globalization (including increase and volatility of food/commodity prices, financial instability, employment opportunities), and new patterns of vulnerability can trigger cascading and concatenated system breakdowns at different scale which can exponentially magnify negative impacts. In the absence of appropriate policy responses, risks become structural with high individual and social costs. Across all the major hazards, poorer countries (especially complex emergencies or protracted crisis) with weaker governance tend to experience far higher mortality and relative economic loss compared to wealthier countries with stronger governance.

41. Food and agriculture sectoral strategic guidance is needed to help countries comply with the Hyogo Framework for Action (HFA) and to reduce and manage multi-hazards and various risks magnifying vulnerabilities to food and nutrition insecurity (especially for the poorest). At global, regional, national and local levels, coherent interventions are needed to build, prevent and restore resilient livelihoods of farmers, herders, fishers, foresters and other vulnerable groups (estimated to more than 2.5 billion smallholders according to FAO's publication "Save and Grow") against various threats and shocks. Disaster risk reduction and management for food and nutrition security is vital for ensuring one of the most basic human rights – "the right to adequate food and freedom from hunger".

D. Main Global Challenges

42. The described major Global Trends, jointly with the Vision and Goals of the Organization, are the most significant inputs for the identification of the Main Challenges that Member Nations, the development community and FAO will face in the future. The identification of these challenges and opportunities, and the selection of those that are especially relevant for FAO's Member Nations is one of the main steps in defining new substantive priorities for the Organization.

43. The first conclusion that emerges from the analysis of the trends is that agriculture, forestry and fisheries are, and will continue to be, in the immediate future, a fundamental instrument for sustainable development, economic growth and poverty reduction and must be kept at the centre of the development agenda.

44. Agriculture contributes in many ways to economic growth and development. As an economic activity, it is a major source of economic growth and a main driver for agriculture-related industries and private sector investments. In many developing countries it contributes with around 30 percent of total GDP. As a source of food and rural employment, it is a main contributor to the food security of the world's population most in need. Agriculture is the provider for the livelihood of small producers, landless labourers and other social sectors in rural economies, and is also a provider of environmental services.

45. A second conclusion is that these contributions, and especially agriculture's contribution to food production and economic activities, are done in a new context of opportunities and restrictions. Rapidly expanding human needs that translate into demands on agriculture must be satisfied under increasing constraints related to natural resources availability and environmental concerns.

46. A third element that emerges from the trends is that development imposes on governments, individually and collectively, a central and overriding challenge: the need to find, in the context of growing national and global restrictions, the most appropriate balance between competing needs. What is the most appropriate balance between different objectives at the national level will depend on the political context and desired goals of each country. However, at national, regional and global levels, good information and analysis will be necessary to inform these choices, and good governance mechanisms will be crucial to transform these choices into decisions and policies. To contribute to these complex processes is one important role of FAO.

47. It is against this backdrop of the substantial and manifold contributions of agriculture to development, and the pressing necessity to make choices and strike balances between different needs that the following Main Challenges are identified and described.

1) Increasing the production of agriculture, forestry and fisheries and its contributions to economic growth and development while ensuring sustainable ecosystem management and strategies for adaptation to, and mitigation of climatic change

48. The natural resource base and ecosystems service are the foundation of all food and agricultural systems, and their protection is a guiding principal in their use. Meeting environmental challenges, moving to a greener economy and ensuring social and political sustainability of production systems is the main context for attaining an increase in food and non-food agricultural production. Within this framework, the objective is to take advantage of the potential of the bioeconomy to increase the contributions of agriculture, forestry and fisheries to economic development, while generating income and employment and providing livelihood opportunities for family farms and the more general population in the rural areas. Production systems must meet this challenge through innovations that increase agricultural productivity and efficiency in a context of a sustainable use of natural resources, reduced contamination and cleaner energy utilization, and increased mitigation of, and adaptation to climatic change, as well as the delivery of environmental services. This will require taking into consideration existing trade-offs and striking the appropriate balances. These balances are country-specific and must be country-led.

2) Eradicating food insecurity, nutrient deficiencies and unsafe food in the face of increasing food prices and high price volatility

49. The right to adequate food is an increasingly accepted value that has led to new concerns on food insecurity and commitments to eradicate hunger, as well as under nutrition at national and international levels - especially in women and children. For these purposes appropriate strategies, policies and programmes for improving food and nutritional security, in rural and urban populations, must be implemented at the national, regional and global levels with the clear objective of eradication in a reasonable period of time. These policies need to balance the short- and long-term needs and constraints. They must also balance the interest of agricultural production, and especially the small farmers, with the interest and needs of poor consumers. They should include local supply of agriculture, aquaculture, non-wood forest products and livestock production, especially in family-operated activities, in order to improve accessibility, commercial policies that integrate and balance local production and imports, and social programmes that contribute to improve the access to food. A guiding principle for these policies should be that what is done in the short-term to address vulnerabilities, does not undermine long-term objectives of food production. Nutritional security and quality, including protein and micronutrient components, need to be integrated. Furthermore a reduction of the significant food losses that occur in the industrial and commercial stages of the overall process could make a substantial contribution to national and global food security.

3) Rationalizing food consumption and nutrition

50. Global demand growth and its impact on environment and on prices, widespread inadequate eating habits and related nutritional imbalances and health problems call for major changes to establish more sustainable and healthy diets. Meeting this challenge implies the modification of consumption patterns and habits including reducing food waste. It will require a range of actions including behavioural and/or cultural changes, the reinstatement of the true value of food (nutritionally, symbolically and economically) and the integration of nutrition as a core concern of every policy directed to food systems.

51. Gender-sensitive education and information needs to be strengthened and show the links between meal preparation, nutrition and health. In turn, the concept of nutrition has to be better integrated into agricultural policies and programs. Leverage points in supply chains need to be identified in order to influence the choices of consumers and of the main actors of the complete food chain, including public sector authorities. The inter-relation between education, health and agriculture needs to be further developed and internalized in policies and programmes.

4) Improve the livelihood of the population living in rural areas including smallholder farmers, foresters and fisher folk and in particular women, in the context of urbanization and changing agrarian structures

52. Economic growth and livelihood opportunities for different social groups, gender and age groups must be created and promoted in a context of closer rural-urban linkages. Strategies, policies, normative frameworks and programmes need to be designed and implemented in order to create decent employment and other rural and non-rural income opportunities for populations in rural territories. In many countries it

implies new balances in policies that have been biased against agriculture. For this, new and stronger governance mechanisms at local and national levels will be needed.

53. The reduction of income inequalities between regions and social groups in each country, and in particular eliminating gender inequalities and improving the access of women to production resources, are important objectives and main components of this challenge. Similarly, integrating young population to the labour market is an important objective. Protection of land rights and other natural resources, the provision of advisory and financial services are important to foster transition and diversification into productive and competitive activities. In addition, specific policies to support small and family farms, cooperatives and farmers associations, especially for their better integration into markets and production chains, must be implemented, as well as exit strategies from agriculture to alternative sustainable rural and urban livelihoods. These policies will have different relative importance and different types of interventions in different regions and countries.

5) To ensure fairer and more inclusive food and agriculture systems at local, national and international levels

54. The organization of value chains at the national, regional and global level and regulatory measures should foster transparency and efficiency, reduce market power permitting all participating actors to play a meaningful role. Promoting inclusive business models, ensuring that product standards respond to real market needs, strengthening and empowering producers associations and cooperatives and improving market information are important instruments. Furthermore, the integration of small producers to the production value chains in agriculture, forestry and fishery need to be promoted. Land tenure policies that protect small farmers and rural communities from land concentration processes are a need in most regions. At the international level, importing and exporting countries need special and differential strategies and policies to benefit from trade and pursue their own food security objectives, while taking into account food security needs elsewhere. For these objectives, developing and taking advantage of regional markets is an important objective in most regions, as is assistance to countries and producers to comply with increasingly stringent international standards, especially in relation to food safety and animal and plant diseases.

6) To increase resilience of livelihoods to agriculture and food security threats and shocks

55. Vulnerability to various threats and shocks due to natural and man-made causes which are increasingly interconnected, are affecting rural populations with greater frequency and intensity especially as population density increases. Economic shocks related to financial stability, employment opportunities and extreme price variability are associated to income losses and food insecurity that in the absence of appropriate policy responses become structural with high individual and social costs. Instruments to manage risk and safety nets to diminish the impact of these shocks are important. Countries in protracted crisis are particularly vulnerable because of the fragility of institutions and governance systems. Development and humanitarian strategies, policies and programmes need to take into account, reduce and better manage the various and interconnected risks that increasingly affect peoples' livelihoods in order to help people adapt to, and better cope with, slow onset and sudden threats and shocks. Strategies for adaptation and resilience to climate change and developing capacities to respond to plant and animal diseases and in particular transboundary diseases are important elements of the overall challenge.

7) To strengthen governance mechanisms for the needs for food, agriculture, forestry and fisheries systems at national, regional and global levels

56. Addressing development challenges is complex because it involves multiple sectors, a broad range of stakeholders and must take into account transdisciplinary, as well as transboundary dimensions, such as the management of water resources and watersheds and of blue economy resources in the seas. Moreover, globalization requires that existing imbalances, like food insecurity, environmental externalities, sustainable management of common natural resources, including irrigation water, transboundary watersheds and ocean resources be addressed through concerted actions that are effective and fair. In addition, the adequate provision of public goods including services, information, knowledge and innovations, evidence-based policy advice, regulatory frameworks, codes of conduct, agreements for common action, and so on at local, national and global levels is essential for development. For these reasons, stronger and more effective local, national, regional and global governance mechanisms are needed that are transparent, ensure accountability

and fairness and enhance the participation of all stakeholders in a meaningful way, especially those that are weaker in terms of social and/or political representation.

E. Toward FAO's Strategic Objectives

57. These Challenges, complemented by other elements like relevant MDGs, other broad mandates that have been approved by the UN governing bodies, international agreements which are relevant to FAO's work, and FAO's comparative advantages defined in relation to those of other organizations with mandates in agriculture and rural development, will be considered in order to define the main Strategic Objectives that will guide the overall plan of work of the Organization. Identifying these Strategic Objectives, describing and characterizing their content and significance in relation to the Organization's Vision and Goals on which it intends to work, is the third main task to be developed in the process of Strategic Planning. The selection and characterization of the Strategic Objectives will also be informed by regional specificities and the priorities defined by the Regional Conferences, which will establish the relative importance and particularities of each one of them, in each region, and the specific ways in which they could be addressed in FAOs action plans.

F. Guidance Sought

58. The Regional Conferences play a critical role in shaping the main challenges for the future and providing input for formulation of the new strategic objectives, through guidance on the regional priorities for the work of the Organization.

59. The Regional Conferences will have the greatest impact in the process if they:

a) advise on the extent to which the main challenges identified in the document are consistent with the conditions in the region, within the context of FAO's Vision and Goals and the major global trends; and

b) suggest regional specificities that should be incorporated in each one of the identified main challenges and which should be taken into account when formulating FAO's Strategic Objectives.

ANNEX: Indicative Road map of major planning documents and agenda items for governing body meetings – 2012-2013

Date	Governing Body Meeting	Document
2012		
March 12-16	31st Regional Conference for Asia and the Pacific	Areas of priority action for the region in 2012-13 and 2014-17 Decentralization issues Global trends and future challenges for the work of the Organization
March 26-30	32nd Regional Conference for Latin America and the Caribbean	
April 17-20	28th Regional Conference for Europe	
April 23-27	27th Regional Conference for Africa	
To be determined	31st Regional Conference for the Near East	
May 7	Joint Meeting of the 110th session of the Programme Committee and the 143rd session of the Finance Committee	Immediate Plan of Action - IPA annual report for 2011 and direction for 2012
May 7-11	143rd session of the Finance Committee	
May 21-25	23rd Committee on Agriculture	Global trends and future challenges for the work of the Organization
May 28-30	69th Committee on Commodity Problems	

Date	Governing Body Meeting	Document
May 31 1 June	Joint Meeting of the 111th session of the Programme Committee and the 144th session of the Finance Committee	Programme Implementation Report 2010-11 Structure and functioning of the Decentralized Offices Further Adjustments to the Programme of Work and Budget 2012-13 Outline of Reviewed Strategic Framework
June 11-15	144th session of the Council	Programme Implementation Report 2010-11 Immediate Plan of Action - IPA annual report for 2011 and direction for 2012 Structure and functioning of Decentralized offices Further Adjustments to the Programme of Work and Budget 2012-13 Outline of Reviewed Strategic Framework
July 9-13	30th session of the Committee on Fisheries	
September 24-28	21st session of the Committee on Forestry	Outline of Reviewed Strategic Framework Global trends and future challenges for the work of the Organization
October 15-20	38th session of the Committee on World Food Security	
October 8-12	Joint Meeting of the 112th session of the Programme Committee and the 145th session of the Finance Committee	Outline of Reviewed Strategic Framework and Medium Term Plan 2014-17
November 26-30	145th session of the Council	
2013		
March 18-22	113th session of the Programme Committee and 146th session of the Finance Committee	Reviewed Strategic Framework 2010-2019 Medium Term Plan 2014-17/ Programme of Work and Budget 2014-15
April 22-26	146th session of Council	
June 15-22	38th session of Conference	