

**OPPORTUNITIES FOR ECONOMIC GROWTH AND JOB CREATION IN RELATION TO
FOOD SECURITY AND NUTRITION**

Report to the G20 Development Working Group

FAO and the OECD

with inputs from

Asian Development Bank, IFAD, ILO, IFPRI and WTO*

September 2014

* FAO and OECD would like to acknowledge the helpful comments and suggestions on earlier drafts provided by the Food Security Review Steering Committee, other international organizations including WFP and the World Bank, and the Committee on World Food Security's High Level Panel of Experts. The report also benefited from consultations involving developing country governments, international organizations, a wide range of civil society organizations, and G20 affiliated groupings including the T20, B20 and C20;

EXECUTIVE SUMMARY

Food security is critical to the G20's growth agenda.

- G20 actions to foster faster economic growth are mutually reinforcing with efforts to improve global food security and nutrition. The growth, jobs and finance agenda is therefore closely linked to food security and nutrition.
- FAO estimates that around 842 million people (12 percent of the global population) are unable to meet their dietary energy requirements. The principal cause of food insecurity is household incomes that are too low to ensure adequate access to food. Economic growth that raises the incomes of the world's poorest is essential for long-term food security. Empirical evidence suggests that agricultural growth in LICs is three times as effective in reducing extreme (dollar-a-day) poverty as growth in other sectors.
- Improved food security, reflected in better nutritional status, is a prerequisite for human resource development and resulting gains in productivity and economic growth. Food insecurity and malnutrition carry a high cost in terms of foregone economic opportunities, which can extend into future generations. Eliminating undernutrition during the window of opportunity from pregnancy to 24 months could raise the economic growth potential of Africa and Asia dramatically.
- Productivity-enhancing investments and the integration of smallholders into markets not only improves food security and resilience to food price volatility but also improves incomes and creates jobs in agriculture and through strong multiplier effects in the rural sector, and in the broader context of structural transformation can be a foundation for growth and development more generally.

The G20 countries play a vital leadership role in world food security.

- They produce up to 80 percent of the world's cereals and account for a similar percentage of world exports. What G20 countries produce, what stocks they keep and what they import and export have a global impact that falls most heavily on the most vulnerable.
- G20 domestic agricultural and trade policies, their energy policies, and their financial regulations all have an impact on world food security. The G20 can therefore have a valuable policy coordination role, including beyond its own membership, to help all countries make effective and mutually beneficial policy choices.
- Food security is a matter of global concern but half of the world's undernourished also live in G20 countries. The actions G20 countries take to address their own food security concerns, for example to improve agricultural productivity, have spill-over benefits for other countries contributing to their food security and growth.
- G20 countries can also have a direct impact on local food production possibilities through their outward investment in developing country agriculture and land.
- G20 countries are also major providers of official development assistance, food assistance, and technical support to developing country agriculture and the G20 can facilitate a coordinated and more effective approach.

What is the G20's comparative advantage and what value-added can the G20 bring?

- The G20 is a major driver of global growth whose economic performance impacts the rest of the world and whose experience provides globally valuable policy and strategy lessons. That economic and political strength is also the basis for its wider economic and political leadership and influence. The G20 has great convening, coordinating and mobilizing power over other international actors, including the international organizations and international financial institutions. By bringing these same strengths to bear, the G20 can make a difference on global food security issues.
- Addressing global food security and nutrition challenges requires a comprehensive economic development approach. The nature and range of the G20's remit embracing economic growth, employment, finance, trade and development gives it a uniquely broad perspective on food security issues. Its broad membership including emerging economies as well as the wealthiest developed

countries across all continents, also brings a diversity of perspectives to its analysis and corresponding recommendations for action relevant beyond the G20 membership.

- By exploiting its comparative advantage, the G20 can add value to efforts to improve food security in collaboration with its various partners including international organizations. It can sponsor collective actions to provide global public goods through coordination of national policies and through newly created international mechanisms. It can exert political influence on international and national policy and can strengthen existing relevant initiatives through the weight of its support. It can motivate the exchange of knowledge and information.
- The G20 can point to a number of its initiatives which have had a significant and continuing impact on world food security, most notably AMIS, an international mechanism created to address food price volatility for the benefit not only of the G20 but also for the most vulnerable.

How should the G20 approach food security and what should be the priority areas?

We recommend that the G20's engagement on food security

- reflect G20 comparative advantages in collective actions to provide global public goods, promoting policy dialogue and political support and should avoid duplication of existing efforts;
- be broadened towards a longer-term, strategic approach that integrates food security into the core G20 agenda around growth and jobs and aligns with broader international development goals;
- target effective actions at critical points in the linkages between food security, agriculture and growth that will have a continuing impact on productivity and growth and promote the transformation of smallholder agriculture;
- prioritize this “mainstreaming” across the investment and infrastructure, human resource development and employment and financial inclusion policy areas;
- recalibrate existing initiatives across the G20 agenda to ensure that beneficial impacts on food security and the rural sector are fully captured
 - the investment and infrastructure area of work should pay specific attention to rural infrastructure in order to underpin productivity increases, improved market access, reduced food losses, economic growth and job creation,
 - the PRAI should be implemented so the G20 can ensure inclusive and responsible agricultural investments, especially those foreign direct investments originating in G20 member countries, that have major economic benefits,
 - the human resource development area of work should give explicit attention to skills development and decent employment creation, through training, with a particular focus on women and youth to facilitate linkages and movement between rural and urban labour markets and avoid the drift of labour into low productivity informal service sector jobs,
 - the financial inclusion area of work should pay specific attention to rural credit provision and the effective use of remittances as major sources of finance for farm investments;
- support the adoption of more coherent policies, in particular the avoidance of all policies that destabilise world food markets and adoption of deeper reforms of trade and agricultural policies which have the potential to undermine food security in low income countries.
- continue successful ongoing G20 collective actions such as AMIS, and improve the effectiveness of efforts to improve agricultural productivity such as MACS.

Dimensions of food insecurity

- FAO estimates that around 842 million people (12 percent of the global population, or one in eight people) were unable to meet their dietary energy requirements in 2011-13. About one half of this total lives in G20 countries.
- WHO estimates that close to seven million children die before their fifth birthday every year, and a third of these deaths are associated with undernutrition.
- One in three developing country children under the age of five (160 million children) are stunted due to chronic undernutrition, while another 99 million children are underweight.
- Micronutrient deficiencies or “hidden hunger” affect around two billion people (over 30 percent of the world population) with serious public health consequences.
- Food production will need to increase by 60 percent to feed a world population that is expected to exceed nine billion by 2050.

1. INTRODUCTION

1. The 1996 World Food Summit defined food security as existing when all people at all times have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active, healthy life. In this report, food security is understood to mean not just peoples' access to food is guaranteed but also that the requirements for adequate nutrition are also met. FAO estimates that around 842 million people (12 percent of the global population, or one in eight people) were unable to meet their dietary energy requirements in 2011-13. WHO estimates that close to seven million children die before their fifth birthday every year, and nearly one half of these deaths are associated with undernutrition. One in three developing country children under the age of five (160 million children) are stunted due to chronic undernutrition, while another 99 million children are underweight.

2. Micronutrient deficiencies or "hidden hunger" affect around two billion people (over 30 percent of the world population) with serious public health consequences. The costs of undernutrition and micronutrient deficiencies are estimated at 2-3 percent of global GDP, equivalent to USD 1.4-2.1 trillion per year.¹ Improving food security requires a twin-track approach that combines measures to promote agricultural growth and resilience with actions such as targeted safety net programmes that ensure immediate access to adequate food for the most vulnerable who have neither the capacity to produce their own food nor the means to buy it.

3. G20 concern and commitments on food security, broadly defined to include determining factors such as food price volatility, go back to the 2010 Seoul Summit where food security was one of the nine pillars of the G20 Multiyear Action Plan on Development. Food security has continued to be a declared a priority on the G20 agenda, highlighted again with a request for "concrete actions" in the latest Leaders' Declaration. However, it has also been argued that the G20 development agenda has become too broad and should return to a focus on its core concerns around finance, employment and growth.

4. At their meeting in December 2013, the Sherpas instructed the Development Working Group (DWG) to streamline its agenda with a priority focus on infrastructure, domestic resource mobilization and financial inclusion while continuing its work on food security. If food security is to remain a priority, it is therefore important both to exploit the G20 comparative advantage in addressing economic growth and employment issues of common interest and to exploit linkages and synergies between food security and other G20 streams. Opportunities for greater coherence and continuity and hence greater efficiency and effectiveness have not so far been fully exploited. Recognizing and exploiting these linkages and synergies could lead to better progress in several G20 areas of interest – not just food security but also productivity, growth, employment, trade, financial inclusion and inclusive development.

5. There is a need to situate food security and nutrition in the wider G20 agenda. Food security is causally linked to economic growth and employment, and the two-way linkages are mutually reinforcing. Rural employment and incomes are vitally important yet have not so far featured in G20 work on growth and employment. The St. Petersburg Development Outlook proposed that the DWG should review opportunities for growth and job creation in connection with food security and nutrition. This represented a first step in the direction of relating food

¹ FAO (2013), *State of Food and Agriculture 2013: Food Systems for Better Nutrition*, FAO, Rome.

security to the broader G20 priorities on growth and jobs. Leaders endorsed the St. Petersburg Development Outlook and called upon the DWG to focus on "concrete actions" in fewer key areas and to enhance policy coordination across different G20 work streams.

6. The links between food security and nutrition and economic growth are bidirectional and mostly positive. The evidence suggests that growth is a necessary but not a sufficient condition for improving food security. Growth needs to be equitable and inclusive, providing employment and income earning opportunities for the poor, including women. In many developing countries growth has not benefitted equally all sectors of societies and regions. Rural, sparsely populated areas have often been penalised. A recent cross-country study² shows that around 40 percent of the average inequality in consumption is due to urban-rural gaps. Hence, growth in the agricultural sector and rural economy more widely can have a disproportionate positive impact on poverty reduction and food security.

7. Agricultural growth based on productivity-enhancing investments and the integration of smallholders into markets not only improves food security and resilience to food price volatility but also improves incomes and creates jobs in farming and through strong multiplier effects in the rural sector, and in the broader context of structural transformation can be a foundation for growth and development more generally. If agricultural growth is also "nutrition-sensitive", in the sense of providing diverse and nutritious foods to populations in need for improved nutritional status, then there are further beneficial effects on productivity and growth. Adequate nutrition is a prerequisite for human resource development, productivity and growth more generally.

8. Productivity improvement requires adoption of existing technologies as much as new R&D, but adoption will not happen unless smallholders are better integrated into markets, necessary skills are available especially among young people, risks can be managed and there is an enabling environment including adequate infrastructure, accessible finance and conducive policies. Financial inclusion, domestic resource mobilization, infrastructure and human resource development - in fact almost all the DWG's remit - is relevant as are many of the G20's ongoing initiatives. Recognizing these linkages illustrates the wider importance of food security and can lead to greater coherence in G20 work programmes. Concerns for food security and the rural sector therefore need to extend beyond the food security pillar alone.

9. The positive synergies between work areas are reflected in the scope for G20 actions. Actions originating in one area can, perhaps with minor adjustments, have beneficial impacts in another. Recognizing these spillovers can lead to more coherent work planning. However, to capture these potential synergies it is first necessary to map the linkages between food security and other aspects of the DWG's agenda and the G20 jobs, trade, finance and growth agendas more generally. Existing and possible future G20 initiatives need to be reviewed for their potential to link food security to other objectives. On this basis, cross-cutting concrete strategies and actions can be identified which are more coherent and more effective.

10. In section 2, this review elucidates the linkages and synergies between food security and other aspects of the DWG's agenda and the G20 jobs, trade, finance and growth agendas more generally. This implies a specific focus, which differs from an overall assessment of food security challenges, excluding actions that may benefit food security but have only minor linkages with the growth and food security nexus, such as consumer waste. Section 3 provides a critical

² Young, Alwyn (2013), "Inequality, the Urban-Rural Gap, and Migration," *The Quarterly Journal of Economics*, No. 128(4)

review of previous G20 actions on food security and where relevant under other work streams under both the Sherpas and Finance tracks. Finally, section 4 identifies strategies and actions where the G20 has comparative advantage and can add value in exploiting synergies between food security, employment and growth to make positive progress with respect to each one.

2. FOOD SECURITY, GROWTH, EMPLOYMENT, TRADE AND FINANCE

11. The attainment of global food security will require economic growth and employment generation that benefits the world's poor. The costs of inaction are high: food insecurity and associated civil unrest³, and stunted human capital development from undernutrition, negatively impact economic growth and employment across generations. This section of the review describes the principal interactions between growth and employment on the one hand and food security on the other. The aim is to identify areas where international collective action or national policies can reinforce those synergies, with a view to identifying specific areas where G20 action can be a catalyst for improved security – filling gaps and complementing existing initiatives at the global, regional and national levels.

12. Many low- and lower-middle income countries are growing relatively strongly, but there has been uneven progress in translating those gains into reductions in poverty and associated improvements in food security. The greater the inequality in distribution of assets such as land, water, capital, education and health, the more difficult it is for the poor to participate in growth processes and the slower the progress in reducing undernutrition. For example, poor people often have little education, which prevents them from participating in labour markets that offer higher wages. This in turn reduces the rate of overall economic growth, further harming the poor. Approximately two-thirds of the world's poor live in rural areas, with the share even higher in low-income countries (LICs). Nearly eight out of ten working poor at the US\$1.25 level live in rural areas, where many are engaged in vulnerable employment, in particular in agriculture.⁴ These areas are characterised by relatively low public investment in public goods such as infrastructure, and by unequal access to essential services such as education and healthcare.

13. Growth which raises the incomes of the poor tends to be most effective in improving food security. Empirical evidence suggests that agricultural growth in LICs is three times as effective in reducing extreme (dollar-a-day) poverty as growth in other sectors.⁵ One reason is the direct effect of that growth on the incomes of the poor, another is the wider benefits it generates for rural economies. The agricultural sector also plays an important buffer role in protecting households against economy-wide shocks. The overarching challenge is to generate faster overall growth and a composition of growth that is effective in raising the incomes of the poor. Fundamentally that implies raising agricultural and rural incomes, generating wider employment opportunities and integrating rural areas more effectively into mechanisms of national economic development.

³ Barret, C. ed. (2013). *Food Security and Sociopolitical Stability*. Oxford University Press.

⁴ ILO, *Global Employment Trends (2012). Preventing a Deeper Job Crisis*, Geneva, 2012, p. 43-44.; Olinto, P., Beegle, K., Sobrado, C., Uemarsu, H. (2013). *The State of the Poor: Where Are the Poor, Where is Extreme Poverty Harder to End, and What Is the Current Profile of the World's Poor*. Economic Premise, No. 125. World Bank.

⁵ L. Christiaensen, L. Demery, J. Kuhl (2011). *The (evolving) Role of Agriculture in Poverty Reduction—An Empirical Perspective*. *Journal of Development Economics*.

2.1 Agricultural development, smallholders and the agricultural transformation

14. In LICs, agriculture accounts for about 28% of GDP, compared with 17% in LMICs, and is the dominant source of employment in both groups of countries. There is huge scope to raise crop yields and agricultural productivity more generally, and with it the incomes of farm and rural households. Moreover, productivity growth delivers a further benefit to consumers through greater food availability and lower food prices.

15. The key to realising these potential gains is innovation in the wide sense, combining adapted technologies with improved farm management practices. There is evidence of high rates of return to research and development accompanied with extension, albeit with long time lags. In developing countries, the dollar-for-dollar impact of R&D investments on the value of agricultural production is generally within the range of 6% to 12% across countries. Those countries which have heavily invested in R&D while simultaneously investing in extension and supporting infrastructure have had the strongest productivity growth.⁶

16. Smallholder farmers dominate the agricultural sectors of developing countries. On average across developing countries, smallholder farms generate approximately between 40 and 60 percent of total rural income through participating in both farm and non-farm activities.⁷ There are important opportunities to develop smallholder operations, provided the constraints that they confront can be overcome. These include weak infrastructure, the absence of credit markets and under-developed human capital. Financial services are instrumental in overcoming two of the most severe constraints faced by poor smallholders: lack of own savings and access to credit, and lack of insurance against risks.

17. Development of rural financial markets will require improved legal, regulatory and judicial systems; upgraded transport and telecommunications infrastructure; and support for farmer organisations. Adapted financial instruments, which are inclusive of women borrowers, can overcome smallholders' lack of collateral and have the potential to unlock the large latent demand for agricultural credit.

18. However, there is no uniquely efficient structure for farm operations, and the types of operations that are capable of generating incomes comparable with those in other activities will vary from one country to the next, depending on resource endowments and the functioning of factor and output markets. Those structures will be associated with varying combinations of own-farm work and wage earning employment.

19. Moreover, the realisation of increased opportunities within agriculture goes hand-in-hand with the agricultural transformation, which is the only sustainable path towards growth and development. Some smallholders will be able to reap economies of scale in areas such as procuring inputs, obtaining information on markets and agronomic issues, in meeting standards and certifying production, and in transacting with buyers from processors and supermarkets. Those farms will ultimately displace structures which may form the basis for current livelihoods but are too small to generate sufficient income to keep the household above the poverty line and ensure complete food security.

20. More widely, productivity growth in agriculture leads to the generation of surpluses that induce a demand for other goods and services. Once basic needs are met, income elasticities of demand for food tend to be lower than for other consumption, so the demand for food grows

⁶ Bioversity, CGIAR Consortium, FAO, IFAD, IFPRI, IICA, OECD, UNCTAD, Coordination Team of UN High Level Task Force on the Food Security Crisis, WFP, World Bank, and WTO (2012). Sustainable Productivity Growth and Bridging the Gap for Small Family Farms. Interagency Report to the Mexican G20 Presidency. FAO, The State of Food and Agriculture 2012: Investing in agriculture for a better future.

⁷ FAO (2010). Policies and Institutions to Support Smallholder Agriculture. Committee on Agriculture, 22nd Session.

more slowly than for other goods. In aggregate terms, manufactures and services are capable of generating annual growth rates of 10% or more, whereas growth rates in agriculture seldom exceed 5%. Indeed agricultural growth has been slower than overall growth across developing countries as a whole (Table 1).

TABLE 1. Agriculture’s contribution to economic growth

	Average annual growth rate, 2000-12		Agriculture’s share of GDP (%)	
	Total GDP	Agricultural GDP	2000	2012
Low Income Countries	5.6	3.5	34	28
Lower Middle Income Countries	6.3	3.8	21	17
Upper Middle Income Countries	6.3	3.7	10	8
World	2.7	2.7	4	3

Source: World Bank World Development Indicators (2014)

21. The agricultural transformation thus involves a combination of farmers becoming more competitive, households diversifying their income sources (for example by a family member obtaining off-farm work) and people – often sons and daughters – leaving the farm for other economic opportunities. The challenge is to generate balanced development so that labour is “pulled” out of agriculture via rising opportunities, rather than simply “pushed” out by improvements in labour productivity. With increased urbanisation comes the challenge of providing food for growing urban markets, with needed investment in transportation and logistics.

22. A further challenge is to ensure that agricultural productivity is sustainable, i.e. conserving natural resources while adapting to (and mitigating) climate change. There is great scope for sustainable intensification, while investments in infrastructure can help limit producer losses, which account for around one-third of all production in low-income countries. Moreover, lower food losses stimulate supply, reducing prices, raising consumers’ real incomes and contributing more widely to growth and employment. However, a large share of the world’s production is based on the unsustainable use of land and water resources.⁸ Managing these resources sustainably will require changes to incentives, such as strengthening land tenure systems and introducing water charges or tradable water rights. A further range of measures will be needed to adapt to the (mostly negative) effects of climate change.

2.2 Developing agriculture’s enabling environment

23. In such a context, the overall need is for policies that help agricultural development, but do not deter farm households from diversifying their incomes sources or exploiting better long-term prospects outside agriculture when those opportunities arise. Empirical evidence suggests that agricultural growth in LICs is three times as effective in reducing extreme (\$1.25 per day)

⁸ Foresight. The Future of Food and Farming (2011). Final Project Report. The Government Office for Science, London.

poverty as growth in other sectors. Yet non-agricultural growth tends to be more effective in reducing less severe poverty (per capita incomes of between \$1.25 and \$2 per day) and to be relatively more important in LMICs than in LICs⁹.

24. Many of the most important policies are neutral in the sense that they are good for both agricultural and non-agricultural development in rural areas. For example, basic investments in health and education widen households' economic opportunities, while investments in public goods such as rural infrastructure and electrification are helpful to farmers as well as to people engaged in the production of manufactures or the provision of services.¹⁰ Well-designed public investments, in particular in infrastructure development, help crowd-in private investment and support more and better jobs.¹¹

25. In many cases there has been an under-provision of those core public investments and public services in rural areas,¹² while there is a continued albeit diminished tendency for governments in African and South Asian LICs to tax their farmers via suppressed agricultural prices.¹³ A consequence of this has been unmanaged migration to urban centres in many developing countries, with attendant economic and social problems.

26. A range of developments can support the development of rural finance. These include the adoption of a legal framework that supports the user of a wide range of assets and rights as collateral. A credit information system can facilitate credit expansion by enabling creditors to access reliable and transparent information on borrowers and vice versa.¹⁴ Training programmes can also help the banking sector work more effectively with the informal sector, while public-private partnerships can expand the range of available financial products suited to agricultural activities.

2.3 Policies to integrate rural and urban economies

27. The development of rural areas and greater connectivity with urban areas can reduce rural-urban income disparities. Closer ties between urban and rural economies have been shown to yield important benefits in terms of remittances coming into poorer areas and the generation of rural non-farm employment.

28. Part of that increased connectivity can come from value addition based on agriculture. Many LICs, most notably in Africa, have not so far succeeded in developing thriving manufacturing sectors, limiting opportunities for young people to work outside agriculture. The development of agri-food value chains and associated services offers the potential to leverage agricultural development for wider benefits in terms of poverty reduction and food security¹⁵.

⁹ L. Christiaensen, L. Demery, J. Kuhl (2011). The (evolving) Role of Agriculture in Poverty Reduction—An Empirical Perspective. *Journal of Development Economics*.

¹⁰ ILO (2103). "Access to services in the rural economy", Policy Brief on Decent Work in the Rural Economy, Geneva.

¹¹ ILO (2011). "World of Work Report 2012: Better Jobs for a Better Economy," Geneva, 2012, pp. 97-99; ILO, "Investing in food security as a driver of better jobs", in *World of Work 2011*, Geneva, 2011.

¹² Bezemer, D. and D. Headey (2008). "Agriculture, development, and urban bias", *World Development*, Elsevier, Vol. 36(8), pp. 1342-1364, August.

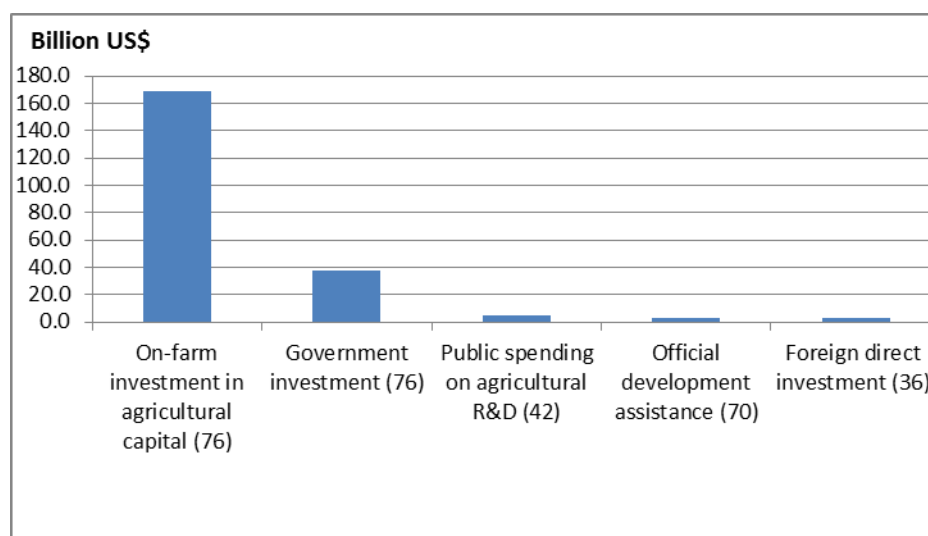
¹³ Anderson, K., E. Jara, M. Kurzweil, D. Sandri and E. Valenzuela (2008), *Distortions to agricultural incentives: A global perspective, 1955 to 2007*, Working Paper, DECRG-TR, World Bank, Washington, DC.

¹⁴ M. Hernandez and M Torero (2014); Parametric versus nonparametric methods in risk scoring: An application to microcredit. *Empirical Economics*, Volume 46, Issue 3, Page 1057-1079. DOI 10.1007/s00181-013-0703-8. <http://link.springer.com/article/10.1007/s00181-013-0703-8>.

¹⁵ AfDB-OECD-UNDP (2014) *African Economic Outlook: Global Value Chains and Africa's Industrialisation*, www.africaneconomicoutlook.org

29. The finance for agricultural and rural investment will come predominantly from farmers themselves. Farmers are by far the largest investors in agriculture, with on farm investment more than three times as large as all other sources of investment combined. Policies that make it easier for them to obtain finance, including those governing remittances, will have a critical impact on agricultural growth, while government investment and overseas finance (in the form of ODA or FDI) can play a catalytic role.

Figure 1. Average annual investment in agriculture in selected low- and middle-income countries, by source¹⁶



Source: FAO, State of Food and Agriculture, 2012.

30. A majority of the world's rural poor work in the informal economy. Policies that improve labour productivity, in particular those that improve opportunities for women and young people, can increase their absorption within the formal economy, with strong impacts on inter-generational poverty and food security. Rural economies often face challenges in providing decent work and productive employment. Limited economic opportunities, combined with lack of access to services, leads to an increase in migration to cities, which struggle to absorb rural workers. Generating more productive and remunerative employment and opportunities for decent work in rural economies and promoting skills development and upgrading may help many developing and emerging economies foster a virtuous circle of increased productivity and sustainable improvements in job quality and living standards.¹⁷ An important policy question here is how to adapt rural strategies, which have often been sector-based, to take into account the specific development needs of rural regions¹⁸.

¹⁶ Notes: All flows are reported in constant 2005 US dollars with the exception of FDI inflows which are reported in current US dollars. Data are the average for the years 2005 - 2007 or for the most recent year available. See Appendix for estimation details. Number of countries covered is shown in parenthesis next to the relevant type of flow. Sources: On-farm investment in agricultural capital is calculated using data on agricultural capital stock from FAO (2012). Government investment is estimated using data from IFPRI (2012b), public spending on agricultural R&D is from IFPRI (2012a), official development assistance is estimated using data from OECD (2012) and foreign direct investment data are from UNCTAD (2011).

¹⁷ ILO, "Skills for improved productivity, employment growth and development", International Labour Conference, 97th Session, Geneva, 2008; ILO, "Unleashing rural development through productive employment and decent work: Building on 40 years of ILO work in rural areas", Geneva, March 2011; ILO, "Economic diversification of the rural economy", Policy Brief on Decent Work in the Rural Economy, Geneva, 2013.

¹⁸ OECD (2006), *The New Rural Paradigm: Policies and Governance*, <http://dx.doi.org/10.1787/9789264023918-en>.

2.4 Trade and trade policy

31. Open food and agriculture trade within and across countries can reinforce the positive two-way linkages between growth and employment on the one hand, and food security and nutrition on the other. Well-functioning international, regional and local markets can boost agricultural growth, while reducing the cost of food, price volatility and the uncertainty of supply. At the same time, trade can improve nutrition by increasing the diversity of national diets, with feedback benefits to growth and employment. In the long-term, trade enables production to locate in areas where land and water are relatively abundant, and where systems are more resilient to the effects of climate change. Moreover, the areas of the world with sustainable productive potential are not the same as the areas experiencing rapid population growth.

32. There is nevertheless a need for complementary policies to make the most of these potential benefits, and for flanking policies to mitigate the burden on those who formerly benefited from protection. In the case of potential exporters who should benefit from reform, there is a need for supply-side investments for those gains to be fully realised. Such measures reinforce the gains even when there is existing capacity, and allow producers to become more deeply integrated with global value chains. The challenge with respect to producers who formerly benefited from protection – a minority in low-income countries – is to either raise their productivity to redress a lack of competitiveness, or create new opportunities in other sectors. Social safety nets can help producers who are otherwise unable to respond effectively to new market opportunities.

33. Regional and cross-border trade has the potential to improve food security, especially in countries where deeper integration with world food markets remains difficult. The constraints to intra-regional trade include a lack of physical infrastructure, such as roads, and obstructive government interventions. In Africa, transport costs are estimated to account for 50-60% of total marketing costs. Introduction of frequent and unpredictable export and import barriers, unnecessary permits and licences, costly document requirements and conflicting standards can all raise transaction costs, pushing private traders from participation in regional trade. The comprehensive WTO Trade Facilitation (TF) Agreement agreed in Bali in 2014 should provide improved incentives for the functioning of value chains through reductions in trade transaction costs.

34. A key constraint for smallholder agriculture in developing countries is that farmers practice either subsistence farming or operate largely in local markets due to a lack of integration with more rewarding provincial, national or global markets. As a result, incentives remain weak, investments low, and low levels of technology adoption and productivity result in poverty traps. Access to export markets can help to enhance and diversify the livelihoods of lower income farm households and reduce rural poverty more generally.¹⁹

35. Food safety and quality considerations are often critical components of well-functioning agricultural value chains.²⁰ However, developing country farmers often face difficulties in meeting standards and participating in value chains. Sometimes standards are set and enforced by governments, but increasingly compliance with private sector standards is required to gain access to supply chains. Increasing agricultural investment, especially in the area of food safety and quality targets, may facilitate countries' participation in agricultural value chains. Further, these requirements can be eased by providing advice and information on new products,

¹⁹ World Bank (2007), World Development Report (2008), *Agriculture for Development*, Washington, DC.

²⁰ The multilateral trade rules with regard to food safety and quality (SPS and TBT agreements) play a balancing role in allowing governments to address food safety and quality issues while simultaneously ensuring that those measures are not more trade-restrictive than is necessary to achieve their objectives.

developing input and credit services, as well as by making marketing services available. Smallholders can benefit either directly, for example through contract farming, or indirectly as employees in larger enterprises. Helping farmers to organise through farm associations and cooperatives can help them reap economies of scale and bargain more effectively.

36. Increased openness also makes it important to ensure the reliability of world markets. When food prices peaked in 2007-08, some countries failed to honour forward contracts and the widespread application of export restrictions to suppress domestic prices undermined some importers' confidence in world markets as a reliable source of food supplies. Many of the trade measures used to mitigate the 2007-08 food price spike were ineffective because of the offsetting impact on world markets of other countries applying similar measures.²¹ They also undermined incentives for investment, thereby compromising future growth. There would be collective benefits from countries using non-trade instruments to manage market instability. There would also be gains from reducing trade distorting domestic support, phasing out of export subsidies and taxes in all forms, and improving market access. These efforts need to go hand-in-hand with non-trade policies that help maximize the benefits and mitigate costs – specifically investments in agricultural productivity, the provision of social protection and the development of risk management tools.

2.5 Nutrition and human capital development

37. Malnutrition in all its forms – undernutrition, micronutrient deficiencies and overweight and obesity – imposes unacceptably high economic and social costs at all income levels. Agricultural productivity growth contributes to nutrition but it is not sufficient to eliminate malnutrition. Nutrition-sensitive interventions and programmes in agriculture have enormous potential to improve nutrition outcomes. Examples include investments tailored to the specific role of women in agriculture; adoption of biofortified crops; food fortification; crop diversification to food with higher nutrient content; aflatoxin control; and increased nutrition education through agriculture extension and livelihood projects.

38. Agricultural interventions are more effective when combined with nutrition education and implemented with sensitivity to gender roles.²² Adequate household incomes are necessary for food security and nutrition, but they are not sufficient. If incomes are deficient, social protection can ensure that purchasing power is sufficient for everyone to meet their dietary needs. Social protection interventions typically influence the determinants of nutrition (i.e. food insecurity, care practices, and the disease environment and access to health services), thereby having the potential – if well-designed – to make a positive impact on nutrition outcomes in vulnerable populations. In addition there is strong evidence that the benefits of growth are not fully reflected in nutritional outcomes unless essential public services are in place. These include the provision of primary healthcare, clean water and sanitation infrastructure, as well as nutrition-specific interventions such as information and education programmes targeted to both mothers and children, in addition to provision of micronutrients and food supplements. Prenatal and early childhood programmes are widely regarded as among the most effective nutrition-enhancing programmes. Such programmes can address the energy and micronutrient needs of children under 24 months and their mothers through the use of targeted vouchers, micronutrient supplements and improved complementary foods.

²¹ Anderson, K. and S. Nelgen (2012), "Trade barrier volatility and agricultural price stabilization", *World Development*, (40)1, pp. 36-48. Antoine Bouët & David Laborde Debuquet (2012). "Food crisis and export taxation: the cost of non-cooperative trade policies," *Review of World Economics (Weltwirtschaftliches Archiv)*, Springer, vol. 148(1), pages 209-233, April

²² FAO (2013). *The State of Food and Agriculture. Food Systems for Better Nutrition*.

39. Social protection and economic growth are mutually reinforcing. Economic growth increases the financial and human resources available to support social protection while safety net programmes within social protection are also a key factor in driving economic growth. They can allow for the acquisition of the human capital (for both children and adults) that leads to increased productivity. They can buffer the poor from economic or climatic shocks, leading to investment in agriculture and greater adoption of improved technologies that increase farm income. In combination, inclusive economic growth and social protection can be powerful tools for improving food security.

40. More generally, investments in human capital are one of the key ways of strengthening the two-way linkages between growth and employment on the one hand, and food security on the other. Improving skills of the poorest is key, hence strong returns to investment in women and youth, which hold the key to prosperity of future generations.

2.6 Resilience and the synergies between income and employment growth and food security

41. In the context of food security, resilience implies adverse shocks do not put peoples' food consumption at risk. Such shocks may originate at the household level, for example through family illness or the loss of a job, or they may be manifested at the market level, for example through changes in food availability and prices.

42. The foremost prerequisite for resilience is sustained income growth, which makes it easier for households to accumulate savings and smooth their consumption over time. Pending income growth, social protection can ensure that a drop in real household income does not carry significant implications for households' food security. Conditional cash transfers have become popular in recent years, with payments conditional on parents making investments in the human capital of their children. These have tended to be more effective when provided in conjunction with complementary investments, for example in schools and hospitals.

43. There are specific risks associated with agricultural activity that are particularly acute in developing countries. Developing country farmers are more exposed to household level risks such as family illness and to market level risks such as those stemming from drought and exacerbated by climate change. Moreover, poor farmers may be more vulnerable in terms of their ability to manage or cope with those risks. In particular, farmers without access to credit may not be able to smooth consumption from one year to the next and may have difficulty financing the inputs they need for the next year. Uncertainty may also result in sub-optimal decisions in the long-term.

Box 1. Investment in infrastructure and improvements in productivity: scenario analysis.

IFPRI have undertaken simulation analysis in order to investigate the impacts of different forms of growth on food security. They use **MIRAGRODEP**, a global, multi-sectoral, multi-country, computable general equilibrium, which provides projections to 2020.

They consider alternative ways through which all countries and regions can achieve, by 2020, the G20 target of 2% additional GDP growth. The scenarios they consider are investments in infrastructure, which lower domestic and international trade costs; gains in total factor productivity, and a combination of the two. In each case they consider implementation which is neutral across urban and rural areas, versus implementation that favours rural areas (the latter can be interpreted as a correction of existing policy biases). This gives a total of six scenarios.

A general finding is that investments in rural infrastructure would have the biggest impact on rural value added and rural wages, with particularly large gains in Africa. Productivity improvements can complement these gains. At the same time, neutral policies are slightly more helpful in narrowing the urban-rural wage gap. In most regions, investments in infrastructure have a bigger impact on the urban-rural wage gap than productivity gains, although Asia is an exception. Whereas infrastructure is the main driver of increases in value added and real wages, improvements in TFP benefit both producers and consumers and have the greatest impact on food consumption.

In general terms, the results highlight the positive contribution of investments in infrastructure, the benefits of correcting urban-rural bias, as well as the gains from policies and investments that would spur rural productivity growth. In most cases, there are significant synergies from combining the two. However, the degree of complementarity varies across regions, indicating the need policies that are tailored to countries' specific structural characteristics and their stage of economic development.

Source: IFPRI (2014), Technical Note: Implementing the G20 Growth Agenda: The Role of Rural Development

44. Designing risk management tools for agriculture is complex, with policymakers needing to decide which risks can be managed effectively by farmers and households themselves, which can be addressed through market instruments such as crop insurance and forward pricing, and which require government intervention. The dearth of market instruments in poor countries has contributed to greater intervention in markets, for example via price supports and the provision of subsidies for seed and fertiliser. These policies are likely to be less effective in the long term than investments to raise incomes, accompanied by effective risk management tools and adequate social protection.

45. The analysis in this section has emphasised the importance of agricultural growth, as well as the need for wider employment creation that connects rural and urban labour markets. A range of actions have been identified that can contribute to such balanced development, including investment in rural infrastructure, innovation to sustain agricultural productivity growth, the development of rural finance and risk management tools, and open market policies that enable producers to participate in global value chains. Simulation analysis by IFPRI shows the potential complementarities between policy actions in different areas (in this case, investments in infrastructure, which reduce trade costs, and measures to improve productivity) as well as the gains from redressing urban bias (Box 1). Relevant G20 actions that have the potential to reinforce synergies between growth and productive employment on the one hand, and food security on the other, are reviewed in Sections 3 and 4.

3. G20 INITIATIVES: FOOD SECURITY AND BEYOND

46. Food security is a complex and multi-faceted issue and the G20 have a significant potential in meeting the challenge of reducing the number of hungry. The G20 had lengthy negotiations in Seoul to include development and embed food security in their agenda, an area where the global governance architecture, in particular the specialized UN agencies (FAO, IFAD, WFP), international organizations such as IFPRI and multi-lateral development banks, and the reformed Committee on World Food Security (CFS), work together in a coordinated way to ensure food and nutrition security.

47. While the instruments the G8 use for development and food security are mainly financial, such as debt relief, Official Development Assistance and multilateral investment funding, the G20, in line with its role as a forum for international economic cooperation, supports development through collective actions that lead to the provision of global public goods.

48. In general terms, the G20's agenda for development, developed after the 2008 food price surge, reflects broad objectives for strong and sustainable growth, but also for mitigating systemic risks. To meet these objectives, the work of G20 is structured in pillars, focusing on the ingredients of growth. Infrastructure, financial inclusion, domestic resource mobilization, human resource development and food security – the priority areas under the St Petersburg Development Outlook – are all inputs that are combined to generate growth and decent work. And growth in LICs – the focus of the G20 – will contribute towards reducing global imbalances.

49. However in food security, initiatives cannot easily correspond to actionable policies which are the main firepower of the G20, as in the areas of global economy and finance. For the LICs, each of these ingredients to growth are under the control of the countries themselves and the margin for collective action to provide them from the part of the G20 is limited. The G8 also target developing and low income countries but for example, their approach to food security differs being based on channelling public and, especially private funds, and on commitments of the recipient governments to reform domestic policies in line with good practices, as within the context of the New Alliance for Agriculture.

50. In contrast, the G20's engagement in development moves beyond the formulation of aid packages to focus on systemic issues and working primarily as a forum for consultation, knowledge sharing and cooperation and not a funding or implementing body. The G20 approach to development is not to prescribe specific policies for LICs, but to shape the international environment so that it is conducive to growth and development, fostering food security. Perhaps, the case of the ECOWAS emergency food reserve system, proposed initially by the DWG to link to social safety nets, but subsequently modified by ECOWAS as a regional food stock, is illustrative.

51. In general, the G20's work structure has been criticized of rendering the development agenda too broad to be managed, resulting in a disconnect between pillars, weakening effectiveness and making development peripheral to the overall G20 framework and the central concerns of G20 Leaders and Ministers of Finance.²³ Development is a long term and complex process, and this is reflected in the work of the DWG, where inevitably breadth is achieved at the cost of diluted focus.

²³ Callaghan, M. et al. 2013. G20 Monitor: Development and the G20. Lowy Institute of International Policy.

3.1 Food Security Initiatives

52. The G20's engagement in food security and nutrition began in 2009 in Pittsburgh through the endorsement and the active support by many G20 members of the establishment of Global Agriculture and Food Security Program (GAFSP), a multilateral fund, managed by the World Bank. GAFSP's was also thought as one channel for the funds pledged at the 2009 L'Aquila G8 Summit to substantially increase investments in agriculture as part of the L'Aquila Food Security Initiative. To date, GAFSP has allocated \$912 million to 25 countries and expects to improve the incomes and food security of over 10 million beneficiaries, mainly smallholder farmers and their families. Although it has been difficult to mobilize funds to meet the amount pledged in L'Aquila, GAFSP provides substantial resources to small-scale agriculture in LICs. In addition to this, GAFSP expresses a political commitment to increase investment in agriculture and enhance food security in the poorest countries.

53. The G20's work structure lends itself to a comprehensive approach towards tackling a long-term food security and growth agenda. Better rural infrastructure integrates smallholders in markets, human resource development builds the skills of rural population and financial inclusion underpins investment. Mainstreaming food security and rural development in all work areas of the DWG will enhance the effectiveness of actions not only for food security, but for jobs and growth.

54. Since 2011, the G20 has had a significant food security agenda, and although the structure of the work – through principal areas or pillars – have the potential to stimulate economic growth, many actions have been geared more towards systemic risk mitigation. The modes of action fall in three broad categories:

- Encourage policy dialogue and enhance policy coherence through the coordination of member countries' policies which can have implications for both for G20 members themselves as well as for other countries, including LICs;
- Engage in collective action and mobilize actors and agencies to establish mechanisms and provide global public goods for developing countries and LICs; and,
- Identify important issues of global concern and provide impetus on action by the international community. Support global initiatives both politically and by shaping their own policy options according to relevant global norms and good practices.

55. Underlying these modes of actions, the G20 encourages collaboration between international organizations, on which they rely upon for technical work. In food security, G20 actions flow from reports which are the product of collaboration between ten or more international organizations and provide a template for international action. The G20 have also been broadening the dialogue by including LICs in the deliberations of the DWG, or by outreach activities. Some efforts have also been made to include stakeholders such as the private sector, and the civil society through the respective B20 and C20 engagement groups. The majority of these initiatives in food security had their origin in the Agricultural Deputies' discussions in 2011 and 2012, although for a number of those the two groups – the DWG and the Agricultural Deputies – collaborated and agreed in a division of labour.

3.1.1 Policy coherence

56. An early action of the G20 to improve policy coherence was the agreement in 2011 by the G20 Ministers of Agriculture to voluntarily exempt purchases of humanitarian food by WFP from export restrictions and other extraordinary taxes.²⁴ Export restrictions on food can have strong destabilizing effects on international markets, exacerbating price surges, negatively affecting the poorest consumers in developing countries. They also hinder the flow of food assistance to vulnerable people hit by high food prices, hunger and humanitarian crises. Their imposition can delay the emergency response and also increase costs as food procurement teams search for alternative food sources. The agreement was also reaffirmed by the G20 Cannes Summit, and in periods of high food prices, when an increasing incidence of export restrictions is likely, ensures that vital food assistance continues to reach people in need.

57. While this agreement has been respected by G20 countries, at the 2011 WTO Ministerial Conference in Geneva the proposal to exempt purchases of humanitarian food by WFP from export restrictions did not attract the necessary consensus within the WTO. The failure to follow-through on G20 decisions in the relevant fora relays an unclear message to the international community and may undermine the G20's credibility in the longer term.

3.1.2 Collective action for the provision of global public goods for food security

58. G20 collective action is an important vehicle for the delivery of global public goods. The Agricultural Market Information System (AMIS), the Tropical Agricultural Platform (TAP), the Platform of Agricultural Risk Management (PARM), AgResults, the Meeting of Agricultural Chief Scientists (MACS) are all mechanisms that aim to close gaps in different aspects of the international food security architecture. These joint facilities rarely involve all member states, but for many, international organisations provide the basis for their establishment, the necessary expertise and the day-to-day management.

59. AMIS has been an important addition to the international food commodity information and analysis network. It entails collective effort from the entire membership of the G20, non-G20 major trade partners, as well as ten international and inter-governmental organizations, which make up its Secretariat and have capacity to regularly collect, analyze and disseminate food market and policy information. Its establishment addresses the systemic risks which are inherent in a globalized food and commodity market and delivers an array of global public goods.

60. AMIS increases global food market transparency through the provision reliable, timely and comparable data on supply and demand and their short term outlook, and by keeping track of policy changes that may influence market conditions. At the global market level, the weight of AMIS' Secretariat consisting of ten international organizations²⁵ is an effective food price crisis alert mechanism, while at the same time it is an important factor that can calm the markets.

61. The initiative also facilitates better coordination of policy actions in response to market uncertainty, by promoting early dialogue among decision-level officials and encouraging the coordination of policies in times of critical market conditions. Thus, in October 2012 when global maize prices reacted to a severe drought in the US, the world's largest producer and exporter of maize, AMIS provided relevant information materials and facilitated exchanges

²⁴ G20 Agriculture Ministers' Action Plan on Food Price Volatility and Agriculture.

²⁵ FAO, IFAD, IFPRI, International Grains Council, WFP, OECD, World Bank, WTO, the UN High Level Task Force (UN-HLTF) and UNCTAD.

among representatives of AMIS countries, deterring the introduction of policies that would have added to the nervousness of the market.²⁶

62. With better data provided by the participating countries, the expertise of the international organizations on analyzing markets and policies, and a platform to host early discussions, AMIS provides a paradigm of G20 collective action that shapes the conditions so that the global market environment is favourable to development. It is a cost-effective mechanism that increases global food market transparency, significantly strengthens global early warning capacity and promotes international policy coordination.

63. The TAP and PARM follow AMIS' collective action model bringing together G20 countries and international organizations in implementation efforts. TAP aims at closing the capacity gap, many developing countries are subject to, for the development of innovation systems. PARM aims to integrate risk management into the agricultural policies of low income countries and act as a broker between those in need of risk management expertise and those who can provide it.

64. Capacity building for innovation systems and risk management are crucial for food security, productivity and growth. TAP and PARM target specifically LICs through South-South or triangular cooperation, and contribute towards balanced and sustainable growth. Both involve a subset of the G20 membership which provide funding and also collaborate in the implementation and both are led by international organizations.²⁷

65. Having only few G20 countries involved in such collective actions, translates into a high degree of delegation to international organizations, while respecting their own decision-making process. This is desirable, as international agencies have the structure to lead multilateral actions, and the expertise to support them. Nevertheless, the costs for establishing these multi-actor mechanisms, securing funds and maintaining the flow of benefits are significant and present a challenge for international organizations whose resources are limited.

66. For example, TAP – which can play an important role in the global agricultural research and development architecture – had sufficient funds to finalize three regional assessments in August 2013 to define the current priorities, capacities and needs in agricultural innovation systems in selected target countries. The TAP Marketplace and the TAPipedia – components that are designed to match offers and demands for capacity development services and enhance knowledge exchange and learning – have still to be fully developed. IFAD mobilized adequate funds to launch PARM at the end of 2013 – more than two years after the agreement to establish it.

67. Such public goods require collective action but their sustainability is a crucial challenge for both G20 countries and international organizations. Collective action incurs costs – start-up, transaction, information and coordination costs – and by their very nature, the international organizations are in a position to minimize them and absorb a significant proportion. Nevertheless, these joint actions require significant efforts and continuous, rather than intermittent and random resourcing.

²⁶ Dreschler, Denis, AMIS: Celebrating its First Birthday, Special Features, Food Outlook, November 2012.

²⁷ TAP is led by FAO and is supported by the Government of Germany. A number of global fora and international organizations provide in-kind contributions: the African Forum for Agricultural Advisory services (AFAAS), Consortium National pour l'agriculture, l'alimentation, la santé animale et l'environnement - France (AGREENIUM), the Chinese Academy of Agricultural Science – People's Republic of China (CAAS), the Centre for Agricultural Bioscience International (CABI), the Chinese Academy of Tropical Agricultural Sciences - People's Republic of China (CATAS), Consultative Group on International Agricultural Research (CGIAR), Forum for Agricultural Research in Africa (FARA), IFAD, World Bank, Young Professionals' Platform on Agricultural Research for Development (YPARD).

PARM is led by IFAD and involves FAO the World Bank and NEPAD. It is supported by Agence Française de Développement, the European Commission, and the Italian Ministry of Cooperation for Development.

68. AgResults follows a different collective action mode, probably due to less significant organization costs. AgResults is a country-driven action aiming at overcoming market failures by encouraging private sector innovations targeted to developing countries through results-based on *ex post* economic incentives.²⁸ This is a well-targeted action, as agricultural research is becoming increasingly private, focusing on technologies which are knowledge intensive, being developed for larger, commercial farms. This renders technology adoption by small farmers difficult.

69. MACS, launched in 2012 with the goal of identifying global research priorities and targets and facilitating collaboration between the public and private sectors, is also an important action. The Chief Agricultural Scientists are in a position to coordinate the G20 efforts on agricultural innovations and to advise their Development Ministers on research needs. MACS can be more effective by closely collaborating with the CGIAR Consortium, the GFAR and the Global Conference on Agricultural Research for Development (GCARD) and more importantly, by adopting a more focused agenda, given the challenge to intensify sustainable agricultural production. However, there is little the G20 Chief Agricultural Scientists can do for research in LICs directly. The Global Forum on Agricultural Research (GFAR) is the appropriate platform to mobilize all stakeholders involved in agricultural research and innovation systems with the objective to meet the needs for resource-poor farmers in LICs.

3.1.3 Supporting global initiatives and other actions

70. Agreeing with, and providing political support to global initiatives on food security at the Heads of State level merges the challenge to eliminate hunger with the wider agenda for balanced growth and decent work. It also sends a strong signal to stakeholders and institutions in the G20 countries which improves policy coherence and lends support to the international consultative processes and organizations which facilitate the path towards meeting these high-level goals.

71. WTO negotiations offer an important opportunity to strengthen the multilateral trading system and to deepen the agricultural reform process to correct and prevent restrictions and distortions in world agricultural markets. Many developing countries were historically discouraged from carrying out policy reforms in their agricultural sectors by distorting agricultural subsidy practices in a number of developed countries and impediments in access to international agricultural markets. After a successful Bali outcome, WTO Members are currently actively engaged in reviving the negotiations. A successful conclusion would make an important systemic contribution to realizing food security objectives.

72. Upholding the Principles for Responsible Agricultural Investment (PRAI), supporting the inclusive consultations on the Principles for Responsible Agricultural Investment in the Context of Food Security and Nutrition (CFS RAI) launched within the framework of the CFS, and also supporting the Global Agriculture Food Security Programme (GAFSP) are important vehicles for advocacy to secure commitment from stakeholders in the G20 membership towards achieving these common goals. Facilitating responsible investment is central to food security and the support provided by the G20 also strengthens coherence globally within the international food security architecture and through the CFS.

73. As the bulk of the FDI in agriculture flows from the G20 countries to LICs, it is important to stress that PRAI should not be seen as restrictions on the behaviour of international investors or

²⁸ Canada, the United States, the United Kingdom, Australia. The action is also supported by the Bill & Melinda Gates Foundation

the prerogatives of governments, but rather as a way to ensure that investments in agriculture realize their significant potential for making a positive contribution to the development of agricultural output, the stability and security of food production, the well-being of rural communities and the development of sustainable agriculture.

74. Reports by international organisations to successive G20 Presidencies in 2011 and 2012 highlighted “...the imperative to increase agricultural productivity growth, sustainably...”. G20 Leaders subsequently endorsed development of a “framework for analysis” that “Countries (could) on a voluntary basis choose to follow.” Since that time work has been advanced at the OECD both to elaborate an appropriate framework and to test it on a voluntary basis with three pilot countries. This work continues and it remains to be seen whether this approach yields significant benefits; early results are encouraging and additional pilot country reviews will be undertaken by OECD, in collaboration with other interested organisations, over the coming period.

3.2 Mainstreaming food security across work areas

75. As noted in Section 2, the benefits of mainstreaming food security across different work areas can be significant. Investing in public goods in rural areas yields strong returns in terms of agricultural productivity, which in turn triggers job growth, poverty reduction and food security. Investments in education and rural infrastructure tend to enhance agricultural investment, leading to growth.²⁹ Nevertheless, limited access to financial services can severely constrain smallholder investment, while well-targeted social transfers can help many escape the poverty traps that prevent them from building assets. This makes the DWG’s work areas not only complementary in nature but also mutually reinforcing. However appropriate targeting and prioritization of investments is essential.³⁰

3.2.1 Financial inclusion

76. Access to financial services for small-scale agribusinesses and women needs to be addressed *holistically*. More recent technological innovations in microfinance have eased some short-term constraints and increased outreach to remote rural areas and helped in deepening formal financial services to rural households. However, more effort is needed to enhance financial education and ensure access to diverse financial services and the long-term financing to attract investments in activities that can sustain the viability of agribusinesses.

77. Today, there is stronger recognition by governments, the private sector, international institutions, and development agencies, that financial inclusion encourages agricultural-based growth, food security and nutrition, and poverty alleviation. A number of international organizations are working jointly and through partnerships with other institutions and networks, such as the Consultative Group to Assist the Poor (CGAP), Making Finance Work for Africa (MFW4A), the Improving Capacity Building in Rural Finance project (CABFIN), and the Agriculture Finance Support Facility (AgriFin) in order to promote financial services inclusive of small agri-business and smallholder farmers. Such inclusive financial services play a crucial role in strengthening small-scale agribusinesses and commercial agro-industries, accelerating agricultural growth and advancing employment, resulting in equal rural social and economic development.

²⁹ FAO, The State of Food and Agriculture 2012: Investing in agriculture for a better future.

³⁰ Maximo Torero (2014) Targeting investments to link farmers to markets: a framework for capturing the heterogeneity of smallholder farmers. 2013. In: New Directions for Smallholder Agriculture. Hazell et al.(eds) Oxford University Press.

78. Working at the financial inclusion frontier for development requires a broader collaborative framework. The DWG and the Global Partnership for Financial Inclusion (GPMI) help determine effective policy solutions for advancing financial education and inclusive rural financial services for small and medium agribusinesses, including mobile financial services and remittances. The financial inclusion of smallholders and the most marginalized can be a crucial driver of job creation and equitable economic growth.³¹

79. A more holistic approach to developing financial systems that support food security and agricultural-based growth and rural development can be supported by the GPMI members.³² Particular attention needs to be paid to the huge potential of remittances to stimulate on-farm investments. New technologies such as mobile money can expand access to financial services in rural areas. There is also a need for safe deposits and equity building, insurance services, seasonal and for long-term finance tailored to the needs of agribusinesses, farmers' organizations and smallholder families.

80. This system approach means focusing on clients' demands, working on the financial service providers' (supply) side, harnessing new technologies and business models, to engage in constructive dialogue with regulators and create enabling environments for the expansion and deepening of rural financial services. Therefore, a progressive partnership of the GPMI with the Rome based Agencies to benefit from their particular knowledge and experience, is needed to mainstream food security in the work on financial inclusion.

81. This partnership can be built on well-defined roles, alignment of comparative advantages and concrete and measurable targets. There are a number of work areas where food security can be included effectively. For example, a baseline could be formed by a series of national surveys on financial inclusion - beyond the World Bank Findex Report - which would provide comprehensive data on the status of financial inclusion with special focus on rural and agricultural finance and complement the ongoing GPMI subgroup work on "data and measurement".

82. IFAD's Financing Facility for Remittances (FFR) can further complement the GPMI advanced work on remittances (by the new subgroup on "markets and payment systems") and bridge to the above topic of financial inclusion for food security. The availability of structured, reliable, and profitable investment tools is likely to attract a significant portion of the remittance funds, at least from those families that wish to invest a part of their liquidity, yet lack the means to do so. IFAD and its partners have been developing programs that take advantage of these opportunities, including a global scaling-up programme Diaspora Investment in Agriculture (DIA). By strengthening existing links between the diaspora and migrant workers' home communities, the initiative aims at creating the right set of incentives for migrants to vitalize the productive base of their home countries' local economies with added capital and as a consequence creating employment opportunities while enhancing food security and tapping potential export markets.

3.2.2 Infrastructure

83. The Infrastructure Action Plan has shaped a number of pro-active initiatives by the Multilateral Development Banks (MDBs) to unlock the infrastructure project pipeline, increase private sector participation and financing, and improve infrastructure spending efficiency.

³¹ Kloeppinger-Todd R. and M. Sharma (eds) "Innovations in Rural and Agriculture Finance," 2010, Focus Paper 18. Washington DC: International Food Policy Research Institute and World Bank.

³² Two reports are available from the GPMI SME Sub-Group: G20 Global Partnership for Financial Inclusion – IFC (2011) Scaling Up Access to Finance for Agricultural SMEs Policy Review and Recommendations, as well as IFC (2012) Innovative Agricultural SME Finance models.

Strengthening the focus on rural infrastructure projects is crucial for food security, rural economic growth and decent work.³³

84. Investment in infrastructure in rural areas, in particular transportation (ports and rural roads), soil and water conservation, irrigation systems, electrification and information and communication technologies, is an effective way to stimulate productivity growth and employment and reduce food losses. Irrigation systems allow for increased and resilient land productivity, particularly in countries that depend on rain-fed agriculture and face water shortages. By facilitating smallholder integration into markets, investment in infrastructure can significantly contribute to domestic and regional value chain development, thus providing employment opportunities to rural populations.

85. Often, infrastructure is ranked among the top two sources of overall agricultural growth, second to R&D investments.³⁴ Especially in Africa, irrigation and feeder roads are shown to have large output-increasing and poverty-reducing effects. The importance of rural transport infrastructure is demonstrated in Africa where, for certain landlocked countries, transport costs can be as high as 77% of the value of their exports.³⁵ Still, large infrastructure deficits remain and investment flows – public and private – have not yet filled these gaps.³⁶

86. Improving the effectiveness of Project Preparation Funds (PPFs) remains a focus of the G20 work on infrastructure. For LICs, the development of regional PPP practitioner networks, which are being expanded and strengthened by the MDBs and the OECD, can enhance local capacity to prepare and implement projects attractive to private investors. Within this work, there are a number of possible entry points for food security which can underpin productivity increases, economic growth and job creation. These could include:

- the strengthening of specialized agencies charged with the provision and rehabilitation of rural infrastructure, such as the Local Government Engineering Department (LGED) in Bangladesh and the Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR) in Nepal, providing them with the tools to better identify, prepare and implement rural infrastructure projects;
- specialized comparative studies on the maintenance of water resources and rural access infrastructure and corresponding levels of success in different countries; and,
- the provision of support for the inclusion of rural infrastructure in initiatives, such as the African Infrastructure Knowledge Program, to identify upgrading and rehabilitation needs and to prioritize them for investment.

87. Any of the above initiatives would provide a good grounding in terms of knowledge and capacity as well as an information base for international development agencies involved in funding rural infrastructure provision with a view to promoting economic growth and food security.

³³ Fan, S. (ed.) (2008), *Public Expenditures, Growth, and Poverty. Lessons from Developing Countries*, The Johns Hopkins University Press, Baltimore; Mogues, T. and S. Benin (eds.) (2012), *Public Expenditures for Agricultural and Rural Development in Africa*, Routledge; Mogues, T., B. Yu, S. Fan and L. McBride (2012), "The impacts of public investment in and for agriculture. Synthesis of the existing evidence", Discussion Paper 01217, Development Strategy and Governance Division, International Food Policy Research Institute, Washington, DC.

³⁴ FAO, *The State of Food and Agriculture 2012: Investing in agriculture for a better future*; Maximo Torero and Shyamal Chowdhury. (2004). *Infrastructure for Africa: Overcoming Barriers to Development*. Policy Brief. Africa 2020 Conference, Kampala

³⁵ Foresight (2011), *The Future of Food and Farming: Final Project Report*. The Government Office for Science, London.

³⁶ World Bank (2010) *Africa Infrastructure Country Diagnostic Study*; OECD (2012) *Mapping Support for Africa's Infrastructure Investment*, <http://www.oecd.org/daf/inv/investment-policy/MappingReportWeb.pdf>

3.2.3 Human Resource Development

88. Recognising the importance of developing employable skills for and employment in LICs, the DWG tasked the OECD, World Bank, ILO and UNESCO to develop a set of international comparable indicators. The indicators and the resulting international database are meant to help developing countries better measuring skills and ensuring their education and training systems produce the relevant skills labour markets demand. This work has involved several developing countries and will be delivered by 2014. A final report on the database will be prepared by the OECD by mid to late December as planned and the OECD expects to release a preliminary version of the database at the same time. Further development of the database as well as providing support to Low Income Countries to develop their statistical capacity to inform their skills development policies will be contingent on obtaining the necessary funding.

89. The G20 training strategy to equip the workforce with the skills required for the jobs of today and those of tomorrow, put forward by the ILO (A Skilled Workforce for Strong, Sustainable and Balanced Growth: A G20 Training Strategy), provides a number of entry points for streamlining food security in the employment work. Many developing and emerging economies are experiencing a slowdown in structural transformation which depresses output growth in these countries. In some countries, the movement of workers from agriculture to higher value added activities is constrained, while agricultural productivity growth remains low. The slow structural transformation is manifested in the continuing high share of workers in agriculture.

90. It is important for governments to facilitate inter-sectoral mobility of workers and to use available capital and workers more efficiently.³⁷ On the one hand, investments in basic and vocational education are crucial to develop skills, which help promote a structural shift in the labour market into higher value added manufacturing and services. On the other hand, it is important to improve agricultural productivity, while also promoting the development of value chains that can provide wider job opportunities.³⁸ These efforts can be supported by effective implementation of international labour standards (ILS) and fundamental principles and rights at work.³⁹

91. Increasing efforts to promote youth employment, in accordance with the Call for Action on the Youth Employment Crisis agreed by the 2012 International Labour Conference is also central. In the rural areas context, FAO's Junior Farmer Field and Life School (JFFLS) approach is adapted to empower vulnerable youth, and provide them with the livelihood options and gender-specific skills needed for long-term food security while reducing their vulnerability to destitution and risk coping strategies.

92. In addition, the DWG has placed strong emphasis social protection and resilience, important complements of building and maintaining human capital. The Social Protection Floor (SPF) has been recognized by G20 Leaders (Cannes 2010, Los Cabos 2011 and Saint Petersburg 2013) as the leading social policy approach to address poverty and vulnerabilities while enhancing inclusive and sustainable growth. The Social Protection Inter-Agency Cooperation Board (SPIAC-B), established at the request of DWG in 2011 by ILO and the World Bank, involves international organizations and bilateral institutions working to enhance global coordination and advocacy on social protection issues. In addition to inter-agency joint work at

³⁷ ILO, *Global Employment Trends 2014: Risk of a Jobless recovery?* Geneva 2014, p. 28.

³⁸ ILO, "Decent Work for Food Security", Policy Brief on Decent Work in the Rural Economy, Geneva, 2013.

³⁹ These include *inter alia* Worst Forms of Child Labour Convention, 1999 (No. 182), Minimum Wage Fixing Machinery (Agriculture) Convention, 1951 (No. 99); Plantations Convention, 1958 (No. 110); Labour Inspection (Agriculture) Convention, 1969 (No. 129); Rural Workers' Organisations Convention, 1975 (No. 141), the Safety and Health in Agriculture Convention, 2001 (No. 184).

the country level, SPIAC-B focuses on the provision of social protection assessment tools and associated knowledge base, knowledge sharing and capacity building.

93. Although most social protection programmes focus on poverty, health, education and nutrition, in many countries the beneficiaries are agricultural producers. Especially in Sub Saharan Africa, the livelihoods of most beneficiaries derive predominantly from subsistence agriculture and income from rural labour markets, and will continue to do so for the foreseeable future. The exit path from poverty can come through formal or informal labour markets, as well as through self-employment income, whether that is generated within or outside agriculture.

94. Cash transfer programmes can influence the productive capacity of beneficiary households, in particular by helping households with limited access to financial services for investment and risk mitigation. The provision of regular and predictable cash transfers to poor households in the context of missing or malfunctioning markets has generated economic and productive impacts at the household and local levels.

95. Efforts to mainstream food security in the human resource development work of the G20 are underway. Since its first meeting in 2012, FAO participated in SPIAC-B, in close collaboration with ILO and the World Bank. FAO's programme 'From Protection to Production' explores the linkages and strengthening coordination between social protection, agriculture and rural development. It provides evidence on the direct impact of social protection on food security and nutrition, but also on the indirect benefits through increased investments in agricultural assets.⁴⁰ Social Protection Floors not only shield rural households from food insecurity and vulnerability, particularly in times of crises, but can also have an important multiplier effect in terms of enhanced human capital which improves access and stability to safe and nutritious food.⁴¹

96. G20 work on food security within the context of social protection will also benefit from the emerging role of FAO and the strengthening of collaboration with ILO. Within its new strategic objective framework, FAO will significantly step up its support to countries in forging greater policy coherence and synergies between social protection, food security, agricultural development and rural poverty reduction.

4. POSITIONING FOOD SECURITY IN THE G20 AGENDA

97. Food security was one of the nine pillars of the G20 Multiyear Action Plan on Development devised at the 2010 Seoul Summit. However, G20 initiatives having beneficial impacts on food security have come primarily through the agriculture workstream to date: notably the Action Plan on Food Price Volatility and establishment of the Agricultural Market Information System (AMIS). These responded to an urgent international concern - food price volatility - that was impacting negatively on all countries, including G20 members and that was amenable to coordinated international action. In contrast, other less well-targeted food security actions have had less impact.

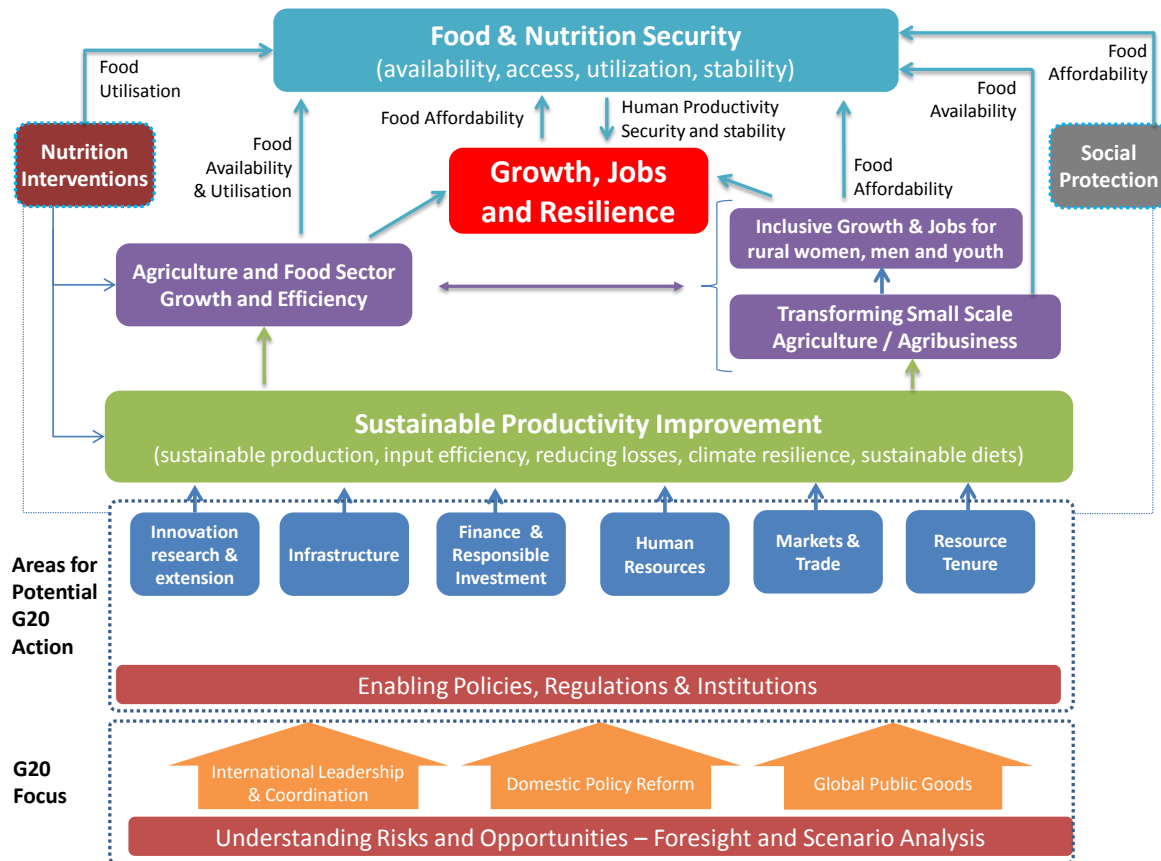
98. In terms of indirect effects coming through other pillars, the potential food security benefits of actions on other G20 agenda items such as financial inclusion, infrastructure investment or human resource development and vice versa, have not so far been exploited although the

⁴⁰ Nyasha Tirivayi, Marco Knowles and Benjamin Davis, "The interaction between social protection and agriculture: A review of evidence" FAO, Rome, 2013

⁴¹ ILO "Extending Social Protection to the Rural Economy", Policy Brief, Decent Work in the Rural Economy, Geneva, November 2013; ILO, Supporting rural development through social protection floors, Rural Policy Brief, Geneva, 2012.

analysis in sections 2 and 3 showed that exploiting these linkages could have significant impacts: actions under human resource development could include a focus on youth employment and hence food security in rural areas; support to infrastructure investment could include an element on infrastructure for linking smallholders to markets; in the opposite direction, effective support for nutrition can contribute to human resource development, productivity and growth. These linkages and possible entry points for G20 actions are summarised in Figure 2.

Figure 2⁴². Food security, growth and jobs – linkages and entry points for G20 actions



⁴² Figure 2 is adapted from a diagram kindly provided by Jim Woodhill, Principal Sector Specialist, Food Security and Rural Development, Department of Foreign Affairs and Trade, Canberra.

4.1 Why should the G20 be interested in food security?

99. Why should the G20 be interested in food security at all when it is clearly an issue that is not only outside the original G20 remit but is also an issue that attracts a great deal of attention from the UN system, the CFS, the HLTF, the World Bank and the OECD amongst others? The numbers speak for themselves. Between eight and nine hundred million people are currently unable to obtain sufficient nutritious food, while 162 million children under-five are stunted. Food production will need to increase by 60 percent to feed a world population that is expected to exceed nine billion by 2050.⁴³ How productivity and production are increased poses a challenge for global resource use, especially water, and global resource limitations will become increasingly binding with climate change. These are global problems that should concern an international grouping like the G20 as good global citizens.

100. However, G20 countries are also more directly influential on the state of the world's food security. They produce up to 80 percent of the world's cereals and account for a similar percentage of world exports. The G20 is therefore crucial to the state of global food security and can potentially play an important leadership role in this context. Moreover, many of the world's undernourished live in G20 countries.

101. The actions G20 countries take to address their own food security concerns are obviously important, while some measures, for example to improve agricultural productivity, may have spill-over benefits for other countries. What G20 countries produce, what stocks they keep and what they import and export have a global impact that falls most heavily on the most vulnerable. Their domestic agricultural and trade policies, their energy policies, and their financial regulations all have an impact. The G20 can therefore have a valuable policy coordination role, including beyond its own membership, by sharing its policy experiences that might contribute to helping all countries make effective and mutually beneficial policy choices. G20 countries not only impact on food security in poor countries through markets, they can also have a direct impact on local food production possibilities through their outward investment in developing country agriculture and land. G20 countries are also major providers of official development assistance, food assistance, and technical support to developing country agriculture and even here there can be advantage in internationally coordinated approaches.

4.2 What is the G20's comparative advantage?

102. The G20 needs to focus on areas where it has a comparative advantage and can bring some value-added to make a difference. There are therefore three fundamental interrelated questions. First, what is the G20 DWG's comparative advantage in an increasingly crowded food security space? Secondly, where and how can the G20 bring value added? This implies defining criteria for the selection of issues for the G20 to address. Finally, these two questions prompt a third, which is what kind of actions can the G20 take?

103. The G20 enjoys a number of sources of comparative advantage in what is a crowded food security field relative to other international groupings and initiatives. It obviously cannot compete with specialized food security agencies in technical depth but the nature and range of its remit embracing economic growth, employment, finance, trade and development gives it a uniquely broad perspective. Its broad membership, that includes emerging economies as well as the wealthiest developed countries across all continents, also brings a diversity of perspectives

⁴³ N. Alexandratos and J. Bruinsma (2012) World Agriculture Towards 2030/2050: The 2012 Revision. Working Paper No. 12-03, Agricultural Development Economics Division, FAO.

to its analysis of global issues and corresponding recommendations for action relevant beyond the G20 membership.

104. As a grouping of more than twenty of the largest economies, the G20 is a major driver of global growth whose economic performance spills over into the rest of the world and whose experience provides globally valuable policy and strategy lessons. That economic and political strength is also the basis for its wider economic and political leadership and influence beyond its immediate members. It gives the G20 great convening, coordinating and mobilizing power over other international actors, including the international organizations and international financial institutions. As the major player in global food security, the G20 can bring these same strengths to bear in this arena.

105. At the same time, the G20 has no institutional capability to act directly since it has no institutional, financial or human resources other than those allocated by each presidency and no permanent secretariat. Its scope for independent action is therefore quite circumscribed. In general, it has to work through other structures such as international organizations and multilateral development banks and any initiative or new public good that the G20 might propose has to be implemented through them. AMIS is one successful case in point; similarly, promoting policy coordination might be achieved through a request to the international organizations to monitor and review G20 members' policies.

4.3 What value-added can the G20 bring?

106. By exploiting its comparative advantage, the G20 can add value to efforts to improve food security in collaboration with its various partners. It can sponsor collective actions to provide global public goods through coordination of national policies and through newly created international mechanisms. It can exert political influence on international and national policy and can strengthen existing relevant initiatives through the weight of its support. It can motivate the exchange of knowledge and information.

107. Partnership with the international organizations is an important element of the G20's *modus operandi*. The G20 can call on the international organizations to support work on its priorities and can add to their agendas and work programmes. In the process of liaising with the international organizations the G20 can help improve their functioning and specifically promote cooperation and coordination between them. While these organizations have a responsibility to many more members than the G20, the G20 includes most major donor countries and thereby has a potentially significant influence.

4.4 How should the G20 act on food security?

108. Any proposed G20 actions should address a real and significant problem, should reflect the G20's comparative advantage as outlined above and should have a significant and measureable impact. However, as argued in this report they should also contribute to the broader G20 growth strategy. For G20 actions to have value-added, they should not duplicate existing provisions of other international efforts, for example by international organizations and, as noted above, food security is a crowded area. Nevertheless, just because others are acting in a certain sphere, this does not mean that the G20 cannot bring value added: the G20 may have comparative advantage in addressing the issue concerned and do it better or it may be able to broker greater coordination of existing efforts in such a way as to improve their overall impact.

109. The target audience for G20 actions in general, and DWG actions in particular, is wider than the G20 membership. The primary constituency is the G20 membership for adoption of

joint actions and for policy and strategy recommendations in areas of relevance to food security – agricultural FDI would be one such example since a majority of outward investors are in G20 countries. However, for food security the potential benefits of DWG actions spread beyond the G20.

110. The low-income countries are obviously important beneficiaries of actions on food security and while the need for G20 actions to have impact in these countries is an explicit objective of the food security review this does not imply a need for a separate low-income country focus. However, what it does imply is a need to consult widely over the review itself and to ensure more effective mechanisms for the dissemination of its recommendations if low-income countries are to gain maximum benefit. More effective outreach and dissemination mechanisms need to be developed as an integral component.

4.5 What should be the priority areas for G20 actions?

111. The essential theme of this report is the need for the G20 to target the linkages between food security and economic growth. This means smoothing the agricultural transformation, which is characterised by agricultural productivity increases, reductions in the relative price of food, shifts of labour out of agriculture, a diminishing role for the agricultural sector in the national economy, yet rising absolute production and improved food security. Other major transformations impacting on food security also need to be managed, including the development of global value chains and the dietary transformation which is seeing major changes in dietary patterns in favour of livestock products.

112. Smallholders and family farms play a central role in the agricultural transformation and need to benefit from G20 actions. Investment is also central not only for improving productivity in agricultural production itself but also in infrastructure, services, R&D and human capital. Transparent and efficient markets are a prerequisite. The need to increase agricultural productivity at a faster rate than agricultural population involves not only public investment in more focused R&D but also actions to promote investment in available technologies. This needs a conducive policy environment, risk reduction, access to markets and value chains and infrastructure investment, where public-private partnerships can play a role. Promotion of nutrition-sensitive agriculture that permits access to a nutritious diet can also impact positively on human capital and hence productivity.

113. Farm level investment needs access to appropriate finance and will be supported by financial inclusion, greater financial literacy and more efficient transfer of remittances. Private sector investments need to be inclusive and responsible and as described by the Principles for Responsible Agricultural Investment (PRAI) developed by FAO, IFAD, UNCTAD and the World Bank. Trade plays an important role in contributing to food security, although accompanying structural policies are necessary to harness the benefits of greater openness and mitigate the costs of reform.

114. It is important that the movement of labour out of agriculture is facilitated to ensure a smooth transition and goes into productive and decent employment and not low productivity, informal services. Efforts to promote rural development and better integration between rural and urban labour markets needs to be strengthened, human resource development promoted and skills enhanced especially for women and youth. The critical points for interventions are clearly not just directly on the various dimensions of food security. The major emphasis here is on investment-related measures to promote agricultural growth and hence economic growth more generally. However, the second track in the “twin-track approach” to improving food security should not be neglected. The G20 has promoted the use of effective, targeted safety net programmes to ensure the most vulnerable have access to adequate food also needs to be supported.

4.5 Recommendations for G20 actions impacting on food security and growth

115. In spite of this wide range of issues, there are relatively few recommendations to be made concerning the G20's engagement on food security. They are for a shift in the overall approach together with a limited number of effective actions at critical points that will have a continuing impact. Rather than new proposals, the latter in general involve adjustments or additional focus to existing actions across the G20 agenda to ensure that food security implications and the particularities of the rural sector are fully captured. More detailed explanation of the background to these recommendations was provided in Section 3.

116. *Regarding the G20 DWG's overall approach to food security, including mainstreaming food security in each of the priority areas:*

- G20 growth strategies need to recognise the important contribution to food security made by agricultural growth, the generation of wider employment opportunities in rural areas, and the integration of urban and rural areas. Those strategies also need to recognise the central role played by smallholders and small family farms;
- The DWG should broaden their food security focus and mainstream food security across its agenda; the priority areas for such mainstreaming should be infrastructure investment, human resource development and employment, financial inclusion and trade;
- Mainstreaming of food security needs to be informed by a detailed review of opportunities in each of these priority areas and detailed proposals on how to exploit them;
- In line with this broader strategic perspective, the findings of on-going and recent food security foresight studies such as those by the EU's Joint Research Council and FAO should be reviewed to identify strategic challenges and investment needs and guide future G20 engagement;
- To facilitate the linking of food security to its growth agenda, the G20 DWG should recognise the importance of social protection in supporting actions that contribute to medium-term agricultural growth and resilience;
- Implementation of successful G20 collective actions in the food security and agriculture areas, should be continued and strengthened through wider DWG ownership and engagement (see Annex);
- As agricultural productivity can trigger economic growth and decent job creation in the rural areas of developing and low income countries, strengthening the collaboration with G20 agricultural experts will significantly enhance the DWG's effectiveness on food security;
- The financial inclusion area of work should pay specific attention to rural finance and rural credit provision and the effective use of remittances as major sources of finance for farm investments with GPF and IFAD progressively collaborating to mainstream food security in this work area;
- The infrastructure investment area of work should pay specific attention to rural infrastructure to underpin productivity increases, improved market access, reduced food losses, economic growth and job creation with a clear request to the MDBs to provide technical support to relevant bodies in this area;
- Explicit attention should be given by the DWG to skills development and decent employment creation, through training, with a particular focus on women and youth for the agricultural and food sectors and to facilitate linkages and movement between rural and urban labour markets.
- The DWG work on social protection area should recognize the positive impacts on the productive capacity of beneficiary households and strengthen coordination between social protection, agriculture and rural development.

117. *Regarding specific actions to strengthen the two-way links between growth and food security and nutrition:*

- The G20 should sustain support for AMIS and the RRF, which has helped to enhance food market transparency and foster more coordinated policy responses to changes in conditions in agricultural markets;
- The effectiveness of the MACS should be enhanced by close collaboration with the CGIAR consortium, the GFAR and the GCARD;
- The DWG should review progress made to date regarding development of a “framework for analysis” of policies to improve productivity growth and sustainable resource use, including in particular the experiences to date of pilot countries, and the possible relevance of this approach to developing countries;
- In light of the proven effect of nutrition on opportunities for growth and employment, the G20 should reaffirm its support for the SUN initiative;
- Implementation of the PRAI should be reaffirmed to ensure inclusive and responsible agricultural investments and especially those foreign direct investments originating in G20 member countries;
- Efforts should be re-doubled to reinforce the multilateral agricultural trading system by pursuing multilateral reforms in the context of the post-Bali WTO agenda, and in the case of agriculture reducing trade-distorting domestic support, phasing out export subsidies and taxes in all forms, and improving the terms of market access.

ANNEX: G20 Food Security Initiatives

	Initiative	Origin	G20 Track	Implementation	Progress	Initiated	Duration/Completion
1	<p>Agricultural Market Information System and Rapid Response Forum</p> <p>The AMIS seeks to strengthen collaboration and dialogue among main producing, exporting and importing countries. It aims to enhance food market transparency and encourage coordination of policy action in response to market uncertainty.</p>	<p>Recommendation of InterAgency Report 2011</p> <p>Action Plan on Food Price Volatility and Agriculture 2011</p>	Agricultural Deputies	<p>FAO, OECD, World Bank, IFAD, IFPRI, WFP, WTO, UNCTAD, IGC (International Grains Council), the UN High Level Task Force (UN-HLTF), G20 Member States, Egypt, Kazakhstan, Philippines, Spain, Thailand, Ukraine Viet Nam</p>	<p>1st meeting of the Global Food Market Information Group (AMIS IG), 9-10 February 2012</p> <p>1st meeting of the Rapid Response Forum (RRF), 11 April 2012</p> <p>2nd meeting of AMIS IG, 2-4 October 2012</p> <p>2nd meeting RRF, 20, February 2013.</p> <p>3rd meeting AMIS IG, 23-24 April, 2013</p> <p>3rd meeting RRF, 6 March 2014.</p> <p>4th meeting AMIS IG, 1-2 October 2014</p>	2011	Continuing
2	<p>Global Agricultural Geo-monitoring Initiative (GEOGLAM)</p> <p>Strengthen capacity to produce and disseminate accurate forecasts of agricultural production. It will be achieved by three steps, including to create a monitoring system of systems based on both satellite and in situ observations.</p>	<p>Action Plan on Food Price Volatility and Agriculture 2011</p>	Agricultural Deputies	<p>Group on Earth Observations (GEO)</p>	<p>1st International Technical Meeting, Geneva, 22-23 September 2011;</p> <p>Presentation at GEO VIII Plenary, November 2011</p> <p>Developed Asian rice monitoring system by JAXA, 2012</p> <p>“GEOGLAM Crop Monitor” has been inserted into “AMIS Crop Monitor”, September 2013.</p>	2011	Continuing

	Initiative	Origin	G20 Track	Implementation	Progress	Initiated	Duration/ Completion
3	<p>Code of Conduct for Emergency Humanitarian Food Reserves</p> <p>Food emergency reserves are put in place in order to respond to food security problems, rather than to try to affect prices in the market. The Code of Conduct will be developed by an inclusive process in the form of a workshop with the participation of International Organizations, the Civil Society, the private sector and other stakeholders.</p>	<p>Recommendation of InterAgency Report 2011</p> <p>Action Plan on Food Price Volatility and Agriculture 2011</p>	Development Working Group	WFP, FAO IFPRI	<p>Analysis has been completed; a number of reports on food reserves, and their role in situations of food price spikes have been finalized / reviewed to provide the base of evidence for the participatory workshop;</p> <p>Currently, FAO, WFP and the World Bank discuss dates and participants</p>	2012	2013
4	<p>ECOWAS Emergency Humanitarian Food Reserves</p> <p>Develop a regional system of small, strategically positioned emergency humanitarian food reserves</p>	Action Plan on Food Price Volatility and Agriculture 2011	Development Working Group	ECOWAS (with WFP support)	ECOWAS Ministers decided to adopt the establishment of the Regional Food Security on 27 September 2012	To be initiated	Continuing
5	<p>Removal of Export Restrictions on Food Purchases for Non-commercial Humanitarian Purposes by the World Food Programme (WFP)</p> <p>Remove export restrictions on, or extraordinary taxes for food purchased for non-commercial humanitarian purposes by the World Food Program</p>	<p>Recommendation of InterAgency Report 2011</p> <p>Action Plan on Food Price Volatility and Agriculture 2011</p>	<p>Agricultural Deputies</p> <p>Development Working Group</p>	G20	Discussions on this issue continue in the WTO	2011	

	Initiative	Origin	G20 Track	Implementation	Progress	Initiated	Duration/Completion
	<p>Global Agriculture and Food Security Program</p> <p>Aims to improve incomes and food security of poor people in low-income countries by supporting country-led efforts to invest in sustainable agriculture and food systems.</p>	G20 Pittsburg Summit 2009		World Bank, IFAD, African Development Bank, Asian Development Bank, Inter-American Development Bank, FAO, WFP, IFC.	<p>GAFSP has allocated \$912 million to 25 countries.</p> <p>Supported by Australia, Canada, Ireland, Japan, Korea, Netherlands, Spain, United Kingdom, United States, and the Gates Foundation</p>	2010	Continuing
6	<p>AgResults</p> <p>Promote agricultural research and development and bridge the gap between public and private investment in the agriculture sector in support of improved agricultural productivity and global food security.</p> <p>Pilot project focuses on maize production in Sub Saharan Africa (farm storage technology; reduction of aflatoxin contamination)</p>	Development Working Group 2010	Development Working Group	World Bank, CGIAR, GFAR, FAO	<p>Launched in Los Cabos in June 2012 with the fund of USD 100 million managed by the World Bank;</p> <p>Supported by Australia, Canada, UK, US and the Gates Foundation</p>	2012	Continuing
7	<p>Tropical Agricultural Platform</p> <p>Enhance capacity development and knowledge sharing in tropical agricultural innovation to improve production and productivity with a particular focus on smallholders</p>	Action Plan on Food Price Volatility and Agriculture 2011	<p>Agricultural Deputies</p> <p>Development Working Group</p>	FAO, IFAD, GFAR, World Bank	<p>Launched in the 1st Meeting of Agricultural Chief Scientists 24-27 September 2012;</p> <p>The Terms of Reference and the implementation framework will be discussed in the GCARD</p>	2012	Continuing
8	<p>Meeting of Chief Agricultural Scientists (MACS)</p> <p>Identifying global research priorities and targets, facilitating collaboration between public and</p>	Recommendation of InterAgency Report 2012 US proposal Agriculture Vice Ministers /	Agricultural Deputies	G20, CGIAR, GFAR, FAO, IFAD	<p>1st MACS 24-27 September 2012</p> <p>Draft MACS Terms of Reference will be presented to G-20 Sherpas for consideration</p>	2012	Continuing on annual basis

	private sector organizations in the key areas, most likely to drive sustainable productivity gains, and tracking progress on established goals over time	Deputies Meeting Report 2012			2 nd MACS 24-25 July 2013 MACS Terms of Reference endorsed		
	Initiative	Origin	G20 Track	Implementation	Progress	Initiated	Duration/Completion
9	International Research Initiative for Wheat Improvement (IRIWI) Reinforce cooperation and coordination between national and international bread and durum wheat research programmes	Action Plan on Food Price Volatility and Agriculture 2011	Agricultural Deputies	Biotechnology and Biological Sciences Research Council (BBSRC), INRA and CIMMYT	-	2011	Continuing
10	Platform for Agricultural Risk Management (PARM) Promote the integration of agricultural risk management into the agricultural policies and programmes of developing countries, providing brokering services between potential users and providers of expertise and solutions for risk management and facilitating co-ordination among practitioners in this field	Action Plan on Food Price Volatility and Agriculture 2011	Agricultural Deputies Development Working Group	Agence Française du Développement (AFD), IFAD (leading). Other IOs and G20 bilateral donors have declared interest in joining	AFD and IFAD have spearheaded the finalization of a concept note for PARM; Subject to successful fund-raising, the Platform will commence operations in early 2013, operating out of IFAD	2013	Continuing
11	International consultations on public-private partnership models Assess the potential of various PPPs to increase foreign direct investment in developing country agriculture and, promote and scale-up appropriate partnership models in developing countries' agriculture	Recommendation of InterAgency Report 2012 Agriculture Vice Ministers / Deputies Meeting Report 2012	Agricultural Deputies	FAO, IFAD, B20 New Vision for Agriculture, CFS		not initiated	

	Initiative	Origin	G20 Track	Implementation	Progress	Initiated	Duration/Completion
12	Improving Efficiency of Water Use Provide a report on science based and policy based options to improve the efficiency of water use in agriculture	Agriculture Vice Ministers / Deputies Meeting Report 2012	Agricultural Deputies	FAO, OECD, IFPRI, IFAD, IFPRI, IICA, WFP, World Bank	-	Initiated in 2013	2013
13	Identify Best Practices to Increase Agricultural Productivity Growth Sustainably Consistent framework for on-going analysis of current national approaches and policy practices to increase sustainable agricultural productivity growth	Recommendation of InterAgency Report 2012 Agriculture Vice Ministers / Deputies Meeting Report 2012	Agricultural Deputies	OECD	OECD pilots a process of analysis and peer review to identify best policy options	2012	Continuing
14	Multilateral Development Bank Action Plan for agriculture, food security and nutrition	Action Plan on Food Price Volatility and Agriculture 2011	Development Working Group	AfDB, AsDB, EBRD, IADB, IsDB and World Bank	Status report to be delivered	2011	
15	Support the Agreement to scale up nutrition	Agriculture Vice Ministers / Deputies Meeting	Development Working	UNHLTF, G20		2011	

		Report 2012	Group		-		
	Initiative	Origin	G20 Track	Implementation	Progress	Initiated	Duration/ Completion
16	Support the Principles for Responsible Agricultural Investment Field testing and operationalization	Multi-Year Action Plan on Development 2010	Development Working Group	FAO, IFAD, World Bank, UNCTAD, G20	Consultation process in UN.	2011	Continuing
17	Coalition for African Rice Development (CARD)	Originally initiated at TICAD IV in 2008. It was referred in Ministerial Declaration in 2011, as the body to accelerate production and productivity growth in rice producing countries in Africa	Development Working Group	AGARA, Africa Rice, AFDB, FARA,FAO, IFAD IRRI, JICA, JIRCAS, NEPAD World Bank	National Rice Development Strategy (NRDS) were developed in most of partner countries (23 countries)	2008	2018