



BACKGROUND PAPER

Nutrition Beyond Agriculture: Investing in Africa's Grey Matter.

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EXECUTIVE SUMMARY

The future belongs to Africa's youth – the continent's biggest asset. Demographically, the continent's youth offers an opportunity for dynamic economic and social growth as long as appropriate investments in human capital are made and skills are fully developed. Many African countries are now positioned to reap the same demographic dividend that benefitted East Asian economies between 1965 and 1990. The cognitive and physical strength of Africa's youth will determine its growth trajectory in the future. However, this is likely to be severely compromised by the prevalence of malnutrition in African children. On-going investments in physical infrastructure without matching investments in human capital i.e. "grey matter" infrastructure will not be sufficient to guarantee sustainable development.

Malnutrition continues to be one of the main barriers that prevent children and societies from realizing their full potential. There is a significant economic cost to individuals and countries affected by malnutrition. Children who are malnourished go on to earn 20% less as adults than the children who are well nourished. This is partly as a result of its impacts on educational development – as well as on physical productivity and health. Estimates suggest that in low- and middle-income countries, the impact of malnutrition decreases GDP by as much as 16%.

There is a fixed and critical window to address malnutrition. Malnutrition in the first 1,000 days – from the start of a woman's pregnancy until her child's second birthday – has a devastating impact on children's future potential. The effects of malnutrition on physical stature, the ability to do physical work, and on cognitive development, lock children into poverty and entrench inequalities.

The multiple benefits from nutrition for development are substantial and nutrition can supercharge the demographic dividend adding 1%-3% to economic growth rates. We know what needs to be done. Investing now in a package of proven nutrition specific and sensitive interventions will ensure good nutrition and develop human capital which is a critical factor in the pursuit of economic development.

Efforts designed to reduce hunger, malnutrition and vulnerability continue, both at continental and global. However, a number of challenges have been encountered principally at policy, implementation and structural (i.e. governance) levels. There are lessons and best practices from some countries including Ethiopia, Rwanda, Democratic Republic of the Congo, United Republic of Tanzania, and Niger that offer solutions and what is now lacking is the technical ability and political will to replicate these insights and take them to scale.

We have a historic opportunity to tackle malnutrition. A package of 13 proven direct nutrition interventions can reduce the prevalence of stunting by a third, and child mortality by a quarter. Acceleration of progress in nutrition will require large-scale nutrition-sensitive programmes that address key underlying determinants of nutrition and enhance the coverage and effectiveness of nutrition-specific interventions. With malnutrition identified as both a cause and a driver of poverty – locking whole communities into a cycle of deprivation and entrenching inequalities across generations, investing in a proven set of nutrition specific and sensitive interventions delivers the additional dividend of breaking this generational cycle, unlocking potential and boosting prosperity.

Given the devastating human and economic impacts of malnutrition, many economists have consistently concluded that investing in nutrition is an excellent way to spur inclusive economic growth and is ‘central to development’. This message has been heard and echoed by other initiatives and channels, including the UN Secretary-General’s Zero Hunger Challenge, the 1,000 Days Initiative and the Copenhagen Consensus 2012 Expert Panel’s findings that malnutrition should be the top priority for policy makers and philanthropists. For example, the Copenhagen Consensus of Nobel Laureates rated nutrition interventions as four of the eight most cost-effective interventions available in development. Nutrition interventions are cost-effective, in particular in reducing the burden on associated diseases on health services. Cost-benefit ratios for nutrition interventions have been found as high as 1:138. Yet, despite its crucial importance and the growing consensus that this is one of the ‘best buys’ in development, the issue remains chronically underfunded.

The 2014 Annual Development Effectiveness Review presents the contribution of the African Development Bank (AfDB) to Africa’s development. Based on an operating portfolio of \$33billion, it is clear that:

- i. **AfDB spends most of its money on infrastructure** (including water and sanitation) with current investments of over \$21billion representing 63.6% of its budget
- ii. **Agriculture and food security accounts for 12% of AfDB’s spend** with a significant proportion of this, estimated to be 80%, on *rural infrastructure*, including irrigation, water storage, energy connections and feeder roads; and complementary efforts aimed at promotion of more sophisticated value chains by linking farmers to agri-businesses
- iii. **Promoting gender equality is a key priority** with the overarching aim of empowering African women to play a stronger role in government, society and the economy as a winning strategy for promoting inclusive growth
- iv. **Private sector development** i.e. promoting jobs and livelihood opportunities in the private sector is regarded as the most direct way of reducing poverty.

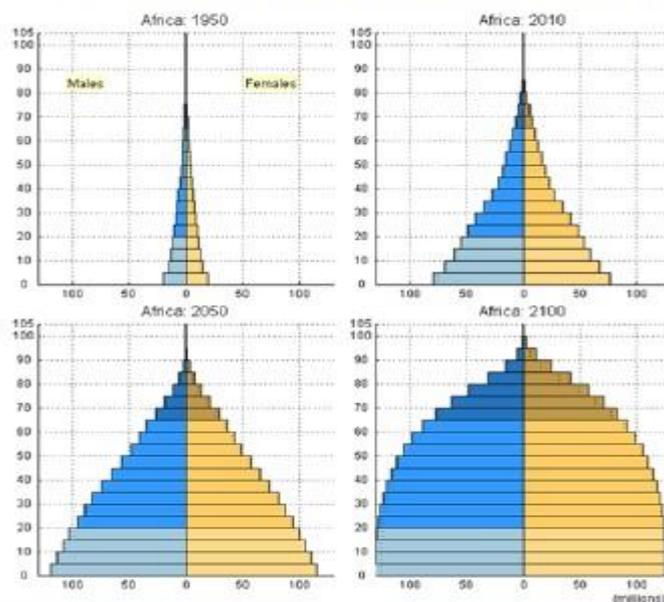
The African Development Bank, governments in countries with a high burden of malnutrition and donors should seize this historic opportunity and make the commitments needed to tackle malnutrition. Principally, they should:

1. Put nutrition at the centre of sustainable economic development.
2. Review the current approach to investments in infrastructure.
3. Enhance nutrition-sensitivity of agriculture initiatives so that food-based approaches can contribute more to improving nutritional status.
4. Express full support for existing continental and global initiatives e.g. Malabo Declaration, Scaling Up Nutrition (SUN), Comprehensive Africa Agriculture Development Programme (CAADP), etc.
5. Focus on working with the private sector to improve access to nutritious food by the poor and the most vulnerable segments of the population.
6. Work harder to unleash the entrepreneurial talent currently locked up in gender discrimination.

BACKGROUND

- 1. Africa is experiencing profound shifts, with repercussions for building human capital.** With 1 billion people in Africa today and 2.3 billion – mostly youth – projected for 2050, the continent’s greatest asset in the coming decade will be its capacity to harness this rapidly increasing reservoir of human capital.¹ Demographically, the continent’s youth bulge offers an opportunity for dynamic economic and social growth so long as appropriate investments in human capital are made and skills are fully utilized (figure 1). Human capital, and not financial capital, is the foundation of economic development.

Figure 1. A strikingly large youth bulge in Africa



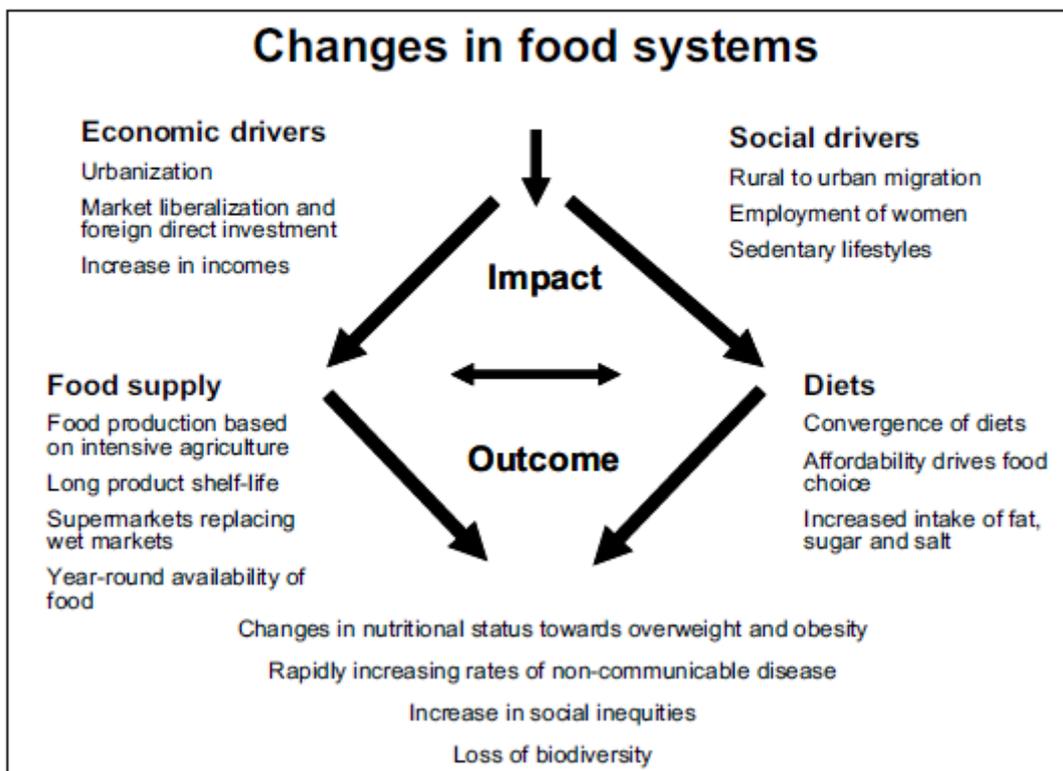
Source: UN DESA 2011.

- 2. Africa’s economic growth has been remarkably resilient despite an uncertain global economy.** Out of 54 countries, 24 more than doubled their per capita income over 1990 – 2010, with the past decade of robust growth contributing to poverty reduction. Economically, African countries have grown an annual 5% on average over the past decade and six of the world’s fastest growing economies are in Africa.² While this growth has been recorded despite some of the highest rates of child undernutrition in the world, the continent is still short of its full potential. The promise of Africa as an economic powerhouse will remain just that if nutrition is not more seriously addressed. The “*Africa of Tomorrow*” depends on action and investment in nutrition today to prevent the next generation of African children from a future of stunted growth and potential.
- 3. Many African countries are now positioned to reap the demographic dividend that benefitted East Asian economies between 1965 and 1990.** By 2050, it is estimated that the continent’s population would have doubled in size.³ Despite gains being made in agricultural and food system initiatives, Africa still faces a huge challenge with malnutrition. Investments in modern infrastructure without investing in “*grey matter infrastructure*”¹ will not be sufficient to guarantee sustainable development. The cognitive and physical abilities of Africa’s youth will be key determinants of its growth trajectory in the future but this is likely to be severely compromised by the prevalence of malnutrition in African children. Nutrition, as well as early childhood education, health, secondary and

higher education, skills and employment opportunities provide the scaffolding for building “grey matter infrastructure” which is a long-term investment with big-offs but is unfortunately not sufficiently prioritized by governments.

4. **Africa is urbanizing rapidly, both constraining and providing opportunities for nutrition and food security.** By 2025, more than half of Africa’s population will be urban, and over the next quarter century, the urban population will be growing almost twice as fast as the general population, rising by more than half a billion from that in 1990.⁴ Growing urbanization across the continent, therefore, has important “push” and “pull” implications for nutrition and food security. Rapid urbanization asserts “push” factors on food production by competing for resources required for agricultural production e.g. human capital, fertile land, water and energy. Conversely, the “pull-side” implications of urbanization are associated with higher earnings and access to greater disposable income available for food. The impact of higher income and urbanization has contributed to significant shifts in global food demand patterns, as well as dramatic changes in food supply chains worldwide.

FIGURE 1
Changes in food systems



⁴ Defined as investment in human capital development in Keynote Opening Address Delivered by Dr. Akinwumi Adesina, Honourable Minister of Agriculture of Nigeria at the Africa Green Revolution Forum, September 2, 2014, Africa Union, Addis Ababa, Ethiopia.

5. **The multiple burdens of malnutrition pose a direct threat to the aspirations of the next generation.** Although some countries have made recent gains, malnutrition in its various forms remains widely present globally and the number of people affected stays stubbornly high. For example, more than 2 billion people suffer a serious lack of vitamins and minerals and more than 200 million children are stunted or wasted.⁵ At the same time, 1.4 billion people are now overweight or obese, including in low- and middle-income countries. One million children a year die directly from severe acute malnutrition and undernutrition is the underlying cause of half of child deaths.

6. **Malnutrition continues to be one of the main barriers that prevent children and societies from realising their full potential.** In sub-Saharan Africa, 38% of children have had their growth stunted by malnutrition – and their potential severely damaged. Save the Children’s 2013 *Food for Thought* report, which focused on unlocking children’s potential and boosting national prosperity through improving nutrition, highlighted the cognitive development impacts of undernutrition in the first 1,000 days of a child’s life. For example, compared with non-stunted children, stunted children score 7% lower on maths tests, are 19% less likely to be able to read and 12% less likely to be able to write a simple sentence, and are 13% less likely to be in the appropriate grade for their age at school.⁶

7. **There is a significant economic cost to individuals and countries affected by malnutrition.** Children who are malnourished go on to earn 20% less as adults than the children who are well nourished.⁷ This is partly as a result of its impacts on educational development – as well as on physical productivity and health.⁸ Estimates suggest that in low- and middle-income countries, the impact of malnutrition decreases GDP by as much as 16%. This is corroborated by The Cost of Hunger assessment⁹ conducted by the African Union, the World Food Programme, and the UN Economic Commission for Africa.

TABLE I THE COST OF MALNUTRITION TO NATIONAL ECONOMIES (IN LOCAL CURRENCY, US\$, AND AS PERCENTAGE OF GDP)

| Country | Losses due to malnutrition (local currency) | Losses due to malnutrition (US\$) | Equivalent % of GDP |
|-----------|---------------------------------------------|-----------------------------------|---------------------|
| Egypt | EGP 20.3 billion | \$3.7 billion | 1.9 |
| Ethiopia | ETB 55.5 billion | \$4.7 billion | 16.5 |
| Swaziland | SZL 783 million | \$76 million | 3.1 |
| Uganda | UGX 1.8 trillion | \$899 million | 5.6 |

Source: Individual cost of hunger assessment reports for Egypt, Ethiopia, Swaziland and Uganda; published by the individual governments in conjunction with UNECA, ADB, AFC, WFP and others. Sept 2013

8. **There is a fixed and critical window to address malnutrition.** Malnutrition in the first 1,000 days – from the start of a woman’s pregnancy until her child’s second birthday – has a devastating impact on children’s future potential. The effects of malnutrition on physical stature, the ability to do physical work, and on cognitive development, can lock children into poverty and entrench inequalities. In developing countries, children born to the poorest 40% of families are 2.8 times more likely to be malnourished than those in the richest 10% - and are likely to go on to earn less than their better-off and better-nourished peers.¹⁰

- 9. The multiple benefits from nutrition for development are substantial and nutrition can supercharge the demographic dividend adding 1%-3% to economic growth rates.**¹¹ We know what needs to be done. Investing now in a package of proven nutrition specific and sensitive interventions will ensure good nutrition and develop human capital which is a critical factor in the pursuit of economic development.
- 10. We have a historic opportunity to tackle malnutrition.** Efforts designed to reduce hunger, malnutrition and vulnerability continue, both at continental and global. In 2014, the African Union Heads of State and Government adopted the *Malabo Declaration on Accelerated Agriculture Growth and Transformation for Shared Prosperity and Improved Livelihoods*¹² which includes a specific commitment to ending Hunger in Africa by 2025 with specific targets to improve nutritional status, and in particular, the elimination of child under-nutrition in Africa with a view to reducing stunting and underweight prevalence to 10% and 5% respectively by 2025. Other notable efforts at the continental level include initiatives and strategies such as the *Alliance for a Green Revolution in Africa (AGRA)*,¹³ *African Regional Nutrition Strategy*,¹⁴ the *Comprehensive Africa Agriculture Development Programme (CAADP)*, especially CAADP Pillar III, which focuses on reducing hunger and improving food and nutrition security,¹⁵ the *Pan African Nutrition Initiative (PANI)*,¹⁶ *Framework for African Food Security (FAFS)*,¹⁷ *Africa Ten Year Strategy for the Reduction of Vitamin and Mineral Deficiencies (ATYS-VMD)*¹⁸ and *African Day for Food and Nutrition Security (ADFNS)*.¹⁹ At the global level, initiatives include *Scaling Up Nutrition (SUN)*,²⁰ *Renewed Efforts Against Child Hunger and Undernutrition (REACH)*,²¹ *Purchase for Progress (P4P)*,²² *Feed the Future (FTF)*,²³ the *1,000 Days Partnership*,²⁴ *Abuja Food Security Summit of 2006*,²⁵ *WHO Nutrition-friendly Schools Initiative (NFSI)*,²⁶ as well as *Nutrition for Growth (N4G)*,²⁷
- 11. Nutrition is not synonymous with food security and hunger.** Rapid economic growth and increased agricultural productivity over the past two decades has seen the proportion of undernourished people drop by almost half. Whilst this is a significant achievement, extreme hunger and malnutrition remain a huge barrier to development in many countries. 795 million people are estimated to be chronically undernourished as of 2014 and over 90 million children under the age of five are dangerously underweight. And one person in every four still goes hungry in Africa. “*Zero Hunger: End hunger, achieve food security and improved nutrition and promote sustainable agriculture*” is the second of the 17 Global Goals that make up the 2030 Agenda for Sustainable Development and specifically aims to end all forms of hunger and malnutrition by 2030, making sure all people – especially children and the more vulnerable – have access to sufficient (*quantity*) and nutritious (*quality*) food all year round.²⁸
- 12. We define food systems as the production, marketing, transformation and purchase of food, and the consumer practices, resources and institutions involved in these processes.** The elements of such systems have been evolving rapidly over the past few decades as storage, processing and marketing technologies have transformed basic agricultural commodities into a greater variety of more processed food and non- food products aimed at specific markets and consumers. Along with innovations in production and food transformation, trade patterns have shifted as supply chains have spread around the world, increasing the stability and affordability of food for many, while integrating many more consumers into complex value chain-driven markets. This continuing transformation of food systems has arguably had both positive and negative impacts on

consumer choice and resulting nutrition everywhere. The expanded range of choices challenges consumers to make informed selections of foods that not only respond to taste and convenience preferences and budget constraints, but also provide required levels of nutrition.

- 13. To ensure that national agriculture and food policies support optimal nutrition outcomes,** governments must look beyond the provision of incentives for the production of staple crops towards governance of a complex, market-driven system that, while rooted in local markets, must recognise the interests of the private sector and a variety of consumer preferences which are becoming increasingly urban-based. Policies that shape national food systems must also take into account the trade environment, the potential for development of an agribusiness industry to add value and employment locally, governance of the wholesale/retail segments of the value chain, and the overall affordability of food to key groups of consumers, including the most nutritionally vulnerable.

CHALLENGES

- 14. Policy makers and donors must pay greater attention to nutrition and food security to deliver better outcomes for African children and countries.** More recently, a number of recent initiatives have been launched to address child malnutrition and undernutrition, including the Scaling Up Nutrition (SUN) Movement, the Thousand Days Initiative, The New Alliance for Food Security and Nutrition, and the Nutrition for Growth, which agreed some bold targets to improve nutrition among children and pregnant women by 2020, with funding commitments of \$23.1 billion. The African Union (AU) declared 2014 as the Year of Agriculture and Food Security; this, together with the Joint annual reviews of CAADP (the Comprehensive Africa Agriculture Development Programme) and the Nutrition for Growth Event during the 2016 Rio Olympics present important opportunities to secure significant policy and financial commitments to ensure that agriculture supports and delivers child nutrition goals. In Ghana, which has achieved the fastest decline in child stunting in sub-Saharan Africa in the past 5 years (from 35% in 2003, to 28% in 2008,²⁹ a rate of 1.5 percentage points per year), the agenda was one of investment in agriculture as a driver of economic growth and poverty reduction, together with feeding initiatives for infants and young children, all in a context of a stable political environment.³⁰
- 15. The debilitating impacts of malnutrition on economic and agricultural development have been proven and yet have not triggered much action on the continent beyond a few countries.** This point is driven home in a recent study by the African Union, the World Food Programme, and the UN Economic Commission for Africa called *The Cost of Hunger in Africa*. The study looked at four countries – Egypt, Ethiopia, Swaziland and Uganda – and found that 52% of the working population in these countries is stunted. The distribution and cost of productivity losses in three African countries have been estimated and outlined in productivity terms. They represent a significant drain on GDP, of 3.9%, 16%, and 2.9% respectively for Uganda, Ethiopia and Swaziland (see Table 1).³¹ The impacts of stunting on physical strength is critical to agriculture manual labour considering that stunting rates are, in most cases, higher in rural than urban areas. Survey evidence from Guatemala suggests that physical strength is undermined, while susceptibility to disease is increased by undernutrition. Given that all three countries have a considerable proportion of their populations working in agriculture, the loss of productivity is significant. For example, 88% of Uganda's population is engaged in agriculture.³²

TABLE 2 COST OF HUNGER STATISTICS FOR THREE SUB-SAHARAN AFRICAN COUNTRIES

| Country | Economic loss – non-manual (US\$) | Economic cost of working hours lost (US\$) | Lower productivity in manual activities (US\$) | Total cost (US\$) | % of GDP |
|-----------|-----------------------------------|--------------------------------------------|------------------------------------------------|-------------------|----------|
| Uganda | 94,055,459 | 256,185,869 | 163,453,861 | 513,695,189 | 3.9 |
| Ethiopia | 33,066,125 | 2,120,041,218 | 680,209,871 | 2,833,317,213 | 16.0 |
| Swaziland | 25,894,415 | 12,998,790 | 35,076,100 | 73,969,305 | 2.9 |

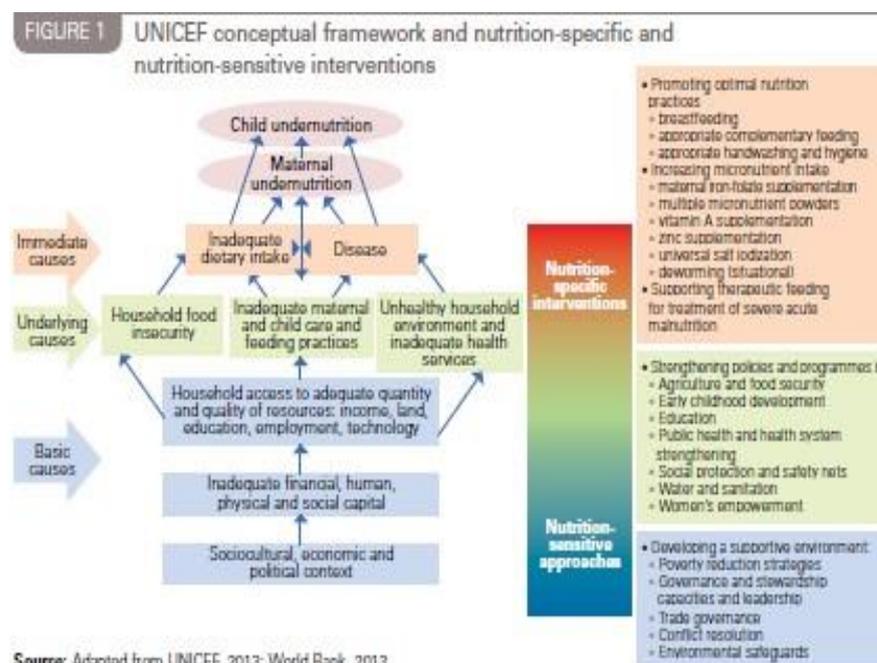
Sources: *Cost of Hunger* reports for Ethiopia, Swaziland and Uganda, Sept 2013

- 16. Policy makers and programme developers must recognize the importance of nutrition for cognitive and educational development, and ensure that schools are utilised as platforms for linking nutrition and education.** Schools are at the centre of communities across the continent and offer a far-reaching platform for concerted interventions that can address both underlying and immediate causes of malnutrition. This is the basis for the joint UNESCO/UNICEF/WFP *Nourishing Minds, Nourishing Bodies* integrated approach launched in 2013 in four countries, including Mozambique and Niger. School meal programmes are proven to encourage access to education for girls and boys, as well as improving pass rates and retention – critical to develop the human capital and capacities of the growing youth population. The meals provided are designed to ensure essential caloric and micronutrient intake, and provide a platform to directly address child health through large-scale deworming schemes, behavioural change communication on sanitation and hygiene, and education on feeding practices and family planning. When linked with local producers, school meal programmes offer a sustainable market, and accordingly a catalyst for further agricultural investment and diversification. The recognition of the linkages between education, nutrition and agricultural growth have been recognised by national governments and form the basis of recent discussions on the post-MDG agenda and of recent initiatives (including a joint declaration by West African Ministers of Education signed in 2014 to promote and invest in nationally owned sustainable home-grown school meal programmes as a tool for integrated resilience- building.
- 17. The potential for food systems to be nutrition sensitive, and address the debilitating and long-lasting effects of child malnutrition deserves attention.** Including appropriate nutrition objectives in agriculture policies and investment plans is the best way to ensure that these plans succeed in promoting agricultural growth and nutrition. The use of appropriate indicators (such as stunting rates) will enable all stakeholders to track progress and make any necessary changes. If agriculture is to provide the level of dietary diversity needed to contribute to reducing child stunting, producers need access to research and innovation on a wider, more diverse range of crops, tree species and protein options that can also be economically viable. Companies with large supply chains can play a crucial role by including smallholder farmers in the value chain, and by shaping the market in ways that promote accessible and affordable nutritious foods throughout a country, particularly in countries that have the highest stunting and malnutrition rates. Promoting nutrition-sensitive agriculture presents an opportunity to review how agricultural extension services are functioning; as frontline extension workers could play an important role in delivering coordinated, complementary messages, not just on agricultural productivity, but on dietary diversity, food hygiene, and the benefits of different foods. Given the key role of women in the pathway to improved child nutrition, nutrition-sensitive approaches should be

gender-sensitive and promote women's empowerment.

OPPORTUNITIES

18. Scaling up of proven nutrition-specific and nutrition-sensitive interventions can make a difference. ³³ A package of 13 proven direct nutrition interventions can reduce the prevalence of stunting by a third, and child mortality by a quarter. Investments in nutrition-sensitive approaches, such as child-focused social protection systems or empowering women farmers to increase the nutrition-sensitivity of agriculture, can have even greater effects on tackling nutrition. ³⁴ Nutrition interventions, along with key educational, health and care services, can help children's brains to develop and help them to learn and to earn for the rest of their lives, and can yield gains that benefit the wider society and economy. There is strong evidence that points to the benefits of nutrition interventions for children's cognitive development. ³⁵ Research into the impact of a variety of nutrition interventions, from a range of developing countries, has found a positive impact on educational indicators, such as grades completed at school, ³⁶ maths and English scores, ³⁷ and intelligence quotient (IQ). ³⁸ With malnutrition identified as both a cause and a driver of poverty – locking whole communities into a cycle of deprivation and entrenching inequalities across generations, investing in a proven set of nutrition interventions delivers the additional dividend of breaking this generational cycle, unlocking potential and boosting prosperity.



19. Acceleration of progress in nutrition will require effective, large-scale nutrition-sensitive programmes that address key underlying determinants of food systems and nutrition and enhance the coverage and effectiveness of nutrition-specific interventions. Nutrition-sensitive programmes draw on complementary sectors such as agriculture, health, social protection, early child development, education, and water and sanitation to affect the underlying determinants of nutrition, including poverty; food insecurity; scarcity of access to adequate care resources; and to health, water, and sanitation services. ³⁹ To ensure that national agriculture and food policies support optimal nutrition

outcomes, governments must take into account evidence-based options across the four food systems domains: *agricultural production, markets and trade systems, consumer purchasing power, and food transformation and consumer demand*. Key features that make programmes in these sectors potentially nutrition-sensitive are: they address crucial underlying determinants of nutrition; they are often implemented at large scale and can be effective at reaching poor populations⁴⁰ who have high malnutrition rates; and they can be leveraged to serve as delivery platforms for nutrition-specific interventions.

20. Harvesting nutrition. Recently, attention has increasingly been paid to improving synergies and linkages between agriculture and nutrition and health, in both the programmatic and the research communities.⁴¹ The global agricultural system is currently producing enough food to feed the world, but access to adequate, affordable, nutritious food is more challenging because of the greater emphasis on staples. Of the 10,000 crop varieties that have been used for human consumption,⁴² only 150 are regularly cultivated by large-scale agriculture, and only three (maize, wheat, and rice) supply the bulk of global protein and energy needs.⁴³ Improving dietary diversity by increasing production of nutritious foods is achievable, particularly in rural populations. It is done by producing nutrition-dense foods, such as fruits and vegetables, fish, livestock, milk and eggs; increasing the nutritional content of foods through crop biofortification and post-harvest fortification; improving storage and preservation of food to cover ‘lean’ seasons; and educating people about nutrition and diet. In several settings, these types of interventions have been shown to improve dietary patterns and intake of specific micronutrients, either directly or by increasing household income. However, the evidence base is more limited in showing impact on nutrition outcome indicators (stunting, wasting, and anaemia).

21. Utilising social protection approaches. Social protection involves policies and programmes that protect people against vulnerability, mitigate the impacts of shocks, improve resilience and support people whose livelihoods are at risk. Safety nets are a type of social protection that provides or substitutes for income: Targeted cash transfers and food access-based approaches are the two main categories of safety nets intended to avert starvation and reduce undernutrition among the most vulnerable populations. Although many transfer programmes reach only a small share of the vulnerable population, some have extensive coverage, such as Ethiopia’s Productivity Safety Net Programme, which reaches 10% of the country’s population.⁴⁴ While social safety net programmes operate in at least a dozen countries, evidence indicating that these programmes have improved child nutritional status is still limited.⁴⁵

SUGGESTED ACTIONS / THE WAY FORWARD

22. Given the devastating human and economic impacts of malnutrition, many economists have consistently concluded that investing in nutrition is an excellent way to spur inclusive economic growth and is ‘central to development’.⁴⁶ This message has been heard and echoed by other initiatives and channels, including the UN Secretary-General’s Zero Hunger Challenge, the 1,000 Days Initiative and the Copenhagen Consensus 2012 Expert Panel’s findings that malnutrition should be the top priority for policy makers and philanthropists. For example, the Copenhagen Consensus of Nobel Laureates rated nutrition interventions as four of the eight most cost-effective interventions available in development. Nutrition interventions are cost-effective, in particular in reducing the burden on associated diseases on health services.⁴⁷ Cost-benefit ratios for

nutrition interventions have been found as high as 1:138.⁴⁸ Yet, despite its crucial importance and the growing consensus that this is one of the ‘best buys’ in development, the issue remains chronically underfunded.

23. We now know the key factors that contribute to successful nutrition programming.

Nutrition programming in diverse countries has shed light on the factors that lead to sustainable advances in a country’s nutrition status. These elements of success include *political commitment and strong government leadership; evidence-based nutrition policy; coordinated and collaborative partnerships across sectors; good technical capacity and programme design; sufficient resources to strengthen implementation; and mechanisms to increase stakeholder demand for nutrition programming.* Also required is a *robust monitoring and evaluation system* that can be used to improve real-time programme implementation and demonstrate impact. Despite the challenges of nutrition programming, some countries have achieved remarkable improvements in policies and programmes as well as in behaviour change and nutritional status – and, importantly, they have achieved them at scale.⁴⁹

24. There are success stories in scaling up nutrition that can be replicated across the African continent.

A 2013 UNICEF Report titled “Improving Child Nutrition: The achievable imperative for global progress”⁵⁰ presents 11 case studies from *Ethiopia, Haiti, India, Nepal, Peru, Rwanda, Democratic Republic of the Congo, Sri Lanka, Kyrgyzstan, United Republic of Tanzania, and Vietnam* representing a broad range of contexts, reflecting the diversity and complexity of nutrition programming, and illustrating that programmes that are targeted to specific populations and are able to maintain a strong equity focus help reduce inequalities in child nutritional status. The first six case studies focus on reducing stunting; the remaining five case studies cover specific programming aspects related to the management of severe acute malnutrition, infant and young child feeding, micronutrients and nutrition policy reform. Similarly, a 2015 World Food Programme Case Study depicts *Niger* as a primary example of how the government, donors and partners have come together to scale-up nutrition. In less than one decade, the country went from having almost no nutrition programme, to today treating the largest number of children with acute malnutrition in the world (1 million in 2014).⁵¹

25. The 2014 Annual Development Effectiveness Review presents the contribution of the African Development Bank (AfDB) to Africa’s development. Based on an operating portfolio of \$33billion,⁵² it is clear that:

- i. **AfDB spends most of its money on infrastructure** (including water and sanitation) with current investments of over \$21billion representing 63.6% of its budget
- ii. **Agriculture and food security accounts for 12% of AfDB’s spend** with a significant proportion of this, estimated to be 80%, on *rural infrastructure*, including irrigation, water storage, energy connections and feeder roads; and complementary efforts aimed at promotion of more sophisticated value chains by linking farmers to agri-businesses.
- iii. **Promoting gender equality** is a key priority with the overarching aim of empowering African women to play a stronger role in government, society and the economy as a winning strategy for promoting inclusive growth
- iv. **Private sector development** i.e. promoting jobs and livelihood opportunities in the private sector is regarded as the most direct way of reducing poverty

RECOMMENDATIONS

The **African Development Bank (AfDB)** should seize this historic opportunity and make the commitments needed to tackle malnutrition. AfDB should:

1. **Put nutrition at the centre of sustainable economic development.** Concrete action steps to be undertaken include:
 - *Commit* to ensuring that agricultural investment plans include nutrition objectives and appropriate metrics to monitor progress on nutrition-related goals consistent with Sustainable Development Goal 2 and operationalisation of the Malabo Declaration
 - *Include* a stunting specific indicator as part of the CAADP results framework. This indicator should be consistent with SDG2 indicators, adopted by national agricultural ministries and be accompanied by action to ensure impact
 - *Establish* a common joint peer review of CAADP implementation following appropriate discussions with the NEPAD Agency and the AU Commission. The joint annual review of Ethiopia's Policy and Investment Framework (CAADP investment plan) provides a useful quality standard
2. **Review the current approach to investments in infrastructure.** The African Development Bank will need to:
 - *Prioritise* investment in human capital development especially “grey matter” infrastructure
 - *Develop* guidelines to make transport, energy, water, sanitation and ICT investments as nutrition friendly as possible.
3. **Enhance nutrition-sensitivity of agriculture initiatives so that food-based approaches can contribute more to improving nutritional status.** Concrete action steps to be undertaken include:
 - *Focus* instead on food systems rather than agriculture
 - *Invest* in improving the efficiency and effectiveness of multi-sectorial coordination mechanisms established by governments to ensure that the nutrition-sensitive agricultural interventions are smarter and better, and represent value for money
 - *Adapt* the Global Agriculture and Food Security Programme (GAFSP) to incentivize nutrition-sensitive approaches to agriculture
 - *Include* accountability mechanisms with detailed public plans to achieve maternal and child nutrition impacts
 - *Establish* a regional benchmarking process for nutrition interventions that would enable citizens to see how their country is performing in relation to other countries
 - *Ensure* that the overlap between high value crops (i.e. profitable) and high nutrition value crops are as large as possible

4. **Express full support for existing continental and global initiatives e.g. Malabo Declaration, Scaling Up Nutrition (SUN), Comprehensive Africa Agriculture Development Programme (CAADP), etc.** Concrete action steps to be undertaken include:
 - *Announce* commitments to develop, and provide technical and financial support to, the integration and implementation of existing costed plans
 - *Develop* institutional links between those responsible for national agriculture plans and Scaling Up Nutrition (SUN) costed plans
5. **Focus on working with governments and partners, including the private sector, to improve access to nutritious food by the poor and most vulnerable segments of the population.**
6. **Work harder to unleash the entrepreneurial talent currently locked up in gender discrimination.**

Governments in high-burden countries should seize this historic opportunity and make the commitments needed to tackle malnutrition. They should:

1. *Include* improving nutrition as an explicit policy objective in their agricultural policies and agricultural investment plans (CAADP).
2. *Establish* or *strengthen* multi-sectoral coordination mechanisms to ensure that policy decisions are owned by all relevant ministries.
3. *Establish* a cross-departmental working group as part of the multi-sectoral coordination mechanisms to oversee policy implementation and to monitor progress against a set of commonly agreed nutrition indicators.
4. *Adapt* sub-national policy approaches to improve coordination and integration of nutrition concerns between agriculture, health and other key ministries.
5. *Increase* the level of agricultural biodiversity to generate a more diverse enterprise and cropping base, as the foundation for a more diverse diet.
6. *Promote* access to nutritious food and nutrition-related services through investment in social protection programmes, including transfers of food and/or cash, for the poor, children and other vulnerable segments of society to be relieved of hunger.

Donors should seize this historic opportunity and make the commitments needed to tackle malnutrition. They should encourage governments to prioritise nutrition within agriculture plans by taking the following actions:

1. *Strengthening* the nutrition outcomes of initiatives, such as the New Alliance for Food Security and Nutrition, by working with participating countries to establish

country-specific goals, outcomes and specific actions, ensuring that nutrition indicators in the results framework are implemented and integrated within national agriculture plans.

2. ***Developing*** a tool to enable agronomists and policy-makers to assess the nutrient constituents of crops. Such a monitoring tool, if available in open data format, could enable agriculturalists to consider the impact and implications of the crops and enterprises they promote from the perspective of their impact on child nutrition.
3. ***Ensuring*** that country-based donor technical committees include civil society representatives, to ensure accountability and to reflect the views of civil society in the planning process.
4. ***Catalyzing*** a broad partnership to enhance access to food by all segments of the society, particularly the poor and children.

REFERENCES

- ¹ Population Reference Bureau 2011
- ² World Economic Outlook Database October 2012
- ³ UNICEF – Generation 2030 Africa, August 2014 – http://www.unicef.org/publications/index_74751.html
- ⁴ World Bank 2001
- ⁵ Ruel M., H. Alderman, and the Maternal and Child Nutrition Study Group. 2013. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *Lancet*, [http://dx.doi.org/10.1016/S0140-6736\(13\)60843-0](http://dx.doi.org/10.1016/S0140-6736(13)60843-0)
- ⁶ Save the Children (2013) Food for Thought: Tackling child malnutrition to unlock potential and boost prosperity
- ⁷ Grantham McGregor A (2007) Developmental potential in the first 5 years for children in developing countries, *Lancet* 369 (9555):60-70
- ⁸ World Food Programme and UN-ECLAC (2007) The Cost of Hunger: Analysis of the social impact of child undernutrition in Latin America: Central America and the Dominican Republic
- ⁹ Individual cost of hunger assessment reports for Egypt, Ethiopia, Swaziland and Uganda; published by the individual governments in conjunction with UNECA, ADB, AFC, WFP and others. September 2013
- ¹⁰ Cobham A (2013) Palma vs Gini: Measuring post-2015 inequality, <http://tinyurl.com/bq2x64e>
- ¹¹ Cleland, J. 2012. Will Africa Benefit from a Demographic Dividend? November 2012
- ¹² <http://www.au.int/en/content/malabo-26-27-june-2014>
- ¹³ <http://www.agra.org>
- ¹⁴ African Regional Nutrition Strategy: 2005 – 2015, report (African Union, 2005)
- ¹⁵ “Pillar 3: Food Supply and Hunger,” CAADP, accessed September 26, 2013
- ¹⁶ CAADP, The Pan African Nutrition Initiative report, accessed September 26, 2013
- ¹⁷ Framework for African Food Security (FAFS), report (Midrand: New Partnership for Africa’s Development (NEPAD), 2009)
- ¹⁸ NEPAD, NEPAD Ten Year Strategy for the Reduction of Vitamins and Mineral Deficiencies (VMD): Draft Action Plan 2008 – 2011, report, accessed September 26, 2013
- ¹⁹ ‘Launching of the African Food and Nutrition Security Day (AFNSD)’, The New Partnership for Africa’s Development, accessed September 26, 2013
- ²⁰ ‘About Scaling Up Nutrition’, accessed September 27, 2013, <http://scalingupnutrition.org/about>
- ²¹ ‘Reach Partnership’, Homepage accessed September 27, 2013, <http://www.reachpartnership.org/>.
- ²² ‘Purchase for Progress’, Homepage. World Food Programme, accessed September 27, 2013, <http://www.wfp.org/purchase-progress>
- ²³ ‘Feed the Future.’ Feed the Future, accessed September 27, 2013, <http://www.feedthefuture.gov/>.
- ²⁴ ‘Why 1,000 Days’ 1000 Days, accessed September 27, 2013, <http://www.thousanddays.org/about>
- ²⁵ Declaration of the Abuja Food Security Summit, Declaration (Abuja: African Union, 2006)
- ²⁶ ‘WHO Nutrition Friendly Schools Initiative’, accessed October 7, 2015, <http://www.who.int/nutrition/topics>
- ²⁷ <http://nutrition4growth.org/>
- ²⁸ Goal 2: Zero hunger. UNDP. Retrieved 28 September 2015
- ²⁹ Measure DHS, USAID. Stat Compiler: <http://www.statcompiler.com> (accessed March 30, 2013)
- ³⁰ National Development Planning Commission, Government of Ghana, UNDP Ghana. Ghana millennium development goals report. Ghana: UNDP, 2010
- ³¹ The Cost of Hunger in Uganda: Implications on National Development and Prosperity, World Food Programme, UN Economic Commission for Africa, Africa Union Commission, May 2013
- ³² Uganda Bureau of Statistics: Uganda Census of Agriculture (UCA) 2008/09 at a glance, May 2011
- ³³ Adapted from Scaling Up Nutrition and Shekar and colleagues 2013
- ³⁴ Save the Children (2012) A Chance to Grow, London: Save the Children.
- Wiggins S, Keats S, (2013) Smallholder Agriculture’s Contribution to Improved Nutrition, London: Overseas Development Institute
- ³⁵ Prado E, Dewey K, Insight Nutrition and brain development in early life, AT&T Technical Brief, Issue 4, January 2012
- ³⁶ Alderman, H. and J. Behram. (2006) Reducing the incidence of low birth weight in low-income countries has substantial economic benefits, *World Bank Research Observer* 21 (1):25-48
- ³⁷ Glewwe, P, Jacoby H G and King E M (2001) Early childhood nutrition and academic achievement: a longitudinal analysis, *Journal of Public Economics*, Volume 81 (Issue 3)345-368
- ³⁸ Kramer M S, Fombonne E, Igumnov S, et al. Effects of prolonged and exclusive breastfeeding on child behaviour and maternal adjustment: evidence from a large, randomized trial, *Paediatrics* 2008; 121: e435-40 cited in Walker et al 2011

-
- ³⁹ Black RE, Victoria CG, Walker SP, and the Maternal and Child Nutrition Study Group. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 2013; published online June 6. [http://dx.doi.org/10.1016/S0140-6736\(13\)60937-X](http://dx.doi.org/10.1016/S0140-6736(13)60937-X)
- ⁴⁰ Grosh M, and Del Ninno C, Tesliuc E, Ouerghi A. For protection and promotion: the design and implementation of effective safety nets. Washington DC: World Bank, 2008
- ⁴¹ International Food Policy Research Institute, 'Leveraging Agriculture for Improving Nutrition and Health', IFPRI, New Delhi, 2011 ; Herforth, Anna, 'Synthesis of Guiding Principles on Agriculture Programming for Nutrition', Draft, September 2012, Food and Agriculture Organization of the United Nations, Rome ; Hoddinott, John, 'Agriculture, Health, and Nutrition : Toward conceptualizing the linkages,' paper presented at the 2020 Conference, New Dehli, India, 10-12 February 2011 ; Hawkes, Corrina, R. Turner and J. Waage, 'Current and Planned Research on Agriculture for Improved Nutrition : A mapping and a gap analysis', Department for International Development, London, August 2012.
- ⁴² The State of Food Insecurity in the World 2010: Addressing food insecurity in protracted crises, FAO, 2010, www.fao.org/docrep/013/il683e/il683e00.htm
- ⁴³ Frison EA, Smith IF, Johns T, Cherfas J Eyzaguine EB (2006) Agricultural biodiversity, nutrition and health: making a difference to hunger and nutrition in the developing world, *Food and Nutrition Bulletin* Jun 27(2):167-79
- ⁴⁴ World Bank. Managing risk, promoting growth: developing systems for social protection in Africa. The World Bank's Africa Social Protection Strategy 2012 – 2022. Washington, DC: World Bank, 2012
- ⁴⁵ Independent Evaluation Group (IEG), 'What Can We Learn from Nutrition Impact Evaluations?: Lessons from a review of interventions to reduce child malnutrition in developing countries', World Bank Publications, Washington, D.C, July 2010
- ⁴⁶ World Bank (2006) Repositioning Nutrition as Central to Development: A strategy for large scale action, Washington: The World Bank
- ⁴⁷ Gyles C L (2012) Health economics and nutrition: a review of published evidence, *Nutrition Review*, 2012 December, 70(12):693-708
- ⁴⁸ World Bank (2006) Repositioning Nutrition as Central to Development: A Strategy for large scale action, Washington: The World Bank
- ⁴⁹ These success stories draw on internal documents, government documents and expert opinion provided by UNICEF Country Offices.
- ⁵⁰ UNICEF (2013) Improving Child Nutrition: The achievable imperative for global progress
- ⁵¹ WFP – Case study on Scaling up nutrition programming – April 2015
- ⁵² http://www.afdb.org/fileadmin/upload/afdb/Documents/Project-and-Operations/ADER-Annual_Development_Effectiveness_Review_2014.pdf