



Good Nutrition

Perspectives for the 21st Century

“This insightful and timely book rightly argues that addressing malnutrition is crucial to achieving sustainable development.”

KOFI ANNAN | CHAIR OF THE KOFI ANNAN FOUNDATION, FORMER SECRETARY-GENERAL OF THE UNITED NATIONS (1997-2006)

“Nutrition is a complex subject, affected by many intertwining factors. Good Nutrition: Perspectives for the 21st Century pulls it all together in one easy-to-follow volume.”

ANNA LARTEY | PRESIDENT OF THE INTERNATIONAL UNION OF NUTRITIONAL SCIENCES AND DIRECTOR OF NUTRITION AT THE UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION (FAO)

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Preface

A moment for concerted thought – and action

Nutrition brings the world together. All human beings, everywhere in the world, have broadly the same nutritional needs. Nutrition also divides the world – into those who have enough to eat and those who have not, those who enjoy safe, quality foods and those who do not, and those who have highly specific nutritional requirements and those who do not. The food we eat is a potent symbol of both the unity and the division of the world we live in.

“We all face common challenges around the need for healthy, nutritionally adequate diets that are safe and affordable. The complexity is, however, never far away. Global trends such as urbanization, the nutrition transition, social inequity, continued shocks and conflict, and changing public health concerns all mean that there is no ‘one size fits all’ solution. This book collects some of our brightest minds and best ideas, but in addition, it represents one of the most precious ingredients for our success in achieving the Sustainable Development Goals (SDGs): the global sharing of knowledge, innovation and creativity by multi-stakeholders, in which we embrace this complexity and direct our combined efforts towards developing tailored solutions. I hope this book will spur new partnerships and joint action towards delivering good nutrition for all, keeping in mind balance and equity, and above all, reaching those furthest behind.”

Ertharin Cousin

Executive Director of the UN World Food Programme

Next to breathing and hydrating, eating is the most essential of all bodily requirements. For this reason, it is sometimes considered a simple matter. Nothing could in fact be further from the truth. Continuing advances in nutrition science, genetics and genomics show how complex the many biochemical processes involved in nutrition are, while the dramatically increasing rate of population growth is placing unprecedented strains on natural and man-made food systems alike. Nutrition is anything but simple.

The world’s population is growing at an unprecedented rate, and is due to pass the 7.5 billion mark as this book is just about to go to press. It is also ageing, with people living longer than ever, especially in the developed world. Yet even as we consider the age-related nutritional needs of our growing populations of senior citizens, we have to recognize that the trend towards ever-increasing life expectancies may not continue, even in the supposedly affluent developed world. We are at a potential tipping point in history.

Not only are poverty and deprivation widespread in some of our most affluent societies; non-communicable diseases (NCDs) also are growing at an unprecedented rate, placing a massive strain on current healthcare and social protection systems and promising a level of demand in years to come that will be patently unsustainable. NCDs have replaced communicable diseases as the greatest threat to human life. Yet – irony of ironies – many of these NCDs are directly attributable to changing lifestyles and, in particular, changing dietary habits.

The trend towards highly processed foods and beverages containing high levels of sugar, salt and saturated fats is leading to an epidemic growth in cardiovascular disease, obesity and type 2 diabetes. This has happened in the course of a generation, in most parts of the world. It will take much longer than a generation to bring under control. At the same time, the nutritional inadequacy of many contemporary diets has led to the reappearance in the developed worlds of dietary deficiency diseases that not long ago were considered to have been eliminated, with cases of rickets (vitamin D deficiency) and scurvy (vitamin C deficiency), for example, making the headlines in the countries of the developed world. One thing is clear: the traditional division between the “developed” and the “developing” world is not as neat as it used to be. While the developing world still carries a massive burden of poverty and nutritional deprivation, many nutritional problems are shared across the globe: the same challenges present themselves not only on the streets of ever-more crowded cities but also in increasingly depopulated rural areas. Changes in food habits around the world are creating populations whose health status will place unprecedented burdens on health systems. Unless something is done to reverse current trends, the world’s ever-growing population will also be increasingly illequipped to help solve the planet’s problems. Whether we have a lot or a little on our plate, literally or metaphorically, we are staring at a ticking time bomb.

Defusing that time bomb will call for a concerted effort – not just from governments, but also from non-governmental organizations, the private sector, and civil society, working across sectors, regions, cultures and religions. There has arguably never been a time when the individual has had such potential to shape his or her own future, and the future of the world with it, through his or her dietary choices. Nor has there ever been a moment when concerted “systems” thinking about nutrition has been so necessary – and concerted action, even more so.

The global nutrition community has become both more interdisciplinary and closer-knit in recent years, as the effects of globalization have made themselves felt in every corner of the world. If there is much to alarm us in the spread of industrialized eating patterns, massive food wastage and the state of chronic

micronutrient deficiency known as “hidden hunger,” there is also reason for hope. The Millennium Development goals brought us closer to one another. The Sustainable Development Goals will bring us closer still, as we strive to work together across sectors, frontiers and cultures to provide better nutritional solutions for the world.

As the Editorial Board that has overseen the development of this book, it is our hope that Good Nutrition: Perspectives for the 21st century will help show that we do indeed all share one world, and that poor nutrition has an impact far beyond its effect on the individual who suffers from an inadequate diet, wherever he or she

may be. We also hope that this book will help point the way towards practical solutions based on trusted science and robust programming – multisector and multidisciplinary solutions that offer improved nutritional value while at the same time helping to protect the fragile ecological balance of our planet. Our thanks go to all the distinguished experts who have graciously made themselves available to contribute to this important work, and to everyone else who has helped to make it happen.

Nutritious, accessible, affordable and sustainable food for all is possible – if we all work together to make it a reality.



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Foreword



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Embedding nutrition in a human rights agenda

Good Nutrition: Perspectives for the 21st century offers a wide-ranging view of the challenges and opportunities for nutrition in the era of the Sustainable Development Goals (SDGs). Nutrition has a role to play in all 17 goals. If nutrition is accepted as a human right, then its potential to bring about positive change on a global scale is vast. If it is not, however, even our best efforts to implement the SDGs will be very limited in their effect.

International law instruments provide a normative and legal foundation for the human right to adequate food and nutrition. Subsequent to Article 25 of the Universal Declaration on Human Rights, Article 11 of the International Covenant on Economic, Social and Cultural Rights (ESCR) recognizes the right to adequate food and the fundamental right of everyone to be free from hunger.

Yet, nearly 800 million people worldwide remain chronically undernourished, and over 2 billion suffer from micronutrient deficiencies, also known as hidden hunger. Another 2 billion are overweight, with 600 million of these being obese. Meanwhile some 159 million children under 5 years of age are stunted, approximately 50 million children from this same age bracket are wasted, and 42 million are obese. For the first time in human history, there are more obese than underweight adults in the world. As a result, non-communicable diseases (NCDs) associated with obesity have surpassed undernutrition as the leading cause of death in low-income countries.

These figures indicate that the challenges of malnutrition in all its forms are daunting. Nevertheless, in many developing and least developed countries (LDCs), policies against hunger receive more attention than does the prevention of malnutrition in general, or the stunting and wasting of children. Therefore it is important to emphasize that the right to adequate food includes nutrition. Adequacy with respect to food simply embraces nutritional value. This means that the quality of the food we consume has to become as important as the quantity. It is not enough to provide quantities of food as measured by caloric intake to eliminate hunger. This caloric intake must include the necessary ingredients for human health.

Like access to food in general, access to nutritious food is often a key indicator of economic inequalities, as well as of discrimination. Therefore including nutrition in a rights-based framework is critical to ensuring that marginalized and vulnerable segments of the population are able to access adequate, healthy, and nutritious food.

Dealing with global nutrition challenges through a rights-based perspective is not only desirable, but also obligatory, since several key principles recognize nutrition as an inherent element of the right to food. The human-rights-based approach to nutrition enables the implementation of procedural rights. These include participation, accountability, non-discrimination, transparency, empowerment and rule of law – each a demonstration of respect for human dignity. At the International Conference on Nutrition 2 (ICN2), in Rome in November 2014, the implications of a human-rights-based approach to nutrition were explained as follows: “[e]mbedding nutrition in a human rights agenda makes issues of governance and accountability central to effective implementation.”

The legal duty to provide access to adequate nutrition

There are several human rights documents that support the claim that the right to adequate food and nutrition is not only legitimate but constitutes a legal duty. The clear inclusion of a nutrition dimension of the right to food reveals that the right to food, properly conceived, is closely linked to the right to health. The Covenant of the ESCR Article 12.1 recognizes “the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.” If there is insufficient nutritious food available and accessible, there will be adverse consequences for physical and mental health.

In its General Comment 12, the Committee on Economic, Social and Cultural Rights (CESCR) Paragraph 8 interpreted the right to adequate food as follows: “Every State is obliged to ensure for everyone under its jurisdiction access to the minimum essential food which is sufficient, nutritionally adequate and safe, to ensure their freedom from hunger.” Furthermore, General Comment 14 Paragraph 43 (b) reiterates that one of the core State obligations under the right to health includes ensuring “access to the minimum essential food which is nutritionally adequate and safe, to ensure freedom from hunger to everyone.”

The Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (Voluntary Guidelines) of 2004 notes that “States should take measures to maintain, adapt or strengthen dietary diversity and healthy eating habits and food preparation, as well as feeding patterns, including breastfeeding, while ensuring that changes in availability and access to food supply do not negatively affect dietary composition and intake.”

Malnutrition does more harm to vulnerable populations, particularly to poor women and children. Therefore, besides the universally protected right to food and nutrition for all, children, pregnant and lactating women are selected for further protection in universally accepted human rights conventions. The Convention on the Rights of the Child (CRC) in Article 24 acknowledges that “to pursue the full implementation of the right of the child to the enjoyment of the highest attainable standard of health... States shall take appropriate measures to (c) combat disease and malnutrition... through, *inter alia*, the provision of adequate nutritious foods.” Article 27(3) states that: “Parties... shall take appropriate measures to assist parents and others responsible for the child to implement this right and shall in case of need provide material assistance and support programs, particularly with regard to nutrition, clothing and housing.”

The Committee of the CRC in its General Comment on Article 24 calls on States to ensure that all segments of society are informed of the advantages of breastfeeding. The CRC further states that “exclusive breastfeeding for infants up to 6 months of age should be protected and promoted and breastfeeding should continue alongside appropriate complementary foods preferably until two years of age, where feasible.”

The protection and promotion of breastfeeding is also enshrined in the International Code on Marketing of Breast-milk Substitutes, which was adopted by the World Health Assembly in 1981. The Global Strategy for Infant and Young Child Feeding, adopted in 2002, sets out the obligations of States to develop, implement, monitor and evaluate comprehensive national policies addressing infant and young child feeding, accompanied by a detailed action plan.

The 1979 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) highlights the importance of children, as well as the importance of lactating and pregnant women. Article 12 stipulates that all states shall ensure to women appropriate services in connection with pregnancy, confinement and the postnatal period, granting free services where necessary, as well as adequate nutrition during pregnancy and lactation. Unfortunately, CEDAW fails to fully protect a woman’s right to adequate food and nutrition as an individual, but only provides protection within the parameters of pregnancy and breastfeeding. Despite scientific evidence demonstrating that women have special needs due to physiological differences from men, CEDAW surprisingly does not provide special protection of the right to adequate food and nutrition for women as individuals. It is vitally important to correct this protection gap as soon as possible.



Considering the pivotal role of the private sector in the provision of adequate food and nutrition, it is appropriate that the primary role of regulating and monitoring the private sector should be given to the governments of sovereign states. A human rights framework underlines the responsibility of corporations that produce food and shape nutritional standards to respect human rights and to contribute to equitable access for all persons to nutritious foods. Such responsibility is implied in the Universal Declaration on Human Rights, which clearly asserts that “everyone has duties to the community” (Art. 29), and that groups and persons must refrain from activities causing encroachment on the rights enshrined within the Declaration (Art. 30).

In 2011 the UN Human Rights Council endorsed the UN Guiding Principles on Business and Human Rights, formally recognizing the responsibility of enterprises to avoid infringing on the human rights of others and to address adverse human rights impacts arising from their commercial activities. This responsibility extends to the adverse impacts caused by the food industry in relation to the right to adequate food.

Although there is no significant resistance opposing a human rights approach to adequate food and nutrition, several potential barriers exist that affect proper implementation. Corporations greatly prefer voluntary commitments to regulatory frameworks. We see this resistance at domestic levels. There are corporate initiatives against several states dealing with such issues as labeling, taxing, limiting excessive advertisements of junk foods, which covers highly processed foods high in salt, sugar and saturated fats. Secondly, there is a governance problem, since nutrition poses a multifaceted challenge that needs to be coordinated through the cooperative effort of several separate parts of government machinery. Finally, the complex character and long-term impacts of malnutrition on human health, as well as the absence of indicators and lack of proper data, creates difficulties when it comes to establishing workable monitoring, accountability and transparency mechanisms.

The role of nutrition within the Sustainable Development Goals (SDGs)

In September 2015, 170 world leaders gathered at the UN Sustainable Development Summit in New York to adopt a 2030 Agenda. The new Agenda covers a broad set of 17 Goals and 167 targets and will serve as the overall framework to guide global and national development action for the next 15 years. The SDGs are universal, transformative, comprehensive, and inclusive.

If we evaluate the SDGs from the perspective of nutrition policies, we notice that nutrition is relevant to all 17 goals. As with all SDGs, nutrition also has a universal character. Without achieving nutrition targets, development policies cannot be successful. The present burden of malnutrition on public health and the national budget has become staggering. At the ICN2, world leaders recognized that a key action for improving nutrition governance is to anchor nutrition targets in the SDGs. While Goal #2 explicitly references “nutrition” (“end hunger, achieve food security, improved nutrition, and promote sustainable agriculture”) and Goal # 3 refers to non-communicable diseases, nutrition is arguably “interwoven” in relation to all 17 SDGs, as at least 50 of the indicators set forth in the 17 SDGs pertain to nutrition. The root causes of malnutrition are more complex than the lack of sufficient and adequate food, reflecting as they do a variety of interrelated conditions addressed in the SDGs with respect to health, care, education, sanitation and hygiene, access to resources, environmental degradation, climate

change and women’s empowerment. All of these conditions are directly related to development policies. The underlying reality is this: the SDGs cannot be achieved without special attention to nutrition, and the nutrition Goals cannot be met without the fulfilment of other SDGs.

We conclude that despite the potential success of the SDGs on account of their inclusion of nutrition (in contrast to the antecedent Millennium Development Goals [MDGs]), they still arguably fail to establish a framework that will facilitate the development of sustainable food systems – something which is crucial in the fight against malnutrition. Moreover, some SDG targets lack the focus to enable effective implementation, and a number are not quantified. Many targets are associated with several goals, and some goals and targets may be in conflict with one another. Action to meet one target could have unintended consequences for others if the pursuit of all is not coordinated. Among the 169 targets, only one is dedicated specifically to nutrition; and obesity is not even mentioned. So the indefiniteness of the SDG framework seems to create gaps between the ambition of the goals and the likely performance of states, which gives cause for concern.

Furthermore, the lack of an effective accountability and monitoring system is a major obstacle to realizing the SDGs. Voluntary national reporting and reviewing mechanisms through the High Level Political Forum of the UN General Assembly are unlikely to be effective enough to reach the nutrition targets in a timely and sufficiently thorough fashion. The multisectoral nature of nutrition, its long-term impact on human rights and development, and the invisibility of some of its consequences together make accountability a complex and difficult challenge. Meeting such a challenge requires a clear understanding of data collection. This calls for an understanding what is needed to improve nutrition coverage, as well as developing a systematic tracking system for monitoring investment and accountability at country and global levels.

Although significant progress has occurred vis-à-vis the Millennium Development Goals, the 2030 Sustainable Development Goals still avoid directly articulating a human-rights-based approach. We cannot find anywhere in the text of the SDGs a direct affirmation of the “right to adequate food,” or language imposing on states the duty to “respect, protect, and fulfil” human rights, despite the fact earlier noted that all 17 goals are directly or indirectly relevant to the fulfilling the 2030 Agenda for the

Sustainable Development Goals.

Overcoming barriers in the “Decade of Nutrition”? It is true that even if the human rights approach to nutrition were recognized, several barriers would still stand in the way of the adoption of effective nutrition policies and their implementation in pursuit of the various targets. At the height of the global food price crises in 2008, The Lancet Series on Maternal and Child Undernutrition warned that the international nutrition system was fragmented, dysfunctional and desperately in need of reform. Since then, significant initiatives have taken place at the global level. On April 1, 2016, following the recommendation of the ICN2, the UN general Assembly declared the Decade of Action on Nutrition that will run from 2016 to 2025. The Decade presents a unique opportunity to centralize globally agreed targets, align actors around implementation, and address the shortcomings identified in the current forms of nutrition governance. While ambitious targets have been set to ensure the global governance of nutrition, much more is



needed to meet the challenge of providing each person with enough nutritious food to live a healthy and productive life, while at the same time protecting the environment and natural resources, including with regard to climate change.

The ICN2 Rome Declaration on Nutrition acknowledged that “current food systems are being increasingly challenged to provide adequate, safe and diversified and nutrient-rich food for all that contribute to healthy diets due to, inter alia, constraints posed by resource scarcity and environmental degradation, as well as by unsustainable production and consumption patterns, food losses and waste, and unbalanced distribution.”

Starting from the observation of the ICN2, the first barrier is the industrial food systems, including production, processing, transport and consumption of food, that are currently dominant in many parts of the world. Food systems have a direct impact on overall diet and in determining what food is available in the market place. Industrial food systems focus on increasing production and maximizing efficiency at the lowest possible economic (and consumer) cost. This type of system relies on industrialized agriculture, including mono-cropping and factory farming, industrial food processing, mass distribution, and marketing. Due to considerations of affordability, availability and palatability, as well as marketing and promotion strategies, food produced from industrialized food systems constitutes a significant portion of global food sales. The adverse impact of industrial food systems on nutrition and public health is widely acknowledged. It is now obvious that excessive food production neither eliminates hunger nor remedies malnutrition. Removing these barriers depends on the appropriate transformation of current food systems into “nutrition-sensitive” food systems. Reflecting the various conditions of specific countries, nutrition-sensitive food systems need to be diverse, but the general principles should be sensitive to global nutrition policies and the human rights approach that gives a high priority to nutritionally deprived groups and vulnerable peoples.

The second barrier is a set of factors relating to political, environmental and socioeconomic conditions that have direct and indirect impacts on nutrition in any given society. These conditions include economic development without inclusive growth; population increase, poverty as well as vertical and horizontal inequality; rural urban migration and urbanization; trade and investment policies as well as economic globalization; equal access to natural resources, sustainable resource management, environmental degradation, and climate change.

These conditions are interrelated and give rise to negative or positive effects on nutrition depending on policy interventions. Therefore each country should create a “national master plan for good nutrition.” Addressing global nutrition challenges and ensuring that every individual is guaranteed a right to nutrition requires significant reforms in several areas: agriculture, education, health, social protection, water, sanitation and hygiene, gender, trade relations, socioeconomic conditions, environmental degradation, and climate change.

To meet the Decade of Nutrition and 2030 Sustainable Development Targets, political will is vital first and foremost. National governments should take these global targets seriously and dedicate substantive financial resources to reaching the targets. Governments should also establish effective, transparent, and independent accountability mechanisms to follow up and review the progress and detect obstacles. Without such monitoring mechanisms and financial resources, there will be little progress, and few nutrition targets will



be reached. Needless to say, effective monitoring and accountability systems, as well as inclusive decision-making processes, would be realized if a human-rights-based approach were to be credibly applied to nutrition policies.

Perspectives for the 21st century

Good Nutrition: Perspectives for the 21st century showcases the thinking of some of today’s most influential and respected scientists from a wide range of fields. With clear presentation and accessible argumentation, it offers a composite view of where global nutrition stands today and outlines a wide range of evidence-based approaches for bringing about positive change. The fact that its scope covers the developed as well as the developing world makes it all the more powerful, for there are no countries in the world today, however affluent they might be, that are not faced with significant malnutrition challenges. I am confident that scientists and policy-makers working in nutrition, food, agriculture and public health, as well as non-specialists, will find this publication informative, useful, and thought provoking, and that it will inspire everyone who reads it to help build a world in which nutrition is indeed recognized as a fundamental human right.

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