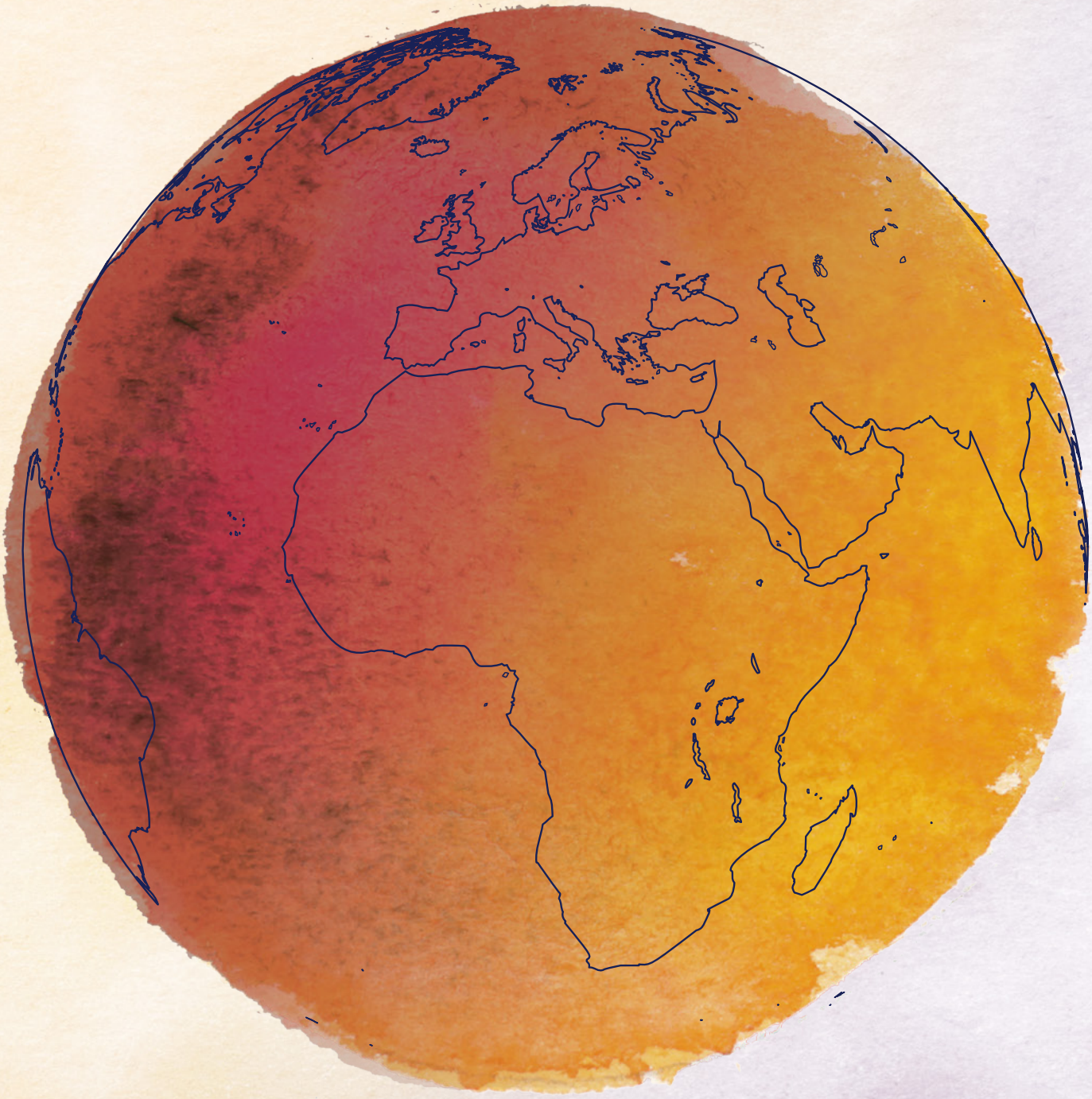
Global Panel on Agriculture and Food Systems for Nutrition

Foresight 2.0



EXECUTIVE SUMMARY

Future Food Systems:

For people, our planet, and prosperity

SEPTEMBER 2020

Future Food Systems:
For people, our planet, and prosperity

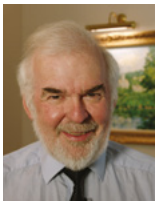
This report includes important recommendations and advice for leaders at the most senior levels in countries and international organisations. It is also of direct relevance to decision makers, professionals, actors in the private sector, experts and researchers with interests in food systems and diets. Many of these individuals will be directly concerned with the production, processing, trade, regulation, supply and safety of food. However, others may work in wider areas of policy and business, for example relating to: public health and well-being, education, economic development and investment, urbanisation, globalisation and demography.

This report and executive summary are necessarily technical due to the nature of the subject matter. However, they set out the practical steps which are essential for food systems transformation, and the process of change.

Global Panel members:

John Beddington
(Co-Chair) Former United Kingdom Government Chief Scientific Adviser

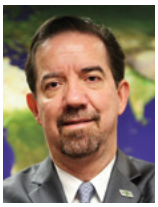
John Kufuor
(Co-Chair) Former President of Ghana



Tom Arnold
Former Director General, Institute of International and European Affairs (IIEA)

Rachel Kyte
Dean of The Fletcher School at Tufts University

Akinwumi Adesina
President, African Development Bank (AfDB)



Celso Moretti
President, Brazilian Agricultural Research Corporation (Embrapa)

Qu Dongyu
Director General, Organization of the United Nations (FAO)

Srinath Reddy
President, Public Health Foundation of India

Shenggen Fan
Chair Professor at the China Agricultural University, and former Director General, International Food Policy Research Institute (IFPRI)

Emmy Simmons
Senior Adviser, Non-resident, to the Center for Strategic and International Studies Global Food Security Project

Agnes Kalibata
President, Alliance for a Green Revolution in Africa (AGRA)

Rhoda Peace Tumusiime
Former Commissioner for Rural Economy and Agriculture, African Union Commission (AUC)

Secretariat

Sandy Thomas
Director, Global Panel on Agriculture and Food Systems for Nutrition

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Preface

It is difficult to envisage a report with more critical implications. By focusing on diets and nutrition across the world, and the food systems that deliver them, it has profound implications for countless millions who endure inadequate diets, and for the world's environmental systems on which every person and every nation depends.

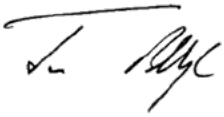
Today, roughly three billion people are unable to afford even the cheapest, locally available, healthy diets. This represents a crisis, not just in terms of health, but also the mental and physical development of children, and the prosperity of families and growth of countries. Worse, it can lead people into lifetime, and even intergenerational, inequality.

This report shows that the underlying problems run deep. Our food systems are failing to produce the foods essential for healthy diets in sufficient quantity and at affordable prices. They are also driving degradation of the natural environment – soil, water and air quality, biodiversity loss and climate change – and dangerously undermining our future well-being. Since this report was commissioned in 2018, COVID-19 has highlighted just how fragile and precarious the world's food systems have become. The situation is unsustainable.

All of these interlinked crises can be traced back to failures of policy. Put simply, the policies that fed the world in the twentieth century are no longer fit for purpose. Therefore, a key aim of this report has been to set out how to turn the situation around – to promote and protect human and planetary health, and jobs and prosperity. Using the latest science and evidence, the Global Panel sets out clear steps which need to be taken – by governments, the private sector, development partners, civil society, and citizens.

But, while this report is about action, it will fail at the first hurdle without the political will and courage to reform outdated policies and a sustained commitment to act. The Global Panel therefore urges world leaders to capitalise on forthcoming events in 2021 – the United Nations (UN) Food Systems Summit, the Nutrition for Growth Summit, and the 26th UN Climate Change Conference COP. It is essential that these meetings are harnessed to catalyse change. The Global Panel hopes that this report will help contribute to a strong foundation for preparing the critical decisions which need to be agreed at those and subsequent events.

John Kufuor
(Co-Chair)
Former President of Ghana



Sir John Beddington
(Co-Chair)
Former UK Government
Chief Scientific Adviser

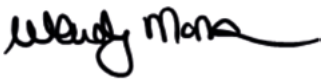
Foreword

Today, there are 690 million chronically undernourished people around the world. Nearly 3 billion people are unable to afford a healthy diet and poor-quality diets are linked to 11 million deaths per year. Despite increased interest in nutrition in recent years, progress to reduce malnutrition and to achieve the Sustainable Development Goal targets is still too slow. Undernutrition remains concerningly high in the poorest regions of the world, and overweight and obesity are on the rise in almost all countries worldwide. All indications are that the wider impacts of the coronavirus pandemic are exacerbating undernutrition. People who face malnutrition in its various forms are also more likely to be severely affected by COVID-19. We have seen people losing their jobs and incomes, and shifting the quality of what they eat. We continue to see disruptions in the production, supply and sale of nutritious foods, highlighting the inherent weaknesses in global food systems and the need to build these back stronger and more resilient.

Food systems are a major source of greenhouse gas emissions (25%-30% of total) and at the same time, the impacts of climate change will affect the way food is produced and the quality of our diets. A shift towards more sustainable, healthy diets could, for example, reduce GHG emissions by 41 – 74%, while boosting health, productivity, growth and resilience to climate shocks – reducing the number of climate induced diseases and deaths.

The UK remains committed to addressing poor nutrition as part of our ambition to end the preventable deaths of newborns, children and mothers by 2030. We know that healthy and well-nourished people are more resilient to shocks and also more likely to grow into productive members of society. Poor quality diets are a key driver behind all forms of malnutrition and the biggest contributor to the global disease burden.

We welcome the Global Panel on Agriculture and Food Systems for Nutrition's new Foresight Report. It sets out how food systems can be transformed to provide healthy diets for all, while mitigating climate change, boosting biodiversity and delivering new jobs in low- and middle-income countries. We need to build back better post COVID-19 and ensure food systems are delivering triple wins for people, the planet, and prosperity.



Wendy Morton MP
Parliamentary Under-Secretary of State
Foreign, Commonwealth and
Development Office

Executive summary

1. Diets, health, and environment: the coming decade's critical challenges

Today's food systems are no longer fit for purpose. Decision makers, particularly governments in low- and middle-income countries (LMICs) and their development partners, need to take urgent action to change the ways in which food systems are currently managed, governed, and used. This is essential to achieve the goal of sustainable, healthy diets[i] for all. These diets are vital for the health of countless millions of people and the health of the planet, and for progress in almost all of the United Nation's Sustainable Development Goals (SDGs), notably those relating to jobs, economic development, and inequalities.

The Global Panel's first Foresight report, published in 2016, sounded the alarm that sub-optimal diets were leading to a deterioration in human health and nutrition globally. This second report brings an even stronger light to bear on the deficiencies in our food systems. Progress in addressing malnutrition in all its forms and diet-related ill health is stalling, and food systems around the world continue to operate unsustainably. The serious health and economic implications of the rising levels of malnutrition and diet-related non-communicable diseases (NCDs) are becoming all too clear; low- and middle-income countries (LMICs) and the poor everywhere are most affected. At the same time, the COVID-19 pandemic has exposed systemic weaknesses and fragility in food systems, which were already increasingly threatened by climate change and worsening environmental degradation.

Given the critical importance of sustainable, healthy diets, it is unsurprising that the achievement of many of the SDGs has been increasingly in doubt even before the coronavirus pandemic. However, despite this bleak outlook, the Global Panel believes that with renewed political will and leadership, the situation can be reversed. However a particular challenge for LMICs in addressing these combined crises is how to address the complexity of the transition process which food systems need to undergo: how to identify priorities for action; how to manage the inevitable trade-offs between competing areas of policy; and how to catalyse massive change across multiple policy domains in a context where resources are severely constrained.

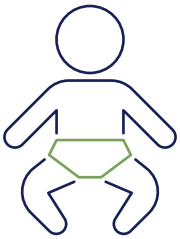
The aim and key added value of this report is to draw on the best available science and evidence to set out a practical way forward which is grounded in the realities of policy development in LMICs. The advice and recommendations offered by the Global Panel are aimed primarily at decision makers in LMICs, but they alone cannot turn global challenges around. In a highly interconnected world, high-income countries also have a vital role to play, particularly where their own decisions have impacts on LMICs. High-income countries (HICs) not only share responsibility for some of the major problems facing us all but are also facing obesity and diet-related disease epidemics of their own. They also have capacity and resources to catalyse necessary collective action. But it is not only governments who have to act swiftly and in a bold and concerted fashion. International organisations and donors, businesses and investors, civil society advocacy groups, and individual citizens all have critically important roles to play. This report makes clear what different stakeholders need to do to play their part in the transition process.

This report makes concrete recommendations on the practical steps which need to be taken in a process of transition to make fundamental changes to food systems possible. The aim is to deliver a transformed food system fit for the twenty-first century.

[i] In this report, 'sustainable diets' are diets that are delivered by a 'sustainable food system'. This means that the contribution of any food system (which delivers locally produced as well as imported and marketed foods) can be continued without undermining the ability of the natural environment to function in the long term. As such, such a system does not drive biodiversity loss, pollution, depletion of natural capital, or impaired ecosystem services, nor does it contribute substantially to greenhouse gas (GHG) emissions.

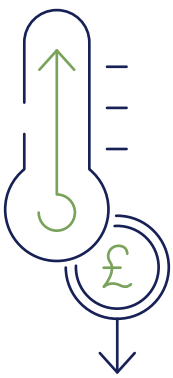
2. Why food systems must undergo a process of transition to deliver sustainable, healthy diets

Diets and the food systems that deliver them are at the nexus of the challenges associated with malnutrition, human health, natural resource degradation, and climate change.



More than **200 million** children under five still face a life adversely affected by early years of undernutrition.[3]

The burden of diet-related disease is highest in LMICs; for diabetes alone, by 2030 (assuming present trends) the annual economic impact for East Asia and the Pacific region is expected to reach almost **US$800 billion**, and **US$52 billion** in sub-Saharan Africa.[4]



A low-income country with an annual average temperature today of **25°C** could see a fall in national economic growth (Gross Domestic Product or GDP) of **1.2%** for each **1°C** increase in temperature.[8]

An estimated 26% of the world's population experienced hunger or did not have regular access to nutrient-rich and sufficient food in 2019. Sub-optimal diets are now responsible for 20% of premature (disease-mediated) mortality worldwide,[1] as well as for 20% of all disability-adjusted life years (DALYs).[2] The outcome is rapidly escalating pressure on healthcare systems which are facing an epidemic of diet-related diseases – including stroke, cardiovascular disease, and diabetes. Affected individuals and families are at risk of becoming drawn into intergenerational cycles of poverty and inequality.

Most countries are not on track to meet the nutrition targets set for 2025 by the World Health Assembly. The goal of cutting child stunting by 40% between 2010 and 2025 is not being met by countries carrying the greatest burdens; no country is on target to achieve a 50% reduction in anaemia among women by 2025; and childhood obesity has nearly tripled worldwide since 1975, and now affects every country on the planet.

Food systems are locked in a spiral of decline with environmental systems: they are also major causes of degradation of the environmental systems on which they themselves depend (including biodiversity, freshwater, oceans, land, and soils). They are the largest cause of anthropomorphic greenhouse gas (GHG) emissions (28% between 2007 and 2016)[5], while agriculture alone accounts for 70% of freshwater use. Even without projected global population growth, food systems are operating well beyond planetary boundaries. The pressures placed on natural resources by food production have left 25% of the globe's cultivated land area degraded, while deforestation for agriculture is recognised as a major and irreversible cause of biodiversity loss.[5]

This situation is simply unsustainable. There is a very substantial risk that the world will irreversibly cross multiple planetary boundaries as a direct outcome of current agricultural and food system practices which are underpinned by often perverse incentive structures. The threat posed by these transgressions to food systems, food security, diet quality, and nutrition in the decades ahead is immense. By 2030, the number of people living in fragile settings is projected to reach 2.3 billion, which includes 80% of the global poor. That represents another 500 million people over today's total.[6] Some projections forecast a doubling in the number of people requiring targeted aid resources of various kinds from around 110 million in 2018 to over 200 million per year by 2050; humanitarian funding requirements after climate-related disasters could increase from between US$3.5–12 billion to US$20 billion annually by 2030.[7]

Four goals need to be met to enable food systems to better protect our planet and nourish the global population:

1. People need to be empowered and encouraged to eat healthy diets which are sustainably produced. Collectively, food purchasers have considerable power to influence food-industry priorities and drive change through the choices they make.

Box 1: COVID-19: lessons, priorities, and building resilience for the future

A sharp shock. The pandemic has been distinguished by its potential to cause multiple shocks simultaneously throughout the global food system. Governments closed down formal and informal retail outlets for food; the movement of agricultural workers was severely restricted; food processing, transport, and trade have all been affected, and many families had access to food seriously impaired over weeks and months. The knock-on effects to diets and nutrition are of major concern, particularly for the nutritionally vulnerable.

Mitigating the effects of COVID-19 on food systems and diets:

1. **Ensure that nutritional needs of all individuals are met.** Priorities include: social protection measures, particularly aimed at the poor; promotion of exclusive breastfeeding and appropriate infant and young child feeding; encouraging people to consume foods which are key to healthy diets; and tackling diet-related misinformation.

2. **Protect, enhance, and buffer stakeholders across entire food value-chains.** Small- and medium-enterprises (SMEs) in the food sector in LMICs are particularly vulnerable to disruptions in markets and spending and need to be supported with access to loans, information, and digital technologies.

3. **Kick-start the transition of the global food system by investing in making it better than before.** Food systems need to be re-imagined, financed, and managed in ways that make them more resilient to shocks of all kinds – a key feature of transformed food systems. This crisis presents an opportunity to better understand and intervene to correct the flashpoints which have compromised food systems: inequities in purchasing power, limited physical access to healthy diets for millions of people, political impulses that lean towards traditional trade protectionism, supply chains susceptible to disruption, natural resource depletion making a supply response to higher prices difficult, and a lack of pre-existing social protection mechanisms designed to protect the diets of the poor.

2. Food systems must be better aligned with the aim of supporting sustainable, healthy diets. Major reform is needed at every stage from production through to retail. This will create significant challenges relating to inadequate availability, physical accessibility, affordability, and desirability of improved diets.

3. The impacts of food systems on climate, natural resources, and biodiversity must be significantly reduced. Making the resource base on which all food production depends both sustainable and resilient is both necessary and urgent.

4. Greater resilience must be built into local and global food systems. Many LMICs will be increasingly vulnerable to shocks which affect food production, trade, and prices. Here, specific measures to build resilience may need to reflect the nature of different types of shock. Box 1, for example, specifically considers the case of the coronavirus pandemic.

3. Factors impeding necessary progress on policy change

Today's food systems operate against a background of policy distortions. These need to be addressed at the outset of food systems transition or they will impede change:

1. **Powerful actors pull in different directions, motivated by factors unrelated to health or food system sustainability.** The private sector plays a crucial role in feeding the world, but at the same time often promotes foods which are not conducive to healthy diets and profits from a food system that over-exploits natural resources. The benefits accrue mainly to private sector stakeholders while the costs (population-wide ill health, ecological degradation, natural disasters) are mainly borne by the public sector and wider society. That imbalance will have to be addressed during the transition. It is essential that the public and private sectors work together on more clearly articulated common agendas. The private sector must spell out specific, measurable responsibilities for improving diet quality and the sustainability of food systems and be willingly held accountable.

2. **Misaligned policy incentives distort food system goals.** Policy instruments and related incentives and responsibilities shaped by public sector decisions, including subsidies and food-related research and development, must be better aligned to support human and planetary health simultaneously, in ways that capture opportunities for jobs and income growth.

3. **Short-termism and siloed agendas.** The transition of food systems requires a long-term focus and a coherent set of commitments and actions. Dietary patterns, drivers of dietary choice, and sustainability of food system practices (from production through to post-retail waste) must be put at the centre of national dialogues aimed at transitioning food systems from today's expectations,

framed by feeding people cheaply, to nourishing people sustainably. The challenges of malnutrition, health, and the environment are all fundamentally interlinked and can only be effectively addressed together. The current lack of coherence in these areas of policy is an important impediment to progress.

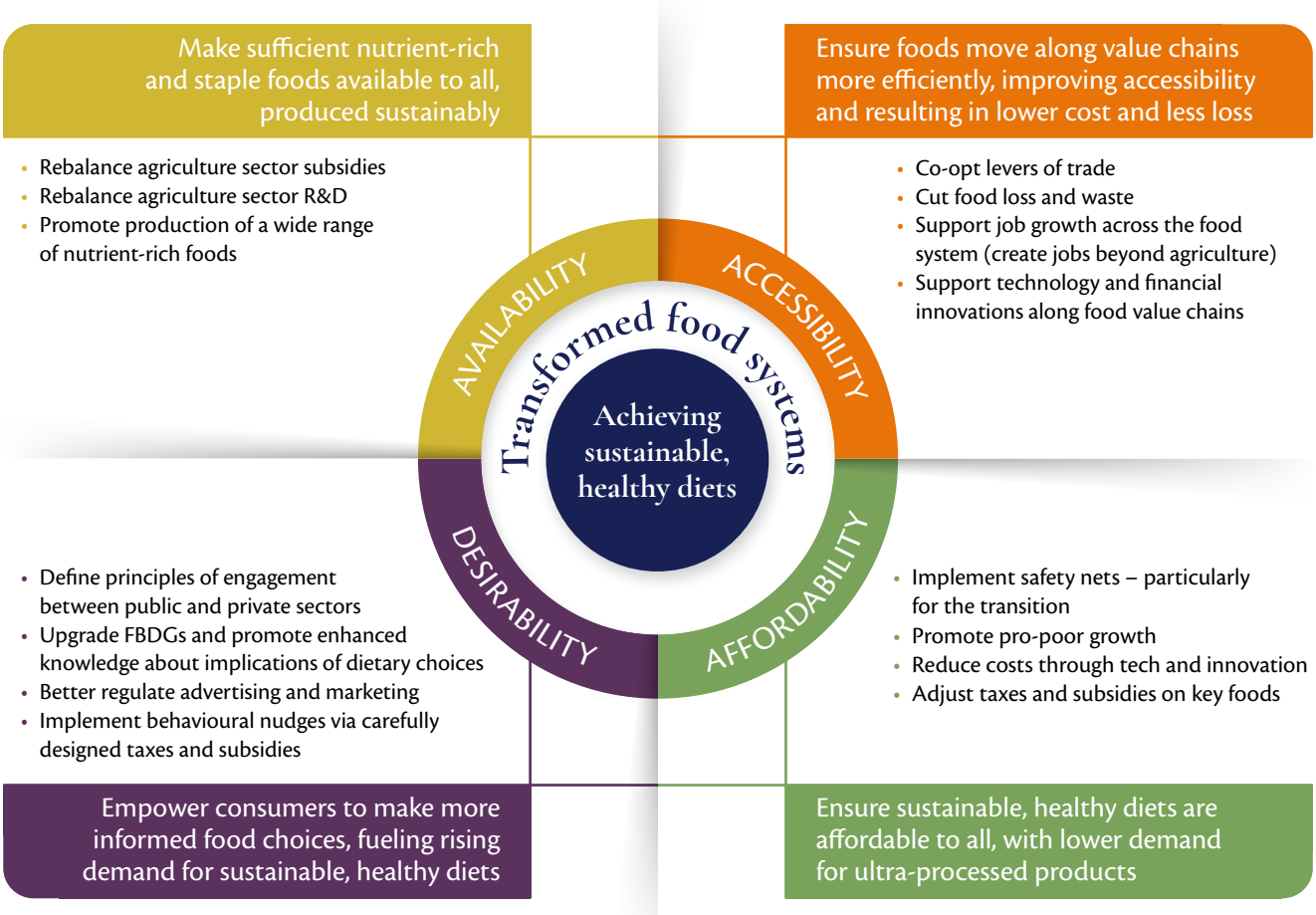
Addressing these policy distortions will only be possible if decision makers demonstrate much stronger leadership to drive through necessary changes. Governments have not been active enough in confronting the difficult choices which have to be made to reform food systems and influence the drivers of dietary choice. This can be due to competing priorities, where sustainable, healthy diets are viewed as a lesser priority when hunger is still a major challenge in several parts of the world. Many of the problems inherent in the food system are global and, like climate change, can only be tackled at a global level. However, actions are also vital at national and local levels.

4. Key interventions in four parts of the food system

Food systems are comprised of a set of dynamic and interlinked sub-systems. However, the transformation of food systems requires a series of transition steps which can be distilled into four distinct policy objectives: producing the right mix of foods in sufficient quantities to deliver sustainable, healthy diets; ensuring those foods are readily accessible and also affordable to everyone; and ensuring that they are desirable to all consumers (see Figure 1).

Fundamental reform is needed to deliver transformed food systems which ensure sustainable, healthy diets for all, with the added requirement that their accessibility and affordability are an integral part of how food systems function. The concept of transformation characterised in this report is both a vision of the future and a goal requiring specific actions today. But it is essential that all actions proceed in concert across the entire food system. For example, policies to increase the supply of nutrient-rich foods will fail if individuals are not persuaded to consume them, nor will they be viable without innovation and investment in the storage, processing, and transportation of perishable foods.

Figure 1: Priority policy actions to transition food systems towards sustainable, healthy diets



Source: created by authors

4.1 Ensuring the *availability* of nutrient-rich food, sustainably produced

Agriculture and related food policies are not supporting healthy diets at the most fundamental level – they are simply not producing enough of the nutrient-rich foods needed globally, and they are failing to produce foods sustainably. Unless these shortfalls are addressed, millions more people in the decades ahead will join the three billion people who are unable to access a healthy diet today. Those affected will be condemned to lives blighted by inequality and disadvantage, as the impacts of poor diets affect their health and cognitive development.

Expanding food production sustainably, including more quantity and diversity of nutrient-rich foods, will be a major challenge, not least because of entrenched attitudes and production practices, vested interests, and the costs involved in the transition. The need for these changes is growing ever more urgent because of population growth, the escalating costs of diet-related disease, the negative impacts of climate change, and the degradation of environmental resources.

Several principles need to guide the food system transition steps relating to enhanced food availability:

1. Rebalance *what* is produced to ensure sufficiency of nutrient-rich foods – both quantity *and* quality are important;
2. Refocus on who produces: support and enhance smallholder production and diets in ways which promote their health as well as contributing more to emissions reduction, optimising natural resources use, and carbon sequestration through enhanced agroforestry practices;
3. Redirect food policy agendas from a focus on agricultural output to increasing the efficiency of entire food systems.
4. Renew understanding of *how* crops and livestock are grown through the sustainable intensification of agriculture – improving efficiency, substituting more environmentally beneficial practices for environmentally harmful ones, and redesigning production systems. Novel technologies – including improved agronomy, digital innovations, and new breeding methods – have an important role to play in fostering sustainable productivity growth, diversity, and resilience in agricultural production systems.

Three major policy shifts relating to food production are needed: each will remove a fundamental impediment to progress, while yielding significant economic benefits:

1. Rebalance public sector subsidies to enhance local and global supplies of nutrient-rich foods. Even a relatively modest shift in these subsidies (e.g., 25%) could have a major effect.
2. Rebalance public agricultural research and development (R&D) from a commodity focus to a food-systems focus. Increase funding overall, but especially for actions that increase the supply of nutrient-rich foods through sustainable and resilient farming.
3. Rebalance food production systems to deliver sustainable, healthy diets. Investing in different approaches, goals, metrics of success, and reward systems relating to food production would represent a substantial realignment of investment patterns, market agendas, policy priorities, and on-the-ground activities across the world. This includes a major new focus on sustainable intensification, reforestation for carbon sequestration, and promotion of system-wide efficiency gains over a single narrow focus on productivity gains in individual outputs of agriculture.

Rebalancing of food production systems would generate substantial rural as well as urban employment opportunities in LMICs. Wider benefits will flow globally from greater GDP growth and addressing income and health inequalities.

> “By 2030, assuming current waste levels remain unchanged, sub-Saharan Africa would fail to meet the 400g per person per day threshold [for intake of fruits and vegetables].”
>
> D’Croz et al. 2019[9]

> “... agriculture and agribusiness together could command a US$1 trillion presence in Africa’s regional economy by 2030.”
>
> World Bank 2013[10]

4.2 Making sustainable, healthy diets *accessible* to all

Year-round accessibility to sustainable, healthy diets means that all consumers can obtain the range of nutrient-rich foods needed to maintain an active healthy life and within planetary boundaries. Since most people do not produce what they eat, the following policy approaches are key:

1. **Use trade policy levers more effectively to achieve the goal of sustainable, healthy diets.** Trade mechanisms are not traditionally designed for these goals. While this has been a missed opportunity in the past, trade presents multiple opportunities for the future. Many instruments can help shift the mix of foods available domestically as well as their relative prices, including formal trade agreements, appropriate tariffs, and food safety regulations. Regional strategies, such as Africa's Malabo Declaration on Accelerated Agricultural Growth should be encouraged.

2. **Governments should resist the imposition of export restrictions at times of sharp food price spikes and look instead to lowering tariffs and value-added taxes (VAT) to encourage trade flows.** Food trade helps to manage price volatility and risks from financial crises, pandemics, or shocks associated with climate change. Protectionist trade policies are increasingly acknowledged to have serious consequences for food and nutrition security. Exports of nutrient-rich foods are not necessarily undesirable and should be considered in the overall context of the nutrient value and affordability of foods available to domestic consumers via their own production and imports.

In **2018**, around **55%** of the world's population lived in urban environments, in **2016** urban residents were already consuming roughly **70%** of the entire world's food supply.[11]

About **25%** of available calories and protein are lost globally, roughly **10–15%** of fats, and **18–41%** of vitamins and minerals, including **23–33%** of vitamin A, folate, calcium, iron, and zinc.[12]

3. **Support investments in the infrastructure needed to optimise food value chains.** Strategies will be particularly needed to 'feed the cities', especially where urban populations will continue to grow relative to rural settings. Substantial investments in hard and soft 'enabling infrastructure', such as roads, cold storage, electrification, and access to credit, are important for moving food (particularly perishable nutrient-rich foods) from rural to urban markets; these measures have the potential to improve the efficiency, costs, and profitability of smallholder producers and SMEs.

4. **Generate jobs across the food system, beyond agriculture.** Adding value to food through processing, packaging, and handling is a major potential source of job creation in rural economies in LMICs. It is also crucial for developing regional food-related manufacturing sectors, as well as helping to make nutrient-rich foods available at locations more distant from their place of production.

5. **Significantly reduce loss and waste to preserve nutrients along the value chain.** Nutrients generated in the food system need to be retained for consumers to benefit. This avoids food having to be 'grown twice'. There is a wealth of potential innovations to be drawn upon by actors throughout food chains. But the choice of where to act needs to take careful account of where in a specific food chain most losses of nutrients occur.

4.3 Making sustainable, healthy diets *affordable* to all

A healthy diet based on today's prices and patterns of consumption is already unaffordable for an estimated three billion people worldwide. The scale of the affordability challenge means that a broad strategic approach is needed, one which takes account of local contextual challenges and opportunities and which addresses both the supply side and the demand side simultaneously. Rising incomes alone will not bridge the 'affordability gap'. Concerted action from both high- and low-income countries, as well as donor agencies, will also be essential.

Modelling analysis shows that a shift to significantly improved diets in terms of health and sustainability would cost more (at current prices) in 71 countries (with a combined population of 4.1 billion). However, such a shift would cost less (per capita) in 86 countries (with a combined population of 4.2 billion). However, these aggregated figures mask the reality that the poor are still likely to see increased costs.[13,14]

But today's food prices fail to cost in external impacts, notably in respect of climate change and the consequences of inadequate diets for human health. When these externalities are factored in, based on diets that are both more sustainable and more supportive of human health, the price of improved diets could fall by around 4% in LMICs by 2050 and 28% in HICs, mainly due to a rebalancing of plant- and animal-sourced foods. While the cost of diet reductions are significant, the affordability gap for LMICs would still be substantial, which means that key actions need to be taken today to protect food consumption patterns of the poor during the transition phase.[13,14]

However, if policy actions and investments recommended in this report were to be implemented quickly and at scale, their combined effects on prices would be to reduce the cost of sustainable, healthy diets more quickly, i*ncluding for most LMICs*. The latter can be achieved if actions were to be taken immediately to reduce food loss and waste by up to 50% from current levels (in line with the SDG target to reduce the cost of current diets by 14% on average) alongside growth policies that include faster rates of poverty reduction, stricter land-use regulation, lower barriers to food trade, and a trend towards lower meat consumption *in high-income countries*. **A strategy to bridge the affordability gap should have the following components:**

1. **Measures to support economic growth, and specifically tackle poverty levels and income inequality.** Roughly 75% of growth in global GDP up to 2030 is projected to accrue to low- and middle-income countries.[8] By 2030, many recently very poor and disaster-affected countries in sub-Saharan Africa, including Mozambique, Rwanda, and Ethiopia, were (before COVID-19) expected to more than triple the size of their own economies.[15]

2. **Carefully designed consumer-level taxes and subsidies on key food categories – to shift the relative prices of staples and ultra-processed foods versus nutrient-rich foods in ways that make the latter more affordable to more people.** While many initiatives relating to taxes show promise, there remain few examples in low-income countries, although this is changing. Some researchers already conclude that measures seeking to modify the prices of targeted nutrient-rich foods are 'effective in improving population diet by modifying what people buy'.[16]

3. **Refocusing of safety nets to support diet-quality goals.** Income transfers to the poor can be particularly effective: they can promote social protection and greater equity of purchasing power and help protect the most vulnerable in the transition phase of food system transformation, when food price uncertainties may arise. There is a strong case for governments and donor organisations to focus on income-transfer interventions tied to accessing nutrient-rich foods, provided they are well-designed and well-implemented.

4. **Reducing the cost of nutrient-rich products through technology and innovation.** Examples include investments in agricultural research and development to increase the productivity of fruits, vegetables, legume crops, and nuts/seeds; precision agriculture; reduced food loss/waste; and improved storage technologies to better protect perishables along the entire value chain.

4.4 Influencing demand: Making sustainable, healthy diets *desirable* to all

Governments need to do much more to encourage and enable people to make more informed dietary choices, but without being prescriptive or impinging on consumer sovereignty. Merely making sustainably produced, healthy foods available and affordable does not mean that people will choose them.

- **Influencing dietary choice is important to drive improvements in healthy eating, but it is also critical for addressing the lack of sustainability of food systems.** Today's diets involve negative feedback loops which drive a spiral of multiple dysfunctions in food systems. For example, certain modes of agricultural intensification driven by consumer demand for foods that have the highest environmental

externalities can result in soil depletion, leading to a decline in yields and the need for greater intensification. Similarly, monocropping can exacerbate biodiversity loss relating to pollinators. With pollinator populations in decline, yields are reduced and food supply issues intensified. Understanding these vicious circles, and the role of diets within them, is critical to reversing them and achieving sustainable food systems. Many factors influence food choices: advertising, taste, convenience, social and cultural norms, and nutritional information. Even nutrition-conscious individuals balance perceived trade-offs between long-term health benefits and immediate gratification of tastier but less nutrient-rich food products.

- **People's collective purchasing power, and its influence on food-industry priorities, has the potential to stimulate market growth and be a powerful force to drive food system transition.** Most governments shy away from adopting an active role in influencing choice: this needs to change. The starting point should be to establish a common policy agenda across government, engage with all non-governmental stakeholders in defining desirable scenarios for future food systems locally, and promote much greater consumer awareness of the planetary and health implications of food choices.

- **Behavioural nudges are an important tool, but there is limited evidence for the kinds of interventions that are most effective in LMIC settings.** A way forward here is to trial different approaches and implement what works best.

- **Reduce and regulate advertising to children, and promote more active marketing of sustainable, healthy diets as an aspirational norm for all nations.** Self-regulation in the form of voluntary guidelines has been shown to be largely ineffective in reducing the number of food advertisements promoting foods which are not conducive to healthy diets: ultra-processed foods, snacks, and toy-branded fast foods aimed at children.

- **Define principles of engagement between public and private sectors, and clearly articulate responsibilities in moving towards common goals.** The diverse companies that make up the food industry must align their considerable influence (e.g., through advertising, retail environments) to shift demand in the right direction. Anything else is unacceptable. The guiding questions for policy makers are: what are the appropriate incentives that would 'persuade' commercial food companies and retailers to make the required changes, recognising their different priorities? And when persuasion is ineffective, is regulation required? Examples of experience in different countries will help inform those decisions.

- **Citizens must be empowered by information: Food Based Dietary Guidelines (FBDGs) need to be substantially improved and used much more effectively.** People need advice which is authoritative and trustworthy, and which cuts through the erroneous, conflicting, and changing advice which is prevalent in the media and on the internet. Three tests for effective FBDGs: are they user-friendly, do they address issues of health *and* sustainability, and do policy makers *across government* use them to inform policy?

If FBDGs were redesigned and fully adopted, the economic value of reduced mortality is estimated to be US$7.2 trillion to US$8.9 trillion, or equivalent to between 10% and 15% of global GDP.[17]

5. The reality of major policy change in LMICs: practical considerations

Given the benefits that would accrue from achieving sustainable, healthy diets for all, the limited actions taken in recent years represent a missed opportunity. Why has it proved difficult for policy makers to make the necessary shifts in policies, companies to shift their approach to food product development and retail, and food purchasers to shift their dietary choices? Three major factors are at play – understanding these is the first step to their resolution:

1. The complexity of food and environmental systems in a context where policy actions on food, health, agriculture, and climate are generally managed separately – the need for 'joined up' policy is a cliché, but still pertinent. There are no easy answers, although convincing relevant policy makers of the critical importance of sustainable, healthy diets to their respective policy agendas is a first step – but that needs to be followed up by embedding these objectives into their own plans and strategies.

2. Competing priorities for:
   - governments who have to make difficult policy choices,
   - private companies making investment choices on product portfolios or retail strategies, and
   - households making food-purchase choices. The issue of policy trade-offs is considered below.

3. Uncertainty about, and mistrust in, scientific evidence which is sometimes exacerbated by political polarisation. Improvements that are required for research and evidence to better support policy decisions are discussed in Box 2.

Policy makers seeking to transition food systems must think through how to navigate difficult trade-offs. Some of these are within the food system, but others go much wider. For example: how to balance resource expenditure between education, stimulating economic growth, and investing specifically in food systems; how to allocate scarce resources

between addressing different forms of malnutrition which may affect a population simultaneously, including undernutrition, micronutrient deficiencies, or overweight and obesity; how to strike a balance between investing in agriculture versus other sectors in rural communities; and how to balance avoiding coronavirus-led debt default in the short-term with investing in food system transition to achieve longer-term health and economic benefits.

Approaches to guide the resolution of trade-offs include: mapping out existing policies in relation to new goals and likely trade-offs; understanding the costs and benefits of alternative actions; transparently defining who pays and benefits from alternative strategies; taking a longer term perspective; and 'getting prices right'. This last point is particularly important as most poor people around the world are already unable to access minimally adequate diets just in terms of calories and micronutrients.

Priorities when deciding among the many actions required to implement a food system transition: ensure transparency in decision making, and on costs, benefits, winners and losers where these are known; change should be implemented based on evidence and transparent expectations. And it will be important to establish feedback mechanisms to allow for real-time adjustments to policy and process – the evidence for what 'works' specifically in LMICs and in different contexts is not fully developed. A priority should be to 'do no harm': there is potential for some producers, traders, retailers, and food purchasers to be vulnerable during the transition. Investing in strengthening institutions and capacity building should be a priority.

6. Next steps: managing the transition

Decisions on how to proceed must keep in mind the four overall objectives, relating to increasing the supply of sustainably produced nutrient-rich foods, making those foods more accessible to more people, ensuring that quality diets are affordable to all, and making informed dietary choices highly desirable. Against that background, the following three steps represent important actionable areas which are within reach of the majority of LMICs to launch the process of transition. Bringing people together around these three sets of actions represents a clear way forward – this may require establishing new informal linkages and agreements, or more formal governance and accountability structures.

1. **Resolve policy distortions and incoherence –** or these will continue to impede progress.
   - Initiate a government-wide *policy review* to identify:
     - what existing policies, strategies, and institutional mandates support or hinder coherent actions towards food system goals
     - how to resolve policy incoherence across sectors and ministry responsibilities (from the perspective of delivering sustainable, healthy diets), and
     - which trade-offs to make where competing goals and interests currently need to be addressed or will need to be addressed in coming years.
   - Implement a government-wide *spending review* to determine what public funding and institutional mandates could be:
     - repurposed to cover the costs of implementing transition phase actions, and
     - realigned to better facilitate one or more of the four transition objectives.

2. **Establish multi-win targets that can be attractive to multiple constituencies.** It will be important early on to *establish targets for actions* which improve food system functions in ways that deliver multiple benefits simultaneously. That means initiating national and subnational dialogues (involving alternative scenarios discussions) and expert commissions to define appropriate targets which bring clearly defined benefits on several fronts through carefully costed interventions. For example:
   - Urgently review and *update national guidance on diets* in ways which are
     - based on the latest evidence,
     - support more informed dietary choice,
     - policy maker-facing to guide strategic and investment decisions, and business-centric, using clear messaging which helps chief executive officers (CEOs) determine how best to support national plans of action relating to both human health and sustainability.

3. **Leverage existing or planned interventions that can be made more food-system friendly.** In all cases, the role of natural resource depletion or degradation, greenhouse gas emissions, and human health outcomes need to be placed at the centre of problem assessments and defined solutions. For example:
   - *Identify policy instruments* that can be expanded in terms of coverage, strengthened in terms of capacity and funding, and better aligned with the goal of promoting sustainable, healthy diets for all. These may include various income transfer programmes (social protection schemes, cash transfers via safety nets, employment guarantee schemes), business promotion initiatives (extending rural finance, tax incentives for SMEs in the food sector, enhanced canteen meal projects) or agricultural extension programmes which also support community-level health messaging. A root-and-branch assessment of the services, goods, and information provided via public sector actions can support the promotion of a more coherent portfolio of investments. These should clearly articulate human and planetary health benefits alongside other goals.
   - *Implement bundles of measures* that promote pathways toward multiple wins rather than single actions which only tackle individual problems in siloes. It is important to demonstrate how returns on investment can be determined through costed health and environmental outcomes, not just income growth. This requires identifying where in national food systems an intervention could bring multiple gains. While the evidence base for

such actions is still limited, there are many encouraging initiatives which need to be closely monitored, measured, scaled, and replicated if shown to be cost-effective in achieving the desired, multifaceted aims. There are still untested and under-explored opportunities for innovation to be considered. Trying different options with wide societal engagement and transparency of intent will be of substantial value in starting the transition.

- *From the supply side*, a market assessment can establish which nutrient-rich foods (and ultra-processed foods) are available in which markets at what price relative to the cheapest available staples. This can suggest:
  - actions needed to increase the availability of nutrient-rich foods (realign domestic agricultural R&D, enhance technical assistance to farmers willing to invest in, say, horticulture or aquaculture, incentivise private seed companies to stock and promote quality products beyond staples); and
  - review price, tax, and tariff policies which influence commodity and technology priorities, determine the externalities of current approaches, and promote alternative technologies with measurable reductions in emissions and natural resource inputs.
- *From the food marketing and retail side*, promote greater efficiency along all food value chains, including setting actionable targets for reducing food losses and waste by identifying market warehousing upgrades; promoting enhanced affordable household-level food storage technologies; setting targets by commodity value-chain; and enhancing rural market access via infrastructure investments, which cut transaction costs.
- *From the demand side*, determine the real nature of the gap between the cost of a sustainable, healthy diet across subnational settings and the affordability of that diet across the income distribution of the local population. This will suggest the imbalance existing in the relative prices of nutrient-rich versus other foods (which suggests actions aimed at price subsidies for nutrient-rich foods and/or taxes on ultra-processed foods), and the scale of income inequality needing to be bridged via pro-poor income growth initiatives over the longer-run and targeted income transfers to the poorest (potentially conditional cash transfers tied to enhanced dietary demand) in the short-run.

Each of these steps is within the purview of national governments; they can all be taken without delay to generate empirical lessons and cost and benefit insights and to build awareness of the urgency of these issues and catalyse public and political support for the actions proposed. None require major new funding or new approaches to policy making, but the potential for much greater policy coherence and impact across the food system is significant.

Box 2: Improving the support provided by research and evidence to decision makers

Governments and their development partners, including the UN and other international organisations, should work together without delay to substantially improve and build on existing mechanisms to support science and policy engagement with sustainable food systems transformation. The forthcoming UN Food Systems Summit in 2021 is a critical opportunity to agree upon concrete proposals for the necessary improvements including: the organisational structures that should be established and charged with delivery, any necessary funding and governance oversight, and the intergovernmental backing which will be essential to ensure the resulting science and evidence is acted upon. Preparations for those agreements need to start immediately.

There is already high-quality research which informs policy development on pathways towards the mitigation of climate change. However, there is considerable potential for the research community to do much better in support of policy makers facing difficult decisions at the intersection of human and planetary health. Policy makers are confronted with rapidly evolving scientific views across multiple disciplines, but there is too much research that either fails to meet the most pressing needs of policy makers (especially in relation to managing policy trade-offs and costs), or which lacks the interdisciplinary perspectives needed to fully address the diversity and complexity of global and local food systems.

Three priorities for action stand out:

1. **Establish inter-governmental and global institutional mechanisms** to better forge credible and authoritative consensuses on scientific evidence, resolving controversies surrounding new research – *conflicting advice translates to indecision and ineffective policies*;

2. **Streamline and improve research efficiency and focus on policy needs** to improve linkages across science regarding climate, natural resources, food, health, and nutrition – *'joined up' science is essential to inform multi-sectoral policies*; and identify data and knowledge priorities, and ensure commissioning of necessary modelling – *more research needs to be driven by the specific needs of policy makers*;

3. **Increase the legitimacy of scientific advice through transparency** in a rigorous synthesis and assessment process which fully includes the perspectives and voice of low- and middle-income countries – *confidence in science will translate to science-led policies*. This goes far beyond the remit of any existing science advisory bodies for policy at national or international levels.

7. Concluding remarks

When work for this Foresight report started 18 months ago, the world was a very different place. The coronavirus pandemic, and its effect on incomes and diets, is the most recent event to highlight the fragility of existing food systems and the need for transformation.

A fragmented approach to policy making and investment in our food systems remains the paramount challenge. This leads to a lack of focus on the quality and affordability of diets; outdated policies that continue to impede change, or even drive change in the wrong direction; powerful actors pulling in different directions; and a lack of attention to the potential for multi-win policies which support job growth, economic productivity, health, and reduced threats to climate and planetary boundaries.

The window is fast closing for reversing the situation and delivering key international targets such as SDG2, which includes a focus on hunger and other important international targets concerning planetary boundaries. The outlook is certainly daunting, but this report shows it is not set in stone. By breaking the problems down into their constituent parts, this report has set out both a broad approach and a range of pragmatic and achievable actions, which taken together can constitute a path forward – both for international organisations and actors of all types in individual nations.

Much will depend on the political will, courage, and commitment of leaders of governments, particularly in LMICs and their development partners, UN agencies and other international organisations, and CEOs of food companies to challenge the *status quo*, to act boldly, and to drive a process of transition guided by science, practical evidence, and moral imperative. The way forward is clear (see Box 3). The Global Panel believes that with strong leadership, these new opportunities to improve human and planetary heath can and must be secured for today's and tomorrow's generations.

Box 3: Ten priorities for transitioning food systems to protect human and planetary health

The report contains many recommendations for action by different classes of stakeholders, and which need to take account of local circumstances and constraints. However, the following priorities are considered to be generally applicable:

1. **Policy makers must build on existing global development targets (such as the SDGs and the Paris Agreement on Climate Change) so they embody the goal of sustainable, healthy diets for everyone as a shared objective.** These targets need to recognise the central importance of sustainable, healthy diets as a key enabler for progress on diverse agendas – equality, economic growth, climate change, the environment, and job creation.

2. **Policy makers in relevant government departments must address planetary and dietary challenges simultaneously, since they are so fundamentally interlinked.** The approach to date, involving tackling these issues piecemeal and in silos, simply will not work.

3. **Donor agencies must support LMICs to ensure that the transition of food systems is socially and ethically just.** They have an important role to play to ensure that the poorest are protected during and after a period of food system transition.

4. **Governments in countries at all stages of development must resolve policy distortions which could fundamentally impede change – or even drive food systems in the wrong direction.** Examples include: taxation and regulation, subsidies, and food-related research and development. The aim is to give much greater weight to the importance of nutrient-rich foods and to better support measures which further both human and planetary health simultaneously.

5. **Relevant ministries (e.g., agriculture, health, transport infrastructure, environment) need to work together to implement policies to realign production systems so that they support healthy diets in sustainable ways.** Food systems today do not produce enough nutrient-rich foods to meet today's needs, let alone projected demand over coming decades, nor are they producing most foods sustainably. Narrow targets relating to productivity need to be replaced with broader measures valuing efficiency and sustainability.

6. **Major trans-national businesses and local SMEs must work closely with the governments on more clearly articulated common agendas to deliver sustainable, healthy diets.** While already contributing much, the many diverse commercial actors too often pull in directions that are not conducive to health or to the sustainability of food systems. It is important for governments to incentivise businesses to make a much wider range of nutrient-rich foods affordable to the entirety of 'bottom of the pyramid' families. More generally, a comprehensive framework for food-industry engagement is needed.

7. **Policy makers in relevant government departments need to prioritise building resilience of food systems – COVID-19 has highlighted their current deficiencies and vulnerabilities.** A broad approach is required which addresses: the causes of lack of resilience within food systems, the root causes of the threats, and mitigation measures which may be needed during times of stress.

8. **Civil society advocacy groups and citizens need to play their part. The former have a major role in leveraging change in businesses operating across food systems and holding policy makers to account, and the latter have considerable influence to drive change through their purchasing power.** However, shifts in demand in favour of sustainable, healthy diets, will need encouragement and empowerment through information from trusted sources.

9. **Policy makers in relevant ministries in LMICs should creatively target actions which can create multiple 'wins' across health and sustainability.** Opportunities need to be sought throughout food systems from farm-to-fork. Major projects in sub-Saharan Africa and South Asia have already shown that this is possible, creating substantial and lasting benefits in terms of jobs, equality, and the development and prosperity of individuals and regions. Technology innovations across food systems from production through processing, storage, and retail hold considerable promise.

10. **Leaders and decision makers should capitalise upon upcoming global fora to agree to new commitments for making food systems more resilient and diets that are healthy and sustainable.** The Nutrition for Growth (N4G) Summit and the United Nations Food Systems Summit are important opportunities to explore the creation of a dedicated Global Financing Facility for food systems transformation and to secure national endorsements for change, including much improved capacity for research and evidence to better support policy decisions. A new vision for sustainable food systems delivering healthy diets for all must be supported through the best science and evidence of what works as informed by practical evidence.

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E secretariat@glopan.org
W glopan.org
@Glo_PAN

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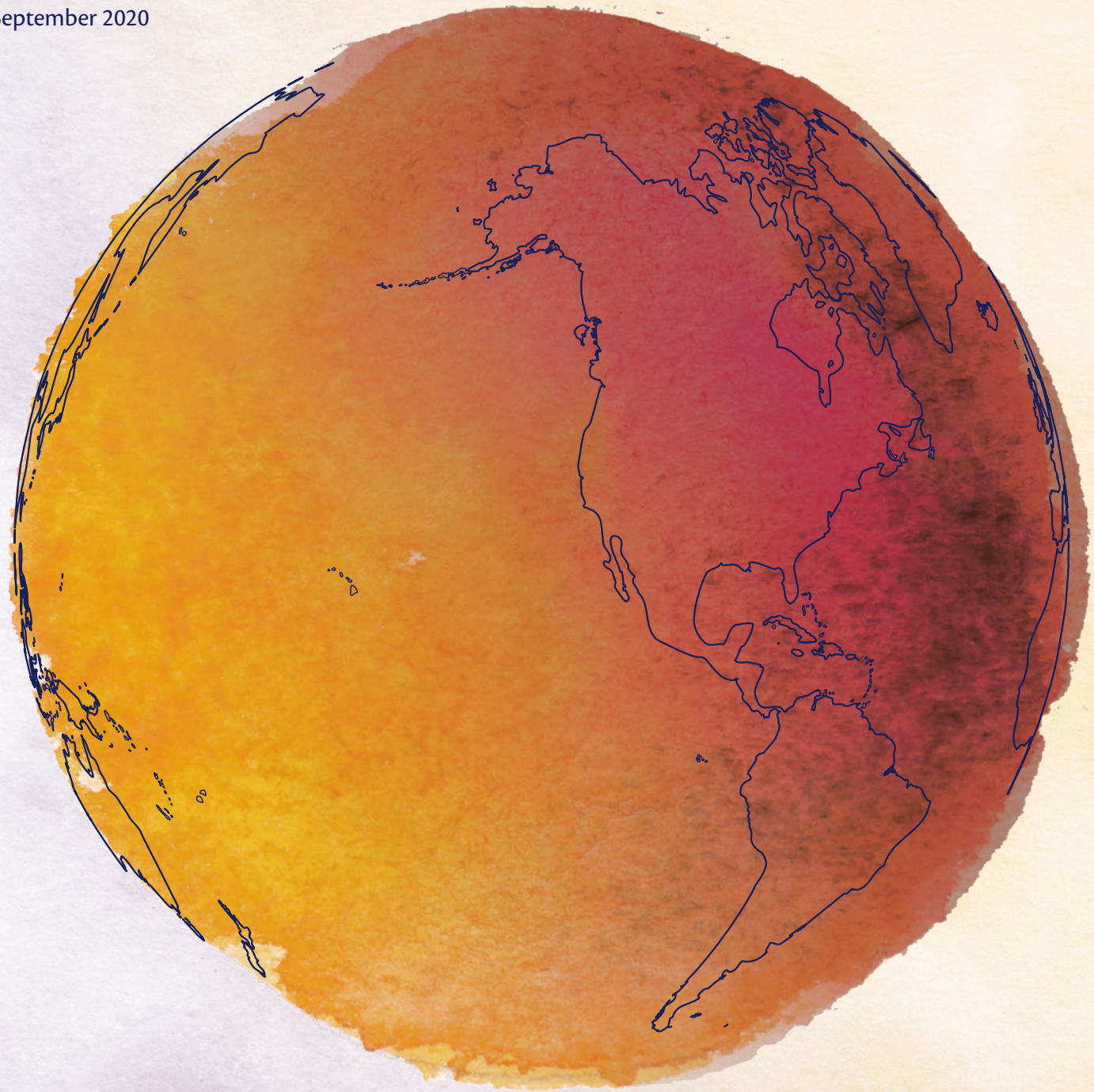

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