KPMG

Reimagining global food system resilience

Executive summary

KPMG. Make the Difference.

kpmg.com/globalfoodresilience

Foreword

The critical role food plays in the effective functioning of society is a well-researched and documented topic — from the importance of a nutritious diet on public health and public finances, the social cohesion around meals, the soft power of culinary influence, all the way to the devastating impacts of poor nutrition on victims of conflicts and political instability resulting from access to food.

Discussions around supplying nutrition to the world's population have tended to largely be reduced to the role of farmers, processors, and retailers, rather than being recognized holistically as one of the fundamental platforms on which society is built. The food system impacts and shapes outcomes for every person and every organization on the planet.

One of the lasting impacts of the COVID-19 pandemic is that it reconnected a large population of food secure people to the critical role food plays in their lives. For many around the world who had been comfortably able to access food, facing empty shelves and shortages as production disruption and supply chain failure highlighted fragilities that have been progressively built into global food systems that they were largely oblivious to. For those already facing food insecurity, their everyday challenges have been further exacerbated.

This shock continues to reverberate today around the world as governments find themselves having to focus on the resilience of their national food supplies. Whether it is as a grower, a processor, a funder, a supplier, an insurer, a transporter, a technologist, or a consumer, the influence of the food system is pervasive. However, the systems we rely on have reached a critical juncture facing a series of growing challenges:

- **Environmental degradation, climate change, and biodiversity loss** threaten the natural resources upon which food production depends.
- **Geopolitical shifts and tensions are destabilizing trade routes and supply chains,** while highlighting the consequences inequitable food access can have on social cohesion.
- **Energy shortages and rising costs** highlight the need to explore interactions between food and energy production to find solutions that lift the resilience of both systems.
- **Non communicable diseases, like obesity and diabetes,** are placing pressure on public health systems and raising the focus on the quality of nutrition food systems deliver.

Every person and organization on the planet is inextricably linked to food systems. Whether it is as a grower, a processor, a funder, a supplier, an insurer, a transporter, a technologist, or a consumer, food plays a critical role in the daily lives of every person on the planet.

Ian Proudfoot
Head of Global Agribusiness
KPMG in New Zealand

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Food systems are so important to the effective functioning of society it is unreasonable expect their transformation to be solely left to farmers and their supply chain partners, many of which are at best marginally profitable.

We recognize much valuable work has already been done exploring future pathways for global food systems and are not looking to repeat these important contributions.

KPMG's hypothesis is that resilient food systems are founded on broad collaborations rather than being left solely to farmers and food companies.

Resilient food systems enable sufficient, affordable and nutritious food to be sustainably grown (from both an economic and environmental perspective) to meet society's needs.

This requires collaboration that involves not only traditional food sector participants, but organizations from across the economy that historically would not have spent much time thinking about the role they play in the food system. We believe the future lies in radical collaborations where participants from sectors as diverse as energy, healthcare, finance, technology, construction and infrastructure contribute as equal partners with traditional food sector participants and government in solving the challenges that will unleash resilient food systems that are positive for the environment, for communities and for all of those participating in the value chain.

This report has been written with the goal of providing insight to enable business leaders to explore the opportunities available to them in joining forces to build a resilient food future.

We begin by outlining the scale and complexity of the global food system, then examine the key forces driving its transformation — technological innovation, environmental pressures, and evolving consumer and societal expectations. We close by encouraging business leaders to consider how these dynamics intersect with their strategic priorities, and where proactive engagement in food system transformation could create long-term value for their organization and stakeholders.

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

What is the food system?

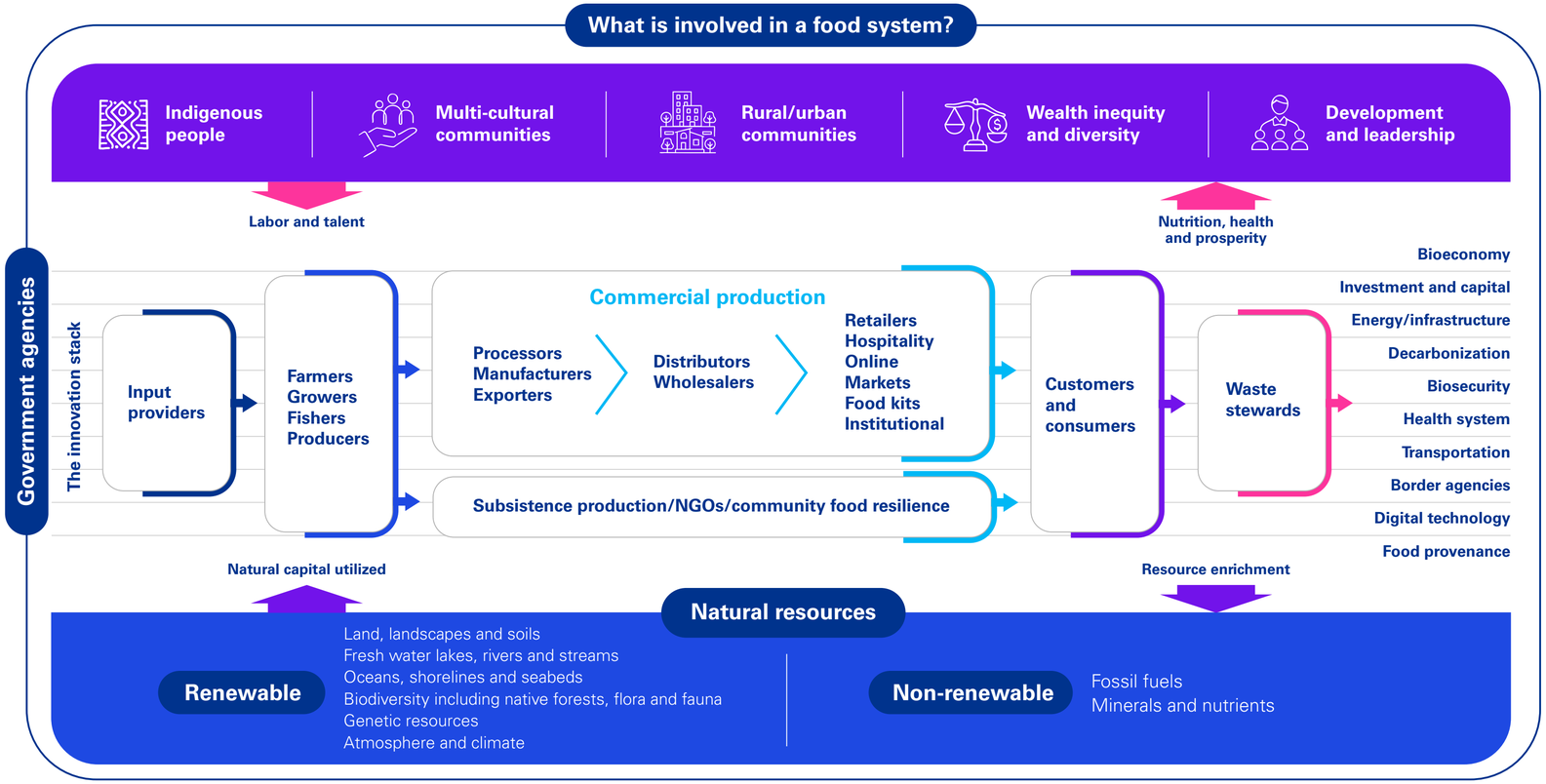
The food system is a dynamic and complex network that does far more than supply what ends up on our plates. It underpins energy and productivity, supports health through nutrition, and relies on agriculture, horticulture, and aquaculture working in alignment with nature. Every aspect of it connects us to the soil, water, air, oceans, and ecosystems that sustain life on the planet.

The food system holds the power to regenerate the earth, uplift communities, and transform industries, offering a profound opportunity to nurture a healthier, more resilient world. Yet the system faces multiple challenges that threaten to undermine the progress achieved by previous generations.

As the global population has grown and its food demands have evolved the food system has grown, enabling it to cultivate, process, and distribute ever greater quantities of food — becoming ever more efficient and effective at delivering increased yields to meet the evolving demands of diverse consumers.

While never having succeeded in feeding the entire population, advancements in science and technology, supply chains, and business models have shaped a web of collaborative connections that has seen global food insecurity consistently decrease and the total number of people fed consistently increase.

However, regional, national, and global conversations have become increasingly disconnected from the land and people that produce our food. Despite the recent introduction of reference to the origin of certain products as food companies recognize that this is a growing expectation from consumers; the conversations that shape our food system happen in the middle of cities, far from the fields and the passionate people that work the land growing food for their living. This is happening to such an extent that many farmers feel that many of the decision makers have never left their own footprints on the most fundamental part of our food system — the farm.



© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Ten key levers for a resilient future

Having acknowledged the challenges facing the global food system, we canvas the levers to the future of the system, and how organizations are starting to respond to them to create the food system of tomorrow.

01 **There are multiple competing uses for agricultural land**
Rethinking how land is allocated, managed, and valued is urgent, as is the need to reimagine food production systems to reduce the demands they have for land.

02 **Facing into the reality of climate change**
Climate change is no longer a distant threat to global agriculture — it is an immediate, compounding force reshaping the productivity, stability, and viability of food systems.

03 **Water stress and shortages are the norm for more than half the global population**
While there are some plants and animals that can thrive with scant water resources, for the majority of the species that have historically formed the basis of our diet, adequate water is crucial to deliver the yields necessary to feed the global population.

04 **Lifespan has increased while health span decreases**
The global food system must recognize its role is not just to deliver calories, but to also provide a platform for lifelong health.

05 **Consumers with choice have very different expectations on food producers**
Historically, the global food system has evolved to serve a single mandate: make food abundant and cheap. While this delivered a tremendous lift in food supply, it also entrenched a low cost, monocultural mindset that one-size-fits-all in terms of food.

06 **When it comes to food 'the have nots' are too often out of sight**
What's needed to feed the current global population is not more food, but smarter systems and the courage to redesign business models so that some priority is attached to access, equity, and resilience.

07 **Subsidizing farmers supports production and price distortion**
While food subsidies have helped stabilize supply in many regions, they have also contributed to unintended consequences that undermine food system resilience.

08 **Microorganisms are causing major disruption, with growing risk**
The food system faces a constellation of microbial risks-from antimicrobial resistance (AMR) and foodborne pathogens to highly contagious animal diseases-that threaten health, trade, and food security in equal measure.

09 **Capital flows drive what grows**
In the food system, capital allocation influences everything from the crops grown to the pace of innovation and the resilience of supply chains.

10 **Technological advances accelerate everything**
Technology is not simply one of many forces reshaping the global food system — it is the catalyst accelerating all others.

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Ten questions

Q.1 — Consider the impact of food on our organization

Do we understand the impact that the food system has on our business and how the failure of a critical food system in a key geography could impact operations and returns from that business and for how long?

Q.2 — Recognize new food futures in our strategic planning

Does our future scenario planning account for major shifts in global food systems, including new breeding and growing technologies, digital and AI adoption, antimicrobial resistance, changing diets, demographic trends, system vulnerabilities, and geopolitical moves away from free trade?

Q.3 — Clarity on what is within and outside the control of our business

Are we clear on what we can control, influence and steer across our value chains and where things are outside of our control but critical to our business? For the factors outside of our control, what can we do to better influence the outcomes that occur?

Q.4 — Understand how food interacts with our social license to operate

Do we understand where our social license to operate overlaps with key inputs into global food systems and is there the potential that our actions could be perceived to be constraining the ability of the food system to meet society's nutrition needs?

Q.5 — Investigate whether we have a technical solution relevant to the food system

Have we explored where we can utilize our technology suite (be that digital, mechanical, intellectual or biological) directly, through platforms or in collaborative partnerships to improve the resilience and effective of global food systems and the associated supply chains?

Q.6 — Influence regulatory outcomes to mitigate business risk

Do we have a clearly articulated plan as to how you participate in securing regulatory outcomes that support our business goals? Does this recognize the importance of maintaining a resilient food system that feeds the communities that our organization interacts with?

Q.7 — Explore energy and bioeconomy opportunities to diversify our business

Are we exploring opportunities available to our organization to participate in bioenergy, biomaterials and other nature based circular economy businesses to diversify our product/ service portfolio, create shareholder value and enhance the resilience of global food systems?

Q.8 — Reduce the impact of societal health challenges on our organization

Do we understand the impact that non communicable diseases (such as heart disease, diabetes, obesity and cancer) have on the efficiency, cost base and outcomes delivered by our business and what are we doing to respond to these challenges?

Q.9 — Allocate capital to participate in emerging opportunities in global food systems

Do we monitor investment opportunities available in global food systems to participate in new income streams and mitigate risks to our business? Are we plugged into the right venture capital, startup and innovation ecosystems to identify opportunities that will support our strategic goals?

Q.10 — Uncover partners to introduce and connect us to the biggest opportunities

Do we understand the food ecosystem in our key geographies and the individuals and organizations that we should be collaborating with to enable us to achieve existing goals, participate in emerging opportunities and reduce our exposure to food system failure?

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

How KPMG can help

KPMG is uniquely positioned to support organizations in navigating and transforming the future of food. From farm to finance, policy to packaging, our global network of multidisciplinary professionals brings deep sector expertise, cutting-edge technology, and strategic foresight to help clients unlock resilience, create value, and lead systemic change.

01.

Strategy and foresight

Our Futures and Foresight teams help clients anticipate disruption and prepare for emerging risks and opportunities across the food system. Through scenario modelling, geopolitical analysis, and ESG benchmarking, we support leadership teams in designing adaptive strategies aligned with long-term value and resilience.

02.

Sustainable supply chain transformation

We help businesses redesign supply chains to improve transparency, reduce emissions, manage climate risks, and enhance traceability. Our supply chain optimization, decarbonization roadmaps, and circular economy solutions help ensure systems that are both commercially agile and environmentally aligned.

03.

Capital and finance innovation

KPMG works with investors, development banks, and agribusinesses to structure innovative financing models-including green bonds, sustainability-linked loans, carbon market participation, and blended finance platforms. Our corporate finance and impact investment teams help clients unlock capital flows for regenerative transitions and nature-based solutions.

04.

Regulatory navigation and policy influence

We advise public and private sector leaders on evolving regulatory frameworks affecting food, climate, and sustainability. From compliance to strategy, we enable organizations to engage constructively with global regulations and actively shape the policy environments critical to their future.

05.

Technology integration and digital transformation

Our Digital & Innovation practices work at the intersection of food and technology-delivering AI-enabled forecasting, blockchain traceability, and smart farming solutions. We also help scale agrifoodtech platforms and digital twin capabilities to improve productivity, resilience, and consumer trust.

06.

Collaboration and ecosystem building

We facilitate multi-stakeholder coalitions across sectors-energy, health, infrastructure, and food-to build integrated solutions to systemic challenges. Our convening power and cross-sector networks help align incentives, share risks, and deliver collaborative impact.

07.

People, culture, and capability development

Through leadership development, workforce upskilling, and ESG culture transformation, we help organizations build internal capacity to lead in an era of rising stakeholder scrutiny and evolving consumer values.

Whether you're a farmer cooperative, food manufacturer, technology innovator, financier, or policymaker, KPMG can help you move from insight to action. Together, we can reimagine and help build a food system that delivers for people, planet, and profit — resiliently and equitably.

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Survey methodology

To better understand the priorities, aspirations, and visions of senior executives across industries directly shaping the food systems future, KPMG undertook a comprehensive global leaders survey with over 200 people responding via in-depth interviews. The subsequent qualitative findings below in part one go beyond the obvious, uncovering nuanced perspectives and unexpected insights that reveal the complexity of reimagining how we produce, distribute, and consume food.

Who responded?

The survey engaged a broad spectrum of respondents, including professionals from agriculture, technology, retail, healthcare, finance, and energy sectors. Participants ranged from senior leaders and mid-level managers to junior professionals, offering perspectives shaped by varying levels of experience and decision-making influence. Geographically, the survey captured insights from regions across the globe, with particularly rich input from Europe, Africa, Asia, and North America. This diversity allows for a multifaceted understanding of the global food system's challenges and opportunities.

What questions were asked?

The survey was designed to explore three core themes:

1. **Outcomes:** What are the most important results the global food system should deliver?
2. **Actions and aspirations:** What actions must be taken to achieve these outcomes? Respondents were encouraged to consider topics like business model innovation, investment priorities, and regulatory needs.
3. **Vision:** What does the future of the global food system look like? Participants shared their long-term hopes and the principles they believe should guide transformation.

This qualitative exploration offered respondents the freedom to share detailed, open-ended responses, both mitigating biases and allowing for a 360 degree view from our respondents, resulting in a rich tapestry of ideas, reflections, and challenges.

Why this matters

Understanding stakeholder perspectives is essential for addressing the complexity of the global food system. These responses provide a roadmap for action, shedding light on shared priorities, regional disparities, and sectoral differences. They also challenge conventional wisdom, offering fresh insights into the tensions and opportunities that lie ahead.

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

About the authors

Lead author

Ian Proudfoot
Head of Global Agribusiness
KPMG in New Zealand

Co-authors

Isabelle Allen
Global Head of Consumer & Retail
KPMG International

Richard Threlfall
Global Head of Infrastructure, Government and Healthcare (IGH)
KPMG International

Anish De
Global Head of Energy, Natural Resources and Chemicals
KPMG International

Sarah Nelson
Global Lead Director — Nature and Biodiversity
KPMG International

Apurba Mitra
Partner — ESG and Climate Change Lead
KPMG in India

Mike Hayes
Climate Change and Decarbonization Leader
Global Head of Renewable Energy
KPMG in Ireland

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

kpmg.com

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2025 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

KPMG refers to the global organization or to one or more of the member firms of KPMG International Limited ("KPMG International"), each of which is a separate legal entity. KPMG International Limited is a private English company limited by guarantee and does not provide services to clients. For more details about our structure please visit kpmg.com/governance.

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.

Throughout this document, "we", "KPMG", "us" and "our" refers to the KPMG global organization, to KPMG International Limited ("KPMG International"), and/or to one or more of the member firms of KPMG International, each of which is a separate legal entity.

Designed by Evalueserve.

Publication name: Reimagining global food system resilience: Executive summary | Publication number: 140010-G | Publication date: June 2025