


From a system where...

Food and land use systems have large hidden costs greater than the market value

Rising hidden costs

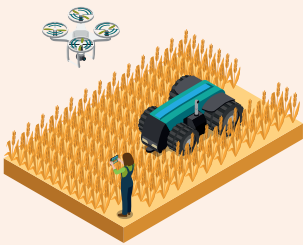
Food and land use systems generate \$12 trillion annually in hidden costs (\$2 trillion more than their market value) through their contribution to climate change and environmental degradation, malnutrition, other public health costs and widespread rural poverty.



Tinkering at the edges


Focus on marginal improvements

Focus on small adjustments and celebration of marginal improvements in a dysfunctional system where the rules of the game encourage non-sustainable practices.



Focus on system maintenance


Public subsidy and support mechanisms decoupled from public goods but help to maintain status quo. Low levels of public and philanthropic capital (e.g. less than 3% of climate finance) are deployed to de-risk investments without addressing flaws in the current enabling environment or targeting scale-able investment areas.



Concentration

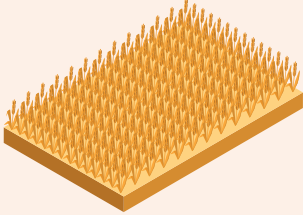
Geographic concentration

Just a few countries provide the bulk of the world's calories: Argentina, Brazil, China, India and the United States, and within them relatively limited areas like the Midwest in the United States. In the face of unavoidable climate change and weather variability, this massively increases risk to food security across the world.




Food type concentration

30 crops and animals provide 95 percent of human food energy needs and just four – rice, wheat, maize and potatoes – provide more than 60 percent. Four varieties of apple dominate global markets today, compared with the over 7000 that existed at the beginning of the 20th century. This concentration reduces resilience, increases risk and leads to less nutritious diets.



Company concentration

From 1994 to 2004 the market share held by only four companies in four key food and land use value-chain nodes increased by around 150% (from just over 20% to just under 60%). This consolidation increases numerous systemic risks, particularly when these companies have high levels of influence on governments.

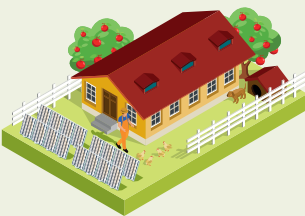


To a system which is...

Food and land use systems are net positive; costs are visible and largely paid by the responsible actor

Visible and decreasing costs

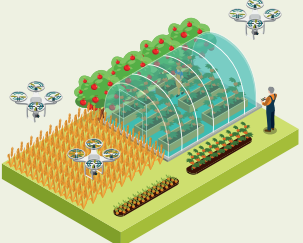
Hidden costs are reduced by \$5.7 trillion by 2030 relative to current trends scenario. Market value is at least \$5 trillion more than the hidden costs. Costs increasingly born by those responsible for their generation.



Redesigning the system


System redesign

System designed to encourage sustainable practices – through pricing externalities and "public bads", protecting and restoring nature, using public finances and regulations to drive sustainability and better health.



Focus on opportunities


Public and philanthropic funding allocations to food and land use systems are scaled and deployed to drive innovative, high-impact sustainable investments (e.g. capacity building and market development in key geographies) in a reform-enabling environment, rapidly driving down risk perceptions and mobilising private capital at speed and scale.



Diversity


Geographic variation

More localised food production, with local circular loops ensuring more efficient use of resources as well as greater variety and respect for local culinary traditions. Sustainable trade is, however, still essential to ensure healthy diets, diversify local production risk and reduce environmental footprints of food and land use systems, especially in areas of high biodiversity value.




Higher agrobiodiversity

The world would draw systematically – including through fiscal incentives and active use of extension services/seed banks – far more heavily on the great variety of food varieties available from nature, thus increasing both nutritional value and resilience of food and land use systems.



Digital innovation and transparency disrupt markets and increase diversity


Governments use investments, research and development (R&D) and regulatory measures to reduce information asymmetries in supply chains, strengthening the hand of smaller actors. Cross-governmental cooperation is established to reduce market concentration and develop open platform protocols that are essential for retaining and fostering competition, innovation and equity.



Linear, inefficient and long supply chains


Linear

Nutrients are mined, used and wasted. Only 15-20% of the nitrogen and phosphorus applied to crops in fertiliser actually reaches consumers' plates. In cities, less than 2% of valuable nutrients from organic waste gets looped back to productive use.




Inefficient

Land, water and chemicals are inefficiently deployed. Livestock uses 62% of agricultural land while delivering 17% of calories and 33% of proteins. Current irrigation efficiencies are often below 50%, with large losses occurring in the water transport system or through inefficient application to plants.



Long


There is nothing intrinsically wrong with long food supply chains, but the lack of pricing/regulation of externalities and "public bads" leads to far higher level of long-distance trade of products (including food) than would happen if those elements were properly priced into the transactions.



Circular, efficient and often local supply chains


Circular

Nutrients are captured after use and recycled in circular loops of value creation.




Efficient

Land, freshwater and nutrient use are driven towards efficiency through protection, regulation and pricing.



Often local


Urban and particularly peri-urban farming plays an increasingly important role in creating a symbiotic relationship with rural and urban populations. There is strong connection between movement towards local and circular supply chains respectively, strengthening both trends. Trade is still essential for nutrition, food security and sustainability, but with environmental rules applied to avoid unsustainable outcomes.



Opacity and impunity


Opacity

Despite progress over the last decade, the ability of systems actors to operate illegally and/or unethically in the shadows of international food and land use systems is significant, reinforcing and perpetuating low levels of accountability and high levels of impunity.



Impunity

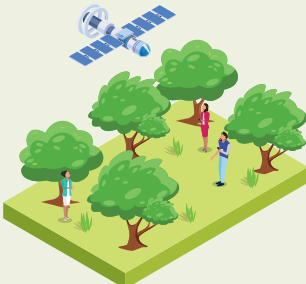
Food and land use systems are characterised by high tolerance of crime – both from public and private sectors – and thus high levels of impunity, even for murder. Natural resources worth between \$90 and \$260 billion are being stolen each year. Environmental crime grows at 2-3 times the rate of the global economy.



Transparency and accountability

Transparency

The public sector drives transparency throughout supply chains through leading by example, implementing and enforcing regulatory measures, investing in free, publicly available satellite data, and financing and processing information sharing platforms to ensure full accessibility of information on all key elements of food and land use systems.



Accountability

National governments and international cooperation put an end to impunity in food and land use systems, unlocking massive value creation potential while also ensuring a just transition and greater levels of equity. This is, in part, driven by a Global Alliance against Environmental Crime.

