

HOW TO INVEST IN SUSTAINABLE AND REGENERATIVE FOOD AND AGRICULTURE

Opportunities to Benefit the Planet, People, and Animals



Jesse Simmons – Managing Director, Research and Advisory Adam Rein – CEO and Chief Investment Officer

INTRODUCTION

Bringing food to your table using today's global food and agriculture system is no simple task. Over one billion people¹, over five billion hectares of land², and billions of animals³ are essential in bringing your food to your local grocery store, marketplace, or restaurant. Farmers and fishers, distributors and drivers, and many, many more fill critical roles in a massive system spanning every corner of the globe.

Bringing together disparate sources of production, modes of transportation, and retailers represents an impressive logistical feat. But the interconnected nature of the global food and agriculture system also leaves it vulnerable to disruptions. Climate-induced crises and events like the war in Ukraine test the resilience of producers, lines of communication, and global transit systems. Meanwhile, current agricultural practices significantly contribute to greenhouse gas emissions, encroach upon forests, and degrade the land on which crops are planted and livestock graze. These systems have an enduring impact on our planet, on the over one billion people who depend upon them for their livelihood, and on billions of animals.

Policymakers, industry leaders, scientists, investors, and activists are meeting these challenges by rethinking our relationship with food and how we get it. Lasting change will demand the cooperation of a far-reaching coalition of governments, corporations, and individuals. In this milieu, investment capital has the opportunity to become a key enabler of a more sustainable, equitable, and resilient food and agriculture framework.

This primer shows how your investments may help catalyze positive change in the global food and agriculture systems. Through proven approaches that engage directly with the people who sustain this critical infrastructure, innovative solutions that highlight new technology, practices that bring in marginalized demographics, and nature-based solutions maximizing environmental benefits, there are myriad opportunities for families interested in food and agriculture to yield a positive impact.

To help you take the first step, we provide a framework to help assess your impact goals and investment strategies, a review of investable food and agriculture solutions, and our thinking on how to best approach incorporating food and agriculture focused investments into your portfolio. Each section features illustrative examples of investment opportunities across different categories and strategies, just some of the many available to families interested in investing in sustainable food and agriculture in support of the planet, people, or animals. We conclude with a recommended plan of action, including how CapShift can help you build food systems portfolios that integrate with donor advised fund providers, financial advisors, philanthropic consultants, family offices, and other institutions.

This primer is intended to be a guide for food and agriculture investing, not a comprehensive examination of the global food system, technological innovations, policy, grant-making, data collection, or corporate behavior.

ABOUT US



CapShift's impact investing platform and suite of solutions empower financial and philanthropic institutions, and their clients, to invest in their vision for a better tomorrow. We do this by providing rigorously researched, easy to access, and cost-effective impact investing and recoverable grant opportunities to donor advised fund holders, family offices, advisors, and foundations. Visit **capshift.com** to learn more about us and the capital that we have mobilized for purpose to date.



TABLE OF CONTENTS

| Introduction | |
|---|----|
| The Food System and the Problem/Opportunity | 3 |
| Planet | 3 |
| People | 4 |
| Animals | 5 |
| Investing in Food and Agriculture | 8 |
| Why now? | 8 |
| Regenerative vs Sustainable Agriculture | 8 |
| | |
| The Opportunity Set | 9 |
| Planet | 10 |
| People | 12 |
| Animals | 14 |
| From Farm to Compost: Investing in a Circular Food and Agriculture System | 15 |
| Farming | 16 |
| Processing & Distribution | 16 |
| Restaurants & Groceries | 17 |
| Consumption, Recovery & Recycling | 17 |
| Take Action: Steps to Build a Sustainable Food and Agriculture Portfolio | 19 |
| Opportunities Across Asset Classes | 20 |
| Evaluating Impact Risk | 21 |

THE FOOD SYSTEM AND THE PROBLEM/OPPORTUNITY

Food and agriculture systems encompass everything from farms and fisheries, to distributors and retailers, to science and technology. The industry's impact is farreaching, with major ramifications on the health of the planet, people, and animals.



The global food and agriculture system shapes our planet. Half of the Earth's fully habitable area⁴ is used to raise crops and livestock, yet much of this land is poorly managed and underutilized, and up to 30% of crops grown on this land will never be consumed.⁵ The world grows 95% of its food in the uppermost layer of soil, but conventional farming has eroded more than half of the most productive soil in the world in the last 150 years.⁶ In the Midwestern United States, one of the world's most productive agricultural regions, topsoil is eroding more than twice as fast as the sustainable rate.⁷ The agriculture industry is responsible for clearing at least three quarters of the over five million hectares of forest cut down worldwide each year, demand which is further spurred by degrading soil quality.^{8,9}

How we use the land is just one factor in this complex and integrated system – the ways in which we grow and raise our food have a lasting effect on our air and water as well. Global food production accounts for about a third of total global greenhouse gas emissions, generating more than 17 billion metric tons per year. ¹⁰ Agriculture is the leading source of freshwater withdrawals worldwide (over 70%) and both contributes to and suffers from the effects of water pollution, with chemical fertilizers and pesticides poisoning local water supplies. ¹¹

Our marine environment isn't immune to the effects of our agriculture system either - aquaculture (or aquafarming) is a massive industry, which both helps meet the demand for protein in our diets while also leaving harmful waste behind in the world's oceans and endangering marine wildlife.¹²



This cycle is exacerbated when we look at how the food we grow and raise is ultimately used by consumers. Globally, 14% of food produced is lost between harvest and retail while an estimated 17% of food is wasted by households, food service, and retailers. This level of waste means that more land is required for food production, spurring on problems like deforestation. To

These complex problems become all the more challenging when viewed through the prism of a growing population with a growing appetite: as of December 2022, the world population has passed 8 billion and is expected to reach 9.7 billion by 2050, and food demand could rise by between 59% and 98% within that window.¹⁵



PEOPLE

Every person on this planet relies on our food and agriculture system and is directly impacted by the relative health of the system. Producers, transporters, distributors, and retailers rely on the system for their livelihood. The food and agriculture system employs 10% of the U.S. workforce and over a billion people worldwide. And across the world, the industry is growing. Often, these individuals are the first to feel the impact of a disruption to the system, well before you see the effects in the grocery store or at your dinner table.



Women comprise 43% of the agricultural workforce in developing countries¹⁶ – and gender disparities, including lack of access to markets, training, and technology, hold back their progress. Poor pay persists for all genders across the industry, particularly in developing countries where as many as 740 million people who work in food and agriculture live in poverty.¹⁷ This workforce is also acutely affected by climate events and supply chain interruptions that can threaten their livelihoods.

Beyond the critical workforce that drives the food and agriculture sectors, people are going hungry. The World Health Organization identified 2.3 billion people across the globe as experiencing some level of food insecurity in 2021. This isn't a problem limited to developing countries: in the United States alone, data from the Department of Agriculture suggests that 19 million people live in low-income, low-access areas—often called "food deserts"—where finding nutritious food can be difficult. Analysts already assess that the Russian invasion of Ukraine is compounding these problems, cutting off two major "breadbasket countries" from many markets.

And finally, consumers in all countries play a key role in shaping the food and agriculture system. Growers and producers are responsive to the choices we make at the market – from what type of food we choose to buy to where we choose to buy it. Consumers who can afford to use their purchasing power to drive change can help shape the way food is produced and consumed around the globe. This has ramifications for subsistence farmers in the developing world, underserved farming communities and food businesses in the US, and consumers both with and without access to affordable healthy food.



ANIMALS

Most of the world relies on animals and animal products as a key source of protein in their diets. Animals don't just determine what's on our menus—animals and the farming processes associated with them shape their respective environments. In developing nations, demand for meat is rising – which means the question of how to sustainably raise livestock for food will be with us for a long time. Today, 26% of our ice-free land is used to raise livestock and 33% of croplands are used for livestock feed production. Increasing our consumption of meat globally will eventually lead to unsustainable outcomes for the planet.

Couple this with the fact that animals are living things. At any given time, there are as many as 19 billion chickens, 1.5 billion cows, one billion sheep and another billion pigs alive that have been raised for agriculture – and the number consumed each year is even higher.²² The living conditions for many of these animals are, to a certain extent, dependent upon where they are raised. In many nations, including the United States, most protein is raised in factory farms where the living conditions are less than ideal. In the quest for affordable protein, we have traded the welfare of the animals we depend upon for access to inexpensive protein - creating unnecessary suffering for many of the animals we rely upon to feed the planet.



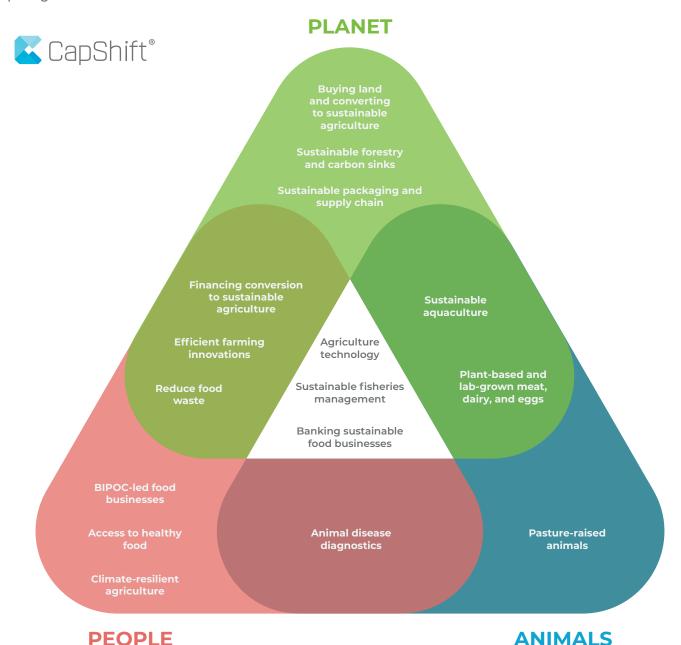
In addition, the environmental impact of the way we raise animals for food is immense. Factory farms pollute the surrounding air, land, and water. Farmers remove trees and change ecosystems to establish grazing ground for their animals. And animals account for 57% of the total emissions contributed by the food and agricultural sector.²³

PLANET, PEOPLE, AND ANIMALS

When you look at the three pillars of our food system in aggregate – planet, people, and animals – you can see how intertwined they are. The planet won't thrive if we continue to grow and raise food the way we do today. People can't survive without food or the income agriculture brings in. And animals are caught in the middle – bringing both sustenance and income to people as well as contributing to a changing planet. This interconnectedness leads to complexity – taken together, the expansiveness of the global food and agriculture systems can be overwhelming.

But there is also opportunity in this intersectionality: A change in one pillar can have dramatic impacts on the other two. For example, shifting to higher quality feed for cattle can reduce the amount of emissions by an estimated 4-15 gigatons by 2050^{24} , while also enhancing livestock health and helping raise farmers' productivity and boosting their income.⁸

For families interested in food and agriculture, the opportunities to invest in change are highly intersectional. Here is a sample of food and agriculture investable solutions and how they may overlap with an investor's impact goals:





PLANET



PEOPLE



ANIMALS







For those interested in tackling the big environmental-level questions facing the global food and agriculture system, opportunities range from bringing expertise in regenerative farming techniques to more agri-businesses to driving sustainable fishing technologies that protect the world's oceans.

For those interested in improving the lives of the indispensable individuals who keep the global food and agriculture systems running, there are several relevant opportunities, ranging from investments in organizations that improve farmers' climate resilience to economic justice initiatives for BIPOC-owned businesses in the food and agriculture space.

For families with an interest in the animals that comprise a critical pillar of the global food and agriculture systems, there are many outlets to have an impact. From regenerative practices which can transform livestock's ecological footprint, to sustainable fishing techniques that protect the health and welfare of marine wildlife, to the development of revolutionary alternative meat technologies which can reduce our reliance on animals as a source of protein, there is no shortage of ways to support our non-human counterparts who play such an essential role in our lives.

Remember that while the planet, people, and animals offer helpful categories for families to focus their energy and resources, no one pillar of the global food and agriculture system is fully separate from the next. Investing in an opportunity under the banner of, say, animal welfare, does not mean planet and people will not benefit as well.²⁵



INVESTING IN FOOD AND AGRICULTURE

In a deeply interdependent global food and agriculture system, investment in any one place or process can have ripple effects across numerous industries, geographies, and ecosystems. A rigorous food and agriculture focused investment strategy presents the opportunity for investors to potentially create positive and sustainable effects for the planet, people, and animals with the goal of long-lasting transformation.

WHY NOW?

INVESTMENT GAP:

According to a 2021 report from the World Bank, reforming these systems along more sustainable lines to address wider social and environmental impacts will require investments between \$300 and \$400 billion each year. This estimate, based on research by the Food and Land Use Coalition, includes investments directed at research and development, implementation of regenerative farming practices, forest restoration, alternative and plant-based proteins, and many other areas, and includes funds coming from private investors and government actors alike.

THE NEED FOR PRIVATE CAPITAL:

Private capital is necessary for scaling innovation and investing in solutions. In the food and agriculture context, private capital can help to de-risk and bring innovative and regenerative technologies and practices into the mainstream.²⁸ With exciting new trends across the food and agriculture industries, ranging from regenerative agricultural practices that preserve and protect the health of land used for farming and improve animal welfare, to the development of plant-based and cultivated meat, private capital has an important role to play in food and agriculture investments.

THE NEED FOR CATALYTIC CAPITAL:

Catalytic capital is impact-first and financially concessionary. By accepting higher financial risks and/ or lower returns, catalytic capital can help generate outcomes in many of the nature-based and justicefocused solutions that might otherwise be overlooked by the market.

Restructuring the global food and agriculture systems will require massive investment, but the resources are there — they need only be properly mobilized. For example, there is over \$1.5 trillion sitting in charitable private foundation and donor advised fund assets – capital which can be put to use by families to invest in solutions that have the potential to drive change across the food and agriculture system.²⁹

REGENERATIVE VS SUSTAINABLE AGRICULTURE

Sustainable agriculture is a term that has been around for a long time, loosely described in the 1990 Farm Bill as an integrated system of plant and animal production practices that sustains economic stability, enhances environmental quality, efficiently utilizes resources, and provides benefits to society while providing food and fiber.²⁵ The term regenerative agriculture has gained salience in recent years to differentiate agricultural practices that restore, improve, and enhance the biological vitality of farming landscapes while supporting the resilience of the communities and broader value chains in which they are situated.³⁰ Here, we treat regenerative agriculture as a subset of sustainable agriculture that moves beyond ceasing degradation of land to restoring land, soil, and ecosystems through its implementation; while enriching vulnerable and marginalized communities. The principles for both practices are similarly focused on building resilience to climate change and bringing strength and vitality to the soil through soil health practices.



THE OPPORTUNITY SET

For families interested in beginning their journey into food and agriculture investing – often one of the biggest hurdles is figuring out how to get started and what to prioritize. While some of the strategies listed below have more direct alignment with certain goals, each has the potential to enable direct and indirect impacts on the planet, people, and animals.









PLANET

The opportunities below provide illustrative examples of just some of the many options for families seeking to help improve the health of the planet through sustainable investment in the global food and agriculture systems.



ACQUIRE FARMLAND AND CONVERT IT TO SUSTAINABLE PRODUCTION

An innovative real estate investment trust (REIT) is working to fund the conversion of conventional farmland to organic and regenerative practices. Through REIT equity shares or a note program, investors can buy into a diversified portfolio of organic farmland managed by independent farmers. The goal of the REIT is to positively impact local, sustainable, and organic agriculture practices while supporting the next generation of organic farmers.

In addition to acquiring the land, this opportunity loans capital to primarily mid-size farm families that run their own regenerative and/or organic farm business, with all farmers required to be USDA Certified Organic after 3 years. The opportunity employs a diversification strategy across categories, including geography, crops, operation size, operator history, and generational history to bolster the financial health and performance of the product.



PLANET



BRING DIGITAL TRACEABILITY AND NEW TRANSPARENCY TO AQUACULTURE



A significant share of our diets can be traced back to the world's oceans. For 3.2 billion people across the planet, fish are the source of a fifth of their protein intake. On islands and in coastal regions, that figure can be as high as 70%. But the rapid expansion of the global fishing industry to meet this need leaves waste in our waters, hurts other marine wildlife, and damages ecological diversity.³¹

One tuna fishing cooperative is working to revolutionize the fishing industry by bringing a new level of transparency to aquaculture through an innovative use of data and technology. The cooperative increases visibility and transparency into on-the-water operations by digitally tracing tuna fishing operations. They collect and standardize metrics in order to ensure compliance with environmental and labor standards from the dockside to the tableside. Plus, 100% of the profits from this cooperative are directed back into island communities for community improvement, marine conservation, and climate change resilience projects in the region.

SUPPORT FOREST RESTORATION

Almost 90% of deforestation worldwide originates in the food and agriculture system.³² Forests—rich reserves of environmental health and ecological diversity—are cleared to make room for farms that are often used below their full capacity, damaging soil and degrading the land in a way that makes undoing the damage difficult.

To help meet the need for timber while maintaining healthy forest ecosystems, this opportunity invests in the sustainable management of millions of acres in the Americas, providing technical assistance to its clients, and drawing on local expertise in order to secure and sustainably manage the forests of the Americas. The strategy has participated in reforestation efforts and carbon sequestration, the process by which forests absorb carbon from the atmosphere, helping to reduce greenhouse gas emissions.





PEOPLE

The opportunities outlined in this section offer illustrative examples of just some of the many ways to deliver impact to the people who support the global food and agriculture systems.



RAISE FARMERS' INCOMES IN SUB-SAHARAN AFRICA



Sub-Saharan Africa is central to the entire African food system - farmers in the region are responsible for 80% of the food production on the continent.³³ Reflective of that significance, one nonprofit in the region is providing affordable solutions that improve these farmers' incomes and their ability to withstand climate-related disruptions.

In 2021, one of the organization's programs served 1.4 million farmers in southern and eastern Africa. Farmers were able to buy quality agricultural products on credit and repay the nonprofit throughout the growing season. The organization also made deliveries within walking distance of farmers' homes. In addition, the organization trains farmers in new agricultural practices, while helping them bring surplus products to market in order to boost their earnings.

Beyond helping provide financial return for farmers, the nonprofit also enhances the farmers' climate resilience. For instance, the organization helps build seed and crop diversity so that a shock impacting one segment of a farmers' harvest will not devastate their entire yield in a given season.

PEOPLE



INVEST IN RURAL, WOMEN, AND BIPOC-LED BUSINESSES

Small businesses and social enterprises play a key role in transforming our food system into one that is regenerative, healthy, and resilient. Yet many of these organizations need training and capital to put regenerative and sustainable practices in place. And organizations which are women-led, BIPOC-owned, or in rural areas are at a disadvantage when it comes to securing capital and support to put these practices in place and transform their communities.

One organization is using targeted debt financing to provide underserved entrepreneurs with access to much needed capital to invest in regenerative and sustainable food and agriculture processes. Their approach brings an environmental justice lens to the work – enabling farmers to both improve the health of the planet while improving their livelihoods and the livelihoods of their families and communities.



EMPOWER WOMEN IN AGRICULTURE



Women in agri-business often miss out on professional opportunities and trainings owing to a variety of factors, including lower literacy rates than their male counterparts and an unequal division of domestic responsibilities.

One organization is addressing this by pioneering women's empowerment in the food and agriculture sectors. Through investments and grants, this organization provides training, technical, and financial assistance for both women and men to encourage gender equity and foster women's financial and physical security in the food and agriculture space. Beneficiaries carried out programs like operating daycare centers to decrease the parenting burden on working mothers, centralized crop collection to reduce potentially long and dangerous journeys to bring crops to market, and trainings to enhance women's technical expertise.



ANIMALS

The following opportunities represent illustrative examples of just some of the many ways to improve the health and livelihood of the animals that are part of our global food and agriculture systems.



DEVELOP SUSTAINABLE AQUACULTURE TECHNOLOGY



To get fish on your plate, many other marine animals like dolphins, turtles, and birds, are put at risk. Their habitats are often located in the middle of fishing operations as well as at the margins of aquaculture, in which farmers breed fish for consumption in more restricted enclosures. But fishing also represents a critical node in the global food and agriculture system and an important source of protein for many.

One organization is confronting the myriad issues modern fishing operations pose for marine environments through investments in technologies and practices that give fishers and farmers the tools to fish more sustainably. Their portfolio includes a company pioneering unique sensor technology, which provides insights to farmers about the health of their fisheries, allowing them to make more informed decisions, and a company whose novel acoustic devices gently nudge sea mammals away from fishing operations and out of harms' way.

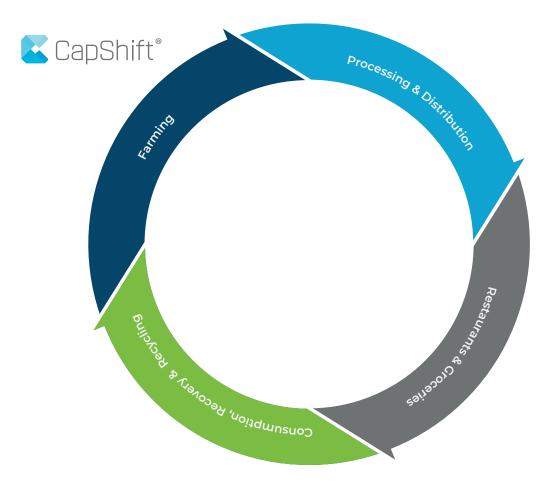
INVEST IN MEAT WITHOUT ANIMALS

What if you could enjoy meat without harming any animals? An increasing number of companies are realizing this vision through strides in plant-based and cultivated meat technology. But these technologies need to be scaled in order to be competitive and reach a broader audience. One firm is investing in early-stage, innovative food and beverage companies. Their portfolio includes brand names in the plant-based sector, as well as pioneers in the cultivated-meat space making strides with cultivated beef steak and ribeye. Driven by the fund's robust criteria for partnership, including mission alignment, diverse leadership, and geographic reach, these developments have the potential to fundamentally change the role animals play in our food system.





The pillars we've laid out thus far, the planet, people, and animals, are a handy starting point when thinking about how to create impact within our food and agriculture system. For many families – it's also helpful to consider the farm to consumption cycle as an added lens with which to evaluate investment and impact opportunities. The farm to consumption cycle looks like this:



Here's how you might combine the two. If you're a family interested in supporting people, and you specifically want to focus on the farming stage of the cycle, you might look to opportunities which provide financing to farmers to transition to regenerative practices. Thinking about both the pillars as well as the circular nature of our food and agriculture system can provide investors with a unique lens with which to view impact and investment opportunities.

FROM FARM TO CONSUMPTION: INVESTING IN A CIRCULAR FOOD AND AGRICULTURE SYSTEM

FARMING



Farming includes growing crops, raising livestock, and managing fisheries – essentially growing the original food ingredients. In this stage of the cycle, there are abundant opportunities to invest in more sustainable farming practices. This includes financing the transition of farmers to regenerative practices, as noted above, buying farmland and converting it from traditional to more sustainable farms at scale, and providing financing to farmers in the developing world to support a sustainable transition. This also includes innovative technologies such as soil science, tech-based crop management, and sustainable pest management. Finally, this includes access to capital for BIPOC and underserved farmers to increase income and autonomy among historically marginalized farming communities.

PROCESSING & DISTRIBUTION



Post-harvest, investors can target companies that participate in the processing, storage, transport, and distribution of food. Example companies include technologies to extend the shelf life of produce, technologies to monitor the storage and transport of grains, and supply chain technology to make more efficient work of identifying and pairing food need and capacity.

FROM FARM TO CONSUMPTION: INVESTING IN A CIRCULAR FOOD AND AGRICULTURE SYSTEM

RESTAURANTS & GROCERIES



Restaurants employ more than 11 million people in the US alone, where the average base salary is \$14/hour.³⁴ Grocery stores are unequally distributed across the income spectrum, leaving an estimated 19 million Americans living in food deserts.¹⁹ These are areas where residents have few to no convenient options for securing affordable and healthy foods, and they are disproportionately located in high poverty areas. To address these challenges, a number of funds have popped up to deliver accessible financing to BIPOC-owned and operated food businesses, as well as food businesses targeting the provision of affordable, healthy food in food deserts.

CONSUMPTION, RECOVERY, AND RECYCLING



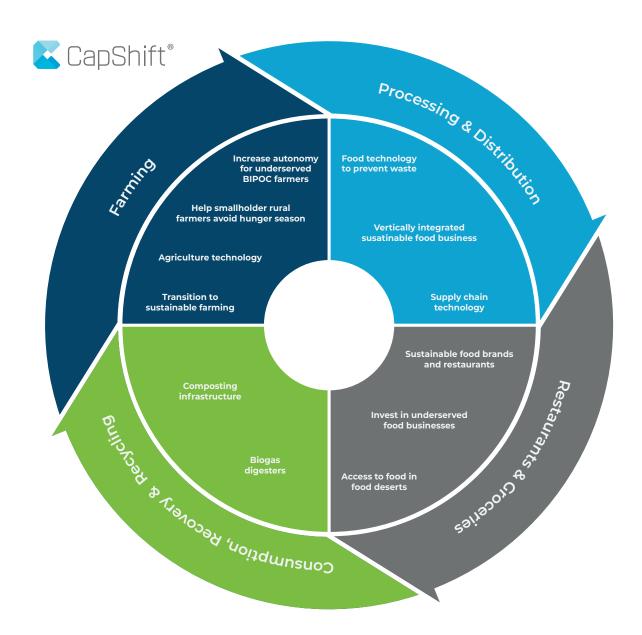
Food is generally consumed in restaurants or homes, where cultural norms, meal kits, cooking apps, and other solutions combine to shape how we eat.

Along the entire food chain, one mega-challenge is the waste that occurs at every step. ReFED, a leading food waste nonprofit, estimates that 35% of food that is produced in the U.S. is never eaten.³⁵ This includes crops that are never harvested, processed food scraps or expired grocery items, and extra food on plates at restaurants or homes that is chucked in the trash. A coalition of stakeholders is working to cut food waste and loss in the U.S. in half by 2030, through prevention, recovery, and recycling.

Food recovery consists of hundreds of nonprofit and for-profit organizations helping repurpose and reuse excess food, primarily to help alleviate hunger and assist families living in poverty. Food recycling generally consists of composting or conversion of food waste into renewable energy. Only 27% of Americans have access to composting³⁶, which means most organic waste flows into landfills where it generates methane, a potent greenhouse gas. By investing in expanded access to composting infrastructure, investors can help reduce emissions and regenerate soils and ecosystems.³⁷ Methane is also generated when animal manure is stored or managed in lagoons or holding tanks, and agriculture is the largest source of methane emissions in the United States.³⁸ Anaerobic biogas digesters provide investors a way to target the conversion of animal manure and other food waste into energy, which both reduces methane emissions and generates clean energy.



Below, we illustrate how a family interested in investment opportunities which address the challenges facing our planet, people and animals can use this farm to consumption cycle to build an investment portfolio aligned with their impact goals.



TAKE ACTION: STEPS TO BUILD A SUSTAINABLE FOOD AND AGRICULTURE PORTFOLIO

As families look to incorporate food and agriculture focused investment opportunities into their portfolios, they need to take their unique circumstances and priorities into consideration. These will shape the blend of financial risk, impact risk, return, and liquidity requirements, as well as the thematic areas of focus each family chooses to pursue. While each family's priorities and approaches may vary, the following steps can offer a basic roadmap for integrating food and agriculture investments into your portfolio.



SET GOALS

Identify which focus areas (planet, people, and/or animals) are most important to you and what metrics you may use to measure success over time. You can also explore other overlapping sets of goals, such as:







INNOVATIVE OR PROVEN SOLUTIONS



If your goal is to take big risks on potentially game-changing innovations, such as the creation of meat without animals, you can explore more innovative solutions to the challenges facing our food and agriculture system. However, if you prefer to invest in and help scale solutions that have already been shown to be effective, such as the conversion of farmland from conventional to organic, exploring more proven solutions might be a great way to get started.

NATURE-BASED OR BUILT ENVIRONMENT SOLUTIONS



Investors interested in nature-based solutions which integrate economic outputs with sustainable natural ecosystems could explore opportunities such as sustainable timber management preserving healthy forests. Others who are interested in building infrastructure that will mitigate the negative impacts of agriculture, such as biogas digesters to convert methane-issuing manure into clean energy, may be better served exploring built environment solutions.

COMMUNITY-BASED OR GLOBAL APPROACHES



Some families may prioritize building stronger communities, and one way to do that while also supporting our food and agriculture system is to invest in local food businesses led by underserved individuals. Other families may be looking to take a more global approach – for example investing in a more sustainable and equitable tuna supply chain.

TAKE ACTION: STEPS TO BUILD A SUSTAINABLE FOOD AND AGRICULTURE PORTFOLIO



DEVELOP YOUR STRATEGY

Identify what pools of capital will be invested, as well as your specific risk, return, and liquidity goals. This will help you develop a budget or target amount to be allocated towards sustainable food and agriculture investments over time, as well as which roles these investments will play in your portfolio and how they align with your overall strategic asset allocation. For example, if your priority is planet, and you are looking to allocate to real assets within your portfolio – you might pursue an investment strategy which allows you to invest in the healthy and sustainable management of timber-producing forests. See the below chart for some additional examples across food and agriculture themes and asset classes.



OPPORTUNITIES ACROSS ASSET CLASSES

| | PLANET | PEOPLE | ANIMALS |
|-------------------------------------|---|--|---|
| Private Debt | Provide conversion loans to support farmers to convert farmland from conventional to sustainable | Finance inputs for smallholder farmers in the developing world and support market access that enables higher incomes | |
| Venture Capital & Private Equity | Invest in soil science innovations that align agriculture production with healthier soils | Agriculture technology that improves the livelihoods and incomes of farmers | Invest in the development of synthetic meat and dairy |
| Real Assets | Contribute to the acquisition and sustainable management of healthy, timber-producing forests | Invest in waste-to-value solutions that eliminate waste and provide access to energy for farmers | Support acquisition of farmland that treat their animals humanely |

TAKE ACTION: STEPS TO BUILD A SUSTAINABLE FOOD AND AGRICULTURE PORTFOLIO

3

TAKE ACTION TO INVEST

Working with your financial advisor, philanthropic advisor, or donor advised fund provider, build your pipeline of investment opportunities. You can work with these professionals or a specialist consultant to conduct appropriate financial and impact diligence and make investments within your target dollar range.



EVALUATING IMPACT RISK

We are accustomed to thinking about risk in financial terms, that is, the likelihood of losing money in an investment or business enterprise. But what about impact risk?

Impact risk refers to the possibility that a target impact outcome may not come to fruition.³⁹ Investing in proven solutions in food and agriculture brings a lower degree of impact risk than investing in innovative approaches that require additional development to get to market. Many opportunities with high impact risk also carry the potential to revolutionize the global food and agriculture systems. Lab-grown meat needs to overcome regulatory and technological barriers to become a mass market solution, but if these technologies can be scaled, they could drastically reduce water consumption and greenhouse gas emissions associated with raising livestock while taking animals out of the equation altogether.⁴⁰ On the other hand, the conversion to organic agriculture is a proven practice with clear benefits; an investment in this process won't revolutionize the agriculture system on its own, but has a better likelihood of achieving its impact goals. As with any investment, you must consider your impact risk tolerance alongside your financial risk tolerance to determine which paths you would like to consider further.



CREATE FEEDBACK LOOPS

Finally, evaluate the progress of your investments against your goals. Periodically review reports on the financial health and impact results of your food and agriculture focused investments, understand how they contribute to the overall impact and return priorities for your investment portfolio, and evaluate learnings that can help you adapt your strategy and portfolio approach over time.



Ready to start a conversation? Email us at hello@capshift.com.

Beyond investing, there are a number of complementary activities that families can take to support solutions to the challenges facing the food and agriculture system. You can focus your charitable donations and/or grant-making to nonprofits focused on strengthening our ecosystems, empowering and training farmers, and improving the living conditions of animals. You can be a vocal advocate for sustainable and regenerative farming approaches with your local, state, and federal elected representatives. You can vote your proxies in alignment with your food and agriculture priorities. And you can continue to read and learn more from academic, nonprofit, investment, and industry thought leaders to keep apprised of progress toward your goals and areas to explore for further investment.

ACKNOWLEDGEMENTS

We would like to thank the following individuals for consulting on this primer:

Evan Gottesman — Graduate Student at Johns Hopkins University, and the University of Michigan's Erb Institute for Global Sustainable Enterprise.

This report and included sample portfolio does not constitute an offer to sell or a solicitation of an offer to purchase any security. Any such offer or solicitation would only be made pursuant to an offering memorandum or prospectus. All investments entail a high degree of risk and no assurance can be given that the investment objective will be achieved or that investors will receive a return of their capital. Any investment opportunities highlighted in this presentation are presented for illustrative purposes only. Opportunities may not be suitable for all investors due to differences in risk tolerance, investor status, and investment time horizons, amongst other factors. Additionally, investments may not achieve stated social, environmental, or similar objectives.

Advisory services are provided by CapShift Advisors LLC, an SEC registered investment advisor. Investments in securities are not FDIC insured, are not bank guaranteed and may lose value. Investing in securities involves risks, and there is always the potential of losing money when you invest in securities. Before investing, consider your investment objectives and CapShift Advisors LLC's charges and expenses. CapShift Advisors LLC's advisory services are designed to assist clients in achieving discrete financial goals. They are not intended to provide financial planning with respect to every aspect of a client's financial situation, they do not incorporate investments that clients hold elsewhere, and they do not provide tax advice. Past performance does not guarantee future results, and the likelihood of investment outcomes are hypothetical in nature. Nothing in this presentation constitutes an offer, solicitation of an offer, or advice to buy or sell securities in jurisdictions where CapShift Advisors LLC is not registered.

WORKS CITED AND NOTES

- 1. Resource Watch: Map of the Month: How Many People Work in Agriculture?
- 2. Food and Agriculture Organization of the United Nations: Land use in agriculture by the numbers
- 3. Food and Water Watch: Factory Farm Nation: 2020 Edition
- 4. Our World in Data: Half of the world's habitable land is used for agriculture
- 5. The Guardian: Produced, but never eaten: A visual guide to food waste
- 6. World Wildlife Fund: Soil Erosion and Degradation
- 7. American Geophysical Union: Rates of Historical Anthropogenic Soil Erosion in the Midwestern United States
- 8. Fortune: We must restore degraded farmland to feed future generations and protect landscapes
- 9. Rural Migration News, University of California Davis: FAO: Ag employs 27% of world's workers, generates 4% of GDP
- 10. Nature Food: Global greenhouse gas emissions from animal-based foods are twice those of plant-based foods
- 11. PR Newswire: Agriculture Global Market Report
- 12. Marine Mammal Commission: Fisheries Interactions with Marine Mammals
- 13. United Nations Environment Programme: The State of Food and Agriculture: Moving Forward on Food Loss and Waste Reduction
- 14. United Nations Environment Programme: Food Waste Index Report 2021
- 15. Harvard Business Review: Global Demand for Food is Rising: Can We Meet It?
- 16. Food and Agriculture Organization of the United Nations: Women in Agriculture Closing the Gender Gap for Development
- 17. Citi: Food and Climate Change
- 18. World Health Organization: UN Report: Global hunger numbers rose to as many as 828 million in 2021
- 19. The Humane League: Food Deserts: What are they and what causes them
- 20. International Food Policy Research Institute: <u>How will Russia's invasion of Ukraine affect global food security?</u>
- 21. Food and Agriculture Organization of the United Nations: Livestock and Landscapes
- 22. World Economic Forum: This is how many animals we eat each year
- 23. Scientific American: Here's How Much Food Contributes to Climate Change
- 24. Project Drawdown: Improved Cattle Feed
- 25. NCSU Cooperative Extension: Regenerative vs. Sustainable Agriculture
- 26. World Bank: Food Finance Architecture Financing a Healthy, Equitable & Sustainable Food System
- 27. Food and Land Use Coalition: Growing Better: Ten Critical Transitions to Transform Food and Land Use
- 28. World Bank: Food Finance Architecture Financing a Healthy, Equitable & Sustainable Food System Executive Summary
- 29. National Philanthropic Trust: The 2022 DAF Report
- 30. Croatan Institute: Soil Wealth Investing in Regenerative Agriculture across Asset Classes
- 31. UC San Diego, The Climate Change Review: The Environmental Impact of the Fishing Industry
- 32. Food and Agriculture Organization of the United Nations: COP26: Agricultural expansion drives almost 90 percent of global deforestation
- 33. Food and Agriculture Organization of the United Nations: Smallholders and Family Farmers
- 34. Indeed: Restaurant staff salary in the United States
- 35. ReFED: Food Waste Monitor
- 36. GreenBiz: Why is composting so hard in the United States?
- 37. US EPA: Reducing the Impact of Wasted Food by Feeding the Soil and Composting
- 38. US EPA: Overview of Greenhouse Gases
- 39. Impact Frontiers: Five Dimensions of Impact
- 40. Pitchbook Analyst Note: Alt-Protein Industry Advances Despite Costs and Red Tape