



IMPACT INVESTING IN SUSTAINABLE FOOD AND AGRICULTURE ACROSS ASSET CLASSES

Financing Resilient Value Chains
through **Total Portfolio Activation**

MAY 2017



Acknowledgments

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Foreword

We are pleased to present the latest in a series of papers on Total Portfolio Activation – with a specific focus on impact investing in sustainable food and agriculture across asset classes.

At a time when farmers, entrepreneurs, and companies are increasingly rising to the growing demand for more transparent, organic, and locally sourced food, investors have a critical role to play in financing stronger links across local, regional, and global agriculture value chains.

In *Impact Investing in Sustainable Food and Agriculture across Asset Classes: Financing Resilient Value Chains through Total Portfolio Activation*, we provide a framework for investors as they consider how to invest in sustainable food systems across common portfolio asset classes such as cash, public equities, and fixed income, as well as alternative asset classes such as private equity, venture capital, and real assets in sustainable farmland and timberland. We present leading examples from across the field – both domestic and global – as well as case studies of investors, funds, and initiatives that are integrating environmental and social impact considerations into their food and agriculture investments.

Although this paper does not make recommendations for any particular investment, our hope is that investors will use the resources in this paper as a guide for identifying high-impact investment opportunities in food, farming, and forestry that align with their specific financial and impact objectives in portfolio management. While our aim was not to provide a comprehensive catalog in such a rapidly growing field, the framework of Total Portfolio Activation does provide a particularly wide-angled lens for viewing the broad landscape of sustainable food and agriculture investing. We therefore welcome your feedback on the utility of the framework for your own work and any initiatives and opportunities that we may have overlooked. We look forward to closely monitoring future developments in the field as investors seek to embed resilience and positive impact into our food systems.



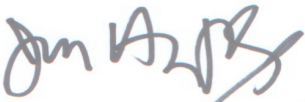
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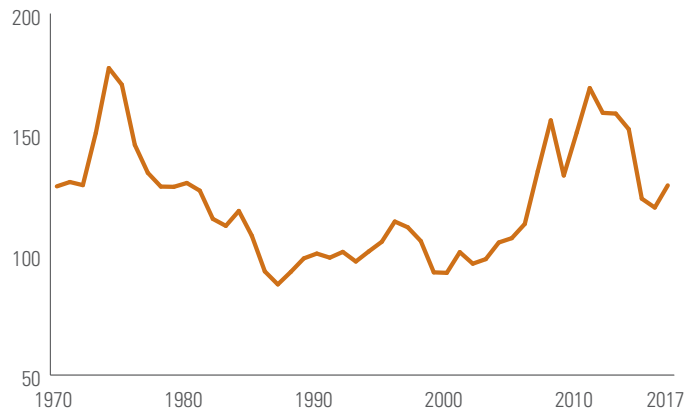
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Introduction

As interest in sustainable food systems and agricultural value chains grows, increasing numbers of investors are beginning to explore high-impact investing opportunities in food, farming, and forestry across asset classes. According to the Global Impact Investing Network's most recent survey of leading impact investors, the largest number of respondents — 63 percent — reported allocating to food and agriculture, more than any other sector. With only 7 percent of assets, however, the overall exposure to food and agriculture among the GIIN's survey respondents remains relatively limited, highlighting that food and agriculture investments, although commonly pursued, tend to remain smaller in scale. At the same time, impact investment assets allocated to the sector have grown rapidly in recent years — at a compound annual growth rate of 32.5 percent since 2013.¹ Impact opportunities in sustainable agriculture now extend from real estate investments in sustainably managed farmland and forests to debt investments in farms, cooperatives, and food enterprises, to equity investments — both private and public — in healthy food companies, retailers, and agricultural technologies focused on the efficient use of energy, inputs, and natural resources.

Several converging trends have moved food and agriculture up the sustainable investment agenda. As Figure 1 highlights, the rise in global agricultural commodity prices since 2002 reversed a long-term decline in prices since the 1970s that had been driven by the “Green Revolution.” The widespread, and often critiqued, adoption of pesticides, fertilizers, and high-yielding, genetically improved crop varieties, particularly for major food grains of corn (maize), wheat, and rice, had created substantial gains in global food production through the 1990s. The commodity price spike in 2007-08 and subsequent volatility have exacerbated social crises in countries and communities facing food insecurity, providing sobering reminders that food and agriculture ultimately remain bounded by natural resource limits on a finite planet facing rapid population growth and urbanization,

FIGURE 1. GLOBAL FOOD PRICE VOLATILITY



Source: Food and Agriculture Organization of the United Nations
Note: Real prices, indexed from 2002-04.

long-term soil degradation and land scarcity, and widening inequality in access to resources. According to the United Nations, global population is projected to grow to 9.7 billion by 2050 from more than 7 billion today. In order to meet rapidly increasing demand in places like China for meat and other resource-intensive foods, agricultural productivity may need to increase an estimated 50 to 70 percent — at precisely the moment when the productivity gains of the Green Revolution appear to have plateaued.²

The risks of climate change, to which investors have become particularly attuned over the last decade, magnify the challenges that food and agriculture systems face. Global warming and more frequent extreme weather events, from severe droughts and wildfires to flooding, hurricanes, and tornadoes, intensify the climatic uncertainty that farmers have long faced. According to the Intergovernmental Panel on Climate Change, farming is responsible for 10 to 12 percent of total global anthropogenic greenhouse gas emissions, 60 percent of nitrous oxide emissions, and 50

- 1 Abhilash Mudaliar, Aliana Pineiro, and Rachel Bass, “Impact Investing Trends: Evidence of a Growing Industry,” Global Impact Investing Network, December 2016.
- 2 United Nations Department of Economic and Social Affairs, “World Population Prospects: The 2015 Revision,” New York: United Nations, 2015. On the Green Revolution's limits, see Joel K. Bourne, Jr., *The End of Plenty: The Race to Feed a Crowded World* (New York: W. W. Norton & Co., 2015); Patricio Grassini, et al., “Distinguishing between Yield Advances and Yield Plateaus in Historical Crop Production Trends,” *Nature Communications* 4, no. 2918 (2013); and Pradhu L. Pingali, “Green Revolution: Impacts, Limits, and the Path Ahead,” *PNAS* 109, no. 31 (2012). For investor views, see Bruce Kahn and David Zaks, “Investing in Agriculture: Far-Reaching Challenge, Significant Opportunity,” DB Climate Change Advisors, June 2009; and Interfaith Center on Corporate Responsibility, “Statement of Principles and Recommended Practices for Sustainable and Equitable Food Production,” November 2012.

percent of methane emissions.³ Agricultural land currently occupies an estimated 40 to 50 percent of the planet’s land surface, and the Green Revolution’s yield plateau has created unprecedented pressures to transform uncultivated rural land into productive agricultural use. Forests, the world’s largest carbon sinks alongside the oceans, have become particularly vulnerable to these pressures; indeed, agriculture is now the largest driver of deforestation, as biodiverse rainforests in conservation hotspots across the developing world, such as the Amazon basin and Indonesia, are clear-cut in order to expand cattle ranches and monoculture operations of high-demand commodities such as soy and palm oil. Corporations, international development banks, sovereign wealth funds, and private-sector investors have helped finance precisely these sorts of large-scale land acquisitions that leading NGOs and research groups such as Friends of the Earth, GRAIN, the International Fund for Agricultural Development, Oakland Institute, and Oxfam have repeatedly described as land grabs.⁴ In countries with local customary land tenure traditions, human rights concerns often emerge when local communities and smallholder farmers are unable to exercise “Free, Prior, and Informed Consent” (FPIC) for these kinds of large-scale transformational investments. In this sense, environmental issues such as climate change and social issues such as sustainable livelihoods and human rights are often intimately linked in the financing of food and agricultural systems. New initiatives such as Chain Reaction Research, a collaborative partnership of Aidenvironment, Climate Advisers, and Profundo, have highlighted how sustainability risks — related to issues such as climate change, conservation, biodiversity, land, and human rights — extend across agricultural value chains, from smallholder farmers to the world’s largest food, beverage, and financial services companies. Investors across all asset classes are consequently making critical decisions to invest, divest, and engage based on deeper analysis

of the social and environmental impacts of agricultural commodities and their extended supply chains.

As an impact investment theme, food and agricultural systems therefore provide numerous entry points for financing much more sustainable, long-term solutions to feed a crowded planet while generating community health and wealth within ecological limits. Taking a total portfolio approach to sustainable agriculture provides investors with a constructive way to grapple with the widest array of investment opportunities because each asset class presents its own specific opportunity set related to food and agriculture — whether financing small-scale local food systems or intervening in large-scale global supply chains. In this paper we focus on five core asset classes where sustainable agricultural investment can be most readily and responsibly pursued:

- » cash and cash equivalents,
- » fixed income (both public bond markets and private debt),
- » public equities,
- » private equity and venture capital, and
- » real assets, such as farmland and timberland.

Although commodities themselves constitute an important asset class in food and agricultural systems, and commodity futures and other derivatives provide valuable financial instruments for managing agricultural risk, sustainable investment opportunities in agricultural commodities remain far too limited at this time to merit inclusion here. Leading investor networks have also issued guidelines discouraging responsible investors from participating in agricultural commodity markets.⁵

Working across these asset classes allows investors to pursue positive impact on food and agricultural systems more holistically, activating a fuller range of investment assets, at different scales, in various geographies, and

3 Pete Smith, et al., “Agriculture,” in *Climate Change 2007: Mitigation*, Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge and New York: Cambridge University Press, 2007), p. 499.

4 Mark Gregory, “Financing Land Grabs and Deforestation: The Role of EU Banks and Investors,” Fern, July 2016; Jeff Conant, “Are You Invested in Exploitation?” Briefing Paper, Friends of the Earth, July 2016; Joshua Humphreys, Ann Solomon, and Emmanuel Tumusiime, “US Investment in Large-Scale Land Acquisitions in Low- and Middle-Income Countries,” Research Backgrounder, Oxfam America, 2013; “Pension Funds and the Financing of Land Grabs,” Briefing Paper, Friends of the Earth, September 2012; Shepard Daniel, “Situating Private Equity Capital in the Land Grab Debate,” *The Journal of Peasant Studies* 39, nos. 3-4 (2012): 703-29; and Daniel, with Anuradha Mittal, “(Mis)Investment in Agriculture: The Role of the International Finance Corporation in Global Land Grabs,” Oakland Institute, 2010.

5 See ICCR, *Guidelines for Responsible Investing in Food Commodities*, 2012; and Ivo Knoepfel and David Impert, “The Responsible Investor’s Guide to Commodities: An Overview of Best Practices across Commodity-exposed Asset Classes,” Principles for Responsible Investment, 2011. More generally, see “Commodities as an Asset Class: Appropriate for Responsible Investors?” Initiative for Responsible Investment, Harvard University, 2011; and Knoepfel, “Responsible Investment in Commodities: The Issues at Stake and a Potential Role for Institutional Investors,” Zurich: onValues, January 2011.

in pursuit of “multiple returns” — financial, social, and environmental.⁶ For example, making cash and money market deposits in mission-oriented community banks and credit unions provides low-risk, market-rate capital for depository institutions to lend to farms and enterprises in local food economies, often in highly targeted regions. With the maturation of community development finance and international microlending and the more recent rise of “Slow Money,” private fixed-income investment opportunities in sustainable agriculture have greatly expanded in recent years, both in the U.S. and abroad.⁷ Many private debt options, through intermediaries such as community loan funds or microfinance organizations, provide high social and environmental impact in specific places, often at concessionary financial rates of return, when adjusted for risk. Although gaining concentrated, direct exposure to high-impact food and agricultural themes remains more challenging in the public bond markets than through private debt, investors can nevertheless pursue market-rate opportunities with skilled, impact-oriented fixed-income investment managers that actively seek corporate, municipal, or government agency bonds that finance specific links in wider food and agricultural value chains.

Equity investment can help finance sustainable agricultural technology (AgTech) companies and other businesses in the food and agriculture sector. Private equity and venture capital investors can provide critical seed and growth equity financing to private companies in the sector, and they can often become highly engaged with management to ensure that positive social and environmental impact is being measured, managed, and maximized. As for public equity managers, they can invest in small and midcap companies working on AgTech innovations, assess their portfolios for climate, water, and other sustainability risks, or use shareholder engagement strategies to hold companies accountable for their often large-scale social and environmental impacts across the value chain. As we shall see, highly engaged public equity managers have had meaningful, positive impacts on a wide range of corporate social and environmental issues, from pesticide use and animal welfare to deforestation and human rights abuse in supply chains related to commodities such as cotton and palm oil.

ICCR GUIDELINES FOR RESPONSIBLE INVESTING IN FOOD COMMODITIES

Given controversies over institutional investor speculation in commodities markets during the commodity price spikes of 2007-08 and 2010-11, The Interfaith Center on Corporate Responsibility (ICCR), a leading network of faith-based investors, issued guidelines that discouraged investors from participating in the asset class or making any new direct investments in commodities or indirect investments in commodity index funds or ETFs:

1. Implement responsible policies for existing food commodities investments that acknowledge social and environmental impacts
2. Disclose the ESG impact of trading in food commodities
3. Advocate for improved regulation of global commodities trading
4. Support appropriate investments in the production of food, such as impact investing, that help mitigate the risk of famine and build sustainable communities






Finally, in real assets, investors can finance the acquisition of farmland, ranchland, and forests that are managed sustainably with strong conservation features, often in specific regional geographies. Farmland opportunities vary from investing in real estate investment trusts (REITs) that are acquiring conventional farmland and converting it into certified organic farms to financing ranchland conservation and holistically managed, pastured livestock. In forestry-related investment, sustainable timberland investment management organizations (TIMOs) apply techniques of conservation finance to acquire and improve forestland at a variety of scales, from community forests to larger-scale working landscapes. Compliance with Forest Stewardship Council (FSC) certification criteria can further enhance both the financial value of the properties and the climate and community benefits associated with more active management of the forest carbon cycle.⁸

6 See Jed Emerson and Lindsay Smalling, “Construction of an Impact Portfolio: Total Portfolio Management for Multiple Returns,” ImpactAssets Issue Brief #15, October 2015.

7 On Slow Money, see Woody Tasch, *Inquiries into the Nature of Slow Money: Investing as if Food, Farms, and Fertility Mattered* (Chelsea Green, 2008); and Carol Peppe Hewitt, *Financing Our Foodshed: Growing Local Food with Slow Money* (New Society Publishers, 2013).

8 See Valentin Bellassen and Sebastiaan Luyssaert, “Carbon Sequestration: Managing Forests in Uncertain Times,” *Nature* 506, no. 7487 (2014): 153-55.

FIGURE 2: IMPACT INVESTMENT THEMES IN SUSTAINABLE AGRICULTURE

 <p>Sustainable Production</p>	 <p>Sustainable Consumption</p>	 <p>Sustainable Agricultural Technology</p>	 <p>Conservation & Climate Change</p>	 <p>Social Equity & Sustainable Livelihoods</p>
<ul style="list-style-type: none"> » Crops, livestock, fisheries » Animal welfare » Timber & wood products » Sustainability standards 	<ul style="list-style-type: none"> » Nutrition » Healthy foods » Food safety » GMOs » Food waste 	<ul style="list-style-type: none"> » Smart irrigation » Biowaste » Software » Big data » Green chemistry » Digital precision ag 	<ul style="list-style-type: none"> » Climate change mitigation & adaptation » Deforestation » Land care & soil health » Water use » Biodiversity 	<ul style="list-style-type: none"> » Fair Trade » Land grabs » Workers' rights » Child labor » Women farmers » Food sovereignty

The Process of Total Portfolio Activation

Based on collaborative research initially commissioned by Tides and Trillium Asset Management in 2012, undertaken by analysts at Tellus Institute, and extended by researchers at Croatan Institute with a growing group of collaborators, Total Portfolio Activation provides a framework for impact investing that can be readily adapted to sustainable food and agriculture.⁹ Rooted in emerging financial research that explores the distinctive impact features of each asset class, the framework helps investors analyze the social and environmental impacts of their investments, both positive and negative, and then seize opportunities to minimize negative impacts and to maximize the potential for positive impact by activating assets across their entire diversified portfolios. Total Portfolio Activation thus gives investors both an analytical toolkit and a process for assessing impact opportunities and re-allocating their assets in alignment with their impact objectives. Investors can use the framework

to integrate multiple environmental and social impact criteria or apply it thematically in more focused ways, as has been done in areas such as climate solutions, women's empowerment, or LGBT equality.¹⁰ For sustainable food and agriculture, we have identified five broad clusters of impact areas that investors currently pursue:

1. **Sustainable production:** promoting sustainable practices and standards for producing food, fiber, and feed crops, livestock and seafood, and forest products.
2. **Sustainable consumption:** nutrition, healthy foods, strong food safety, risks associated with genetically modified organisms, and food waste reduction.

9 Joshua Humphreys, Christi Electris, and Ann Solomon, "Total Portfolio Activation: A Framework for Creating Social and Environmental Impact across Asset Classes," Tellus Institute, 2012; Humphreys, "Institutional Pathways to Fossil-Free Investing: Endowment Management in a Warming World," Tellus Institute, 2013; Kristin Lang, et al., "Investing for Positive Impact on Women: Integrating Gender into Total Portfolio Activation," Croatan Institute, November 2015; Lang and Humphreys, "Investing in Equality: Integrating LGBT Issues into Total Portfolio Activation," Croatan Institute and Trillium Asset Management, September 2016; Ophir Bruck, et al., "Climate-Related Investments for Resilient Communities: DivestInvest Opportunities in Community-Oriented Climate Solutions," Croatan Institute, December 2016.

10 Humphreys, et al., "Divest-Invest Clean Fifteen: A Total Portfolio Approach to Fossil-free Climate Solutions," Croatan Institute, September 2016; Lang, Electris, and Humphreys, "Mobilizing More for Mission: The Evolution of the Wallace Global Fund's Endowment," Croatan Institute, November 2016; Humphreys, "Institutional Pathways to Fossil-Free Investing"; Lang, et al., "Investing for Positive Impact on Women"; and Lang and Humphreys, "Investing in Equality."

3. **Sustainable AgTech:** efforts to improve agricultural efficiency sustainably through technologies such as smart irrigation, computer software, and bioplastics.

4. **Conservation and climate change:** greenhouse gas emissions reduction, carbon sequestration, smarter water use, land restoration, and efforts to improve soil health, prevent deforestation, and foster biodiversity.

5. **Social equity and sustainable livelihoods:** issues related to land grabs, fair trade, workers’ rights, smallholder farmers, women farmers and employees, racial dynamics, community health and wealth, and food sovereignty and local food systems.

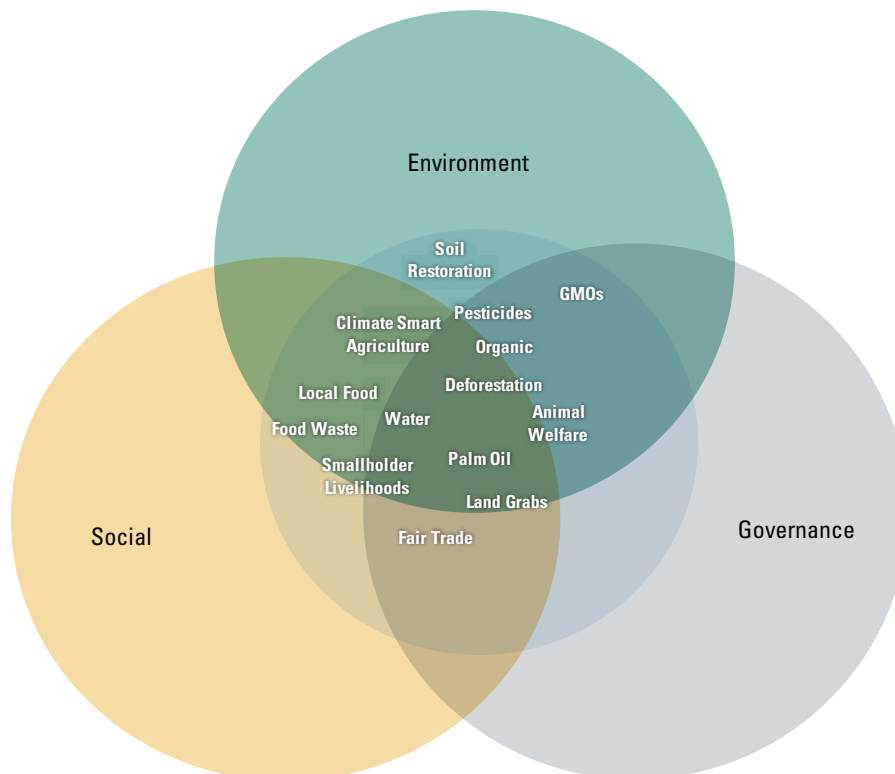
The framework of Total Portfolio Activation also identifies four inter-related areas of investment activity for pursuing impact opportunities, each of which has implications for investing in sustainable food and agriculture:

1. **Investment selection:** The first area of activity relates to investment research, analysis, and determining whether to buy, hold, or sell a given investment. Investment selection

determines which companies, instruments, and funds to invest in based on specific impact criteria related to sustainable agriculture. Sustainable food and agriculture investors can invest in either a narrowly focused way, say in a farmland investment fund or a food-focused debt fund, or as part of a more holistic, or “triple-bottom-line” approach to integrating environmental, social, and governance (ESG) impact considerations into their investment process, as frequently occurs in asset classes such as cash, listed equities, public fixed income, and private equity. As Figure 3 highlights, sustainable food and agriculture impact areas are embedded within broader ESG themes with which investors routinely grapple, from climate or water risk to labor and human rights, and that have direct impacts on people and places.

2. **Active ownership and engagement:** In this second area of activity, investors take a more active approach to influencing impact outcomes by engaging directly or through collaborative initiatives with companies, issuers, and intermediaries. Examples include engaging in direct dialogue with company management, drafting or signing an investor statement, filing a shareholder resolution, or

FIGURE 3: LEADING ESG INVESTING THEMES IN SUSTAINABLE AGRICULTURE



Source: Croatan Institute

ultimately taking more assertive actions like campaigning, divestment, or litigation when other forms of engagement fail. In listed equities, shareholder engagement is one of the highest impact areas of investment activity, and initiatives such as the Impact of Equity Engagement (IE2) are developing rigorous frameworks for managing and measuring the impact of shareholder advocacy by public equity managers.¹¹ Active engagement can take place in other asset classes as well when bondholders engage with issuers and underwriters about the use of bond proceeds and impact reporting, private equity investors seek a seat on a portfolio company’s board, real asset investors conduct site visits of properties they own, or credit union investors actively participate in cooperative governance as member-owners of the institution.

3. Networks: “Network effects” can also enhance impact investing opportunities. Joining wider coalitions, particularly multi-stakeholder initiatives, has been shown to be an effective means for leveraging collective power in order to pursue positive changes and impact.¹² Networks are extremely valuable as ways for entrepreneurs, angel investors, and venture capitalists to connect. The Global Impact Investing Network (GIIN), shareholder groups such as Ceres’s Investor Network on Climate Risk, the Investor Environmental Health Network (IEHN), and Interfaith Center on Corporate Responsibility (ICCR); and convening organizations such as Social Capital Markets (SOCAP) provide regular places where investors share knowledge and best practices about opportunities related to sustainable food and agriculture. Slow Money, with local groups around the country, has become an important national network for investors to connect directly with investment opportunities in local food and agriculture. Land investors can share best practices in the Conservation Finance Network, and foundations can gather in foundation affinity groups such as Confluence Philanthropy, Mission Investors Exchange, and Sustainable Agriculture and Food Systems Funders.

4. Policy: The final area of activity is the policy arena at the local, state, national, or supranational level. Within food and agriculture, farm policy has wide-ranging ramifications across the sector, so investors have

FIGURE 4. KEY STEPS IN THE TOTAL PORTFOLIO ACTIVATION PROCESS



numerous opportunities to amplify their impact through public policy, from supporting state-wide efforts to mandate GMO labeling to tapping into U.S. Department of Agriculture (USDA) funding for Conservation Innovation Grants. At a more international level, some investors have begun aligning their impact objectives with the United Nations Sustainable Development Goals (SDGs), a set of aspirational targets for advancing global sustainable development by 2030.¹³ The second goal — “Zero Hunger” — focuses specifically on achieving food security and improved nutrition and promoting sustainable agriculture.

11 Christi Electricis, et al., “The Impact of Equity Engagement: Evaluating the Impact of Shareholder Engagement in Public Equity Investing,” Croatan Institute, November 2014.

12 See David Easley and Jon Kleinberg, *Networks, Crowds, and Markets: Reasoning about a Highly Connected World* (New York: Cambridge University Press, 2010); and Electricis, et al., “The Impact of Equity Engagement.”

13 “What Do the UN Sustainable Development Goals Mean for Investors?” Principles for Responsible Investment, 2016; and Mila Ivanova and Frances Joanne Mountford, “Transforming Our World,” ShareAction, March 2016.

“Business opportunities in the implementation of the Sustainable Development Goals (SDGs) related to food could be worth over US\$2.3 trillion annually for the private sector by 2030. Investment required to achieve these opportunities is approximately US\$320 billion per year.”¹⁴

— BUSINESS AND SUSTAINABLE DEVELOPMENT COMMISSION

By understanding and analyzing these inter-related areas of investment activity within each asset class and across impact themes, investors concerned about sustainable food and agriculture can begin to pursue impact across their whole portfolio in much more deliberate and strategic ways. The basic process of Total Portfolio Activation, adapted to investing in sustainable food and agriculture, involves ten key steps:

1. **Issue inventory:** Take an inventory of the investor’s key food and agriculture concerns, using the five broad clusters of themes as a starting point. Determine whether other overlapping ESG issues are salient to the investor’s impact objectives.
2. **Evaluation:** Evaluate the impact profile of current investment activities across asset classes.
3. **Impact Opportunity Set:** Identify the Impact Opportunity Set specific to the investor’s sustainable food and agriculture concerns and its broader asset allocation. At this point, the Opportunity Set may be more aspirational if products explicitly addressing the investor’s concerns may not yet be available in certain asset classes.
4. **Gap analysis:** Conduct a gap analysis between current activities and the Impact Opportunity Set in order to identify new areas of activity that will increase the potential for positive impact on sustainable food and agriculture.
5. **Fill gaps:** Identify specific investment opportunities that fill the gaps identified, often in close collaboration with an investment consultant or investment committee.
6. **Revise Investment Policy Statement (IPS):** Revise the IPS to reflect this new strategy of Total Portfolio Activation, specifying how sustainable food and agriculture issues shape investment selection, active ownership and

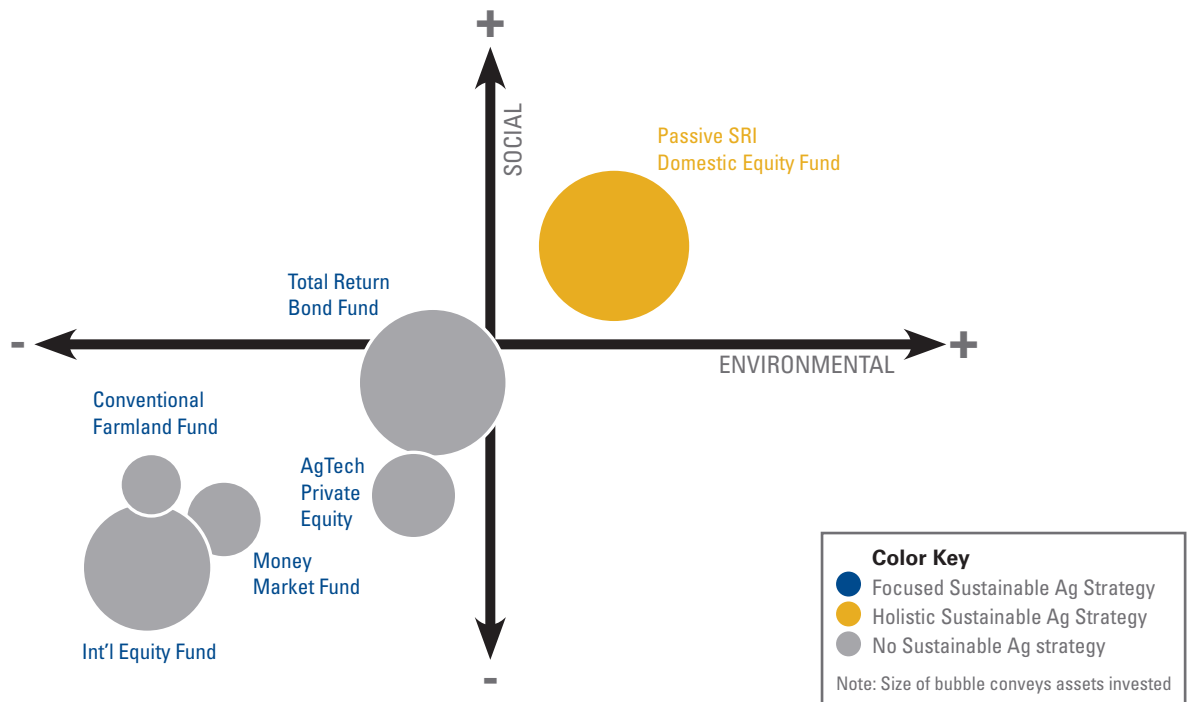
engagement, network participation, and policy initiatives across asset classes.

7. **Capacity analysis:** Conduct a capacity analysis in order to determine which investment activities can be taken directly by the investor and which should be delegated or outsourced to experienced impact investment consultants, service providers, and asset managers.
8. **Re-allocation:** Re-allocate assets to the higher-impact investment opportunities identified.
9. **Portfolio monitoring:** Monitor portfolio performance according to new impact objectives.
10. **Ongoing assessment:** Continually assess ongoing Total Portfolio Activation impact opportunities according to the IPS.

Once investors have determined their impact areas and objectives, their current portfolio can be analyzed in order to determine how sustainable food and agriculture issues are being addressed and what kinds of social and environmental impacts may be generated. The scatterplot in Figure 5 provides a map of a hypothetical portfolio of an investor seeking positive impact on sustainable food and agriculture themes and beginning to undertake Total Portfolio Activation. The investor’s domestic public equity holdings, representing more than a third of the portfolio, are currently the only place where sustainable food and agriculture issues are being explicitly addressed, although this exposure is essentially through a passively managed socially responsible investment strategy where very limited food and agriculture issues are incorporated into the investment decision-making process, alongside a host of other ESG issues. Other investment activities such as engagement and policy advocacy on sustainable agriculture themes are not being pursued, and none of the other allocations, constituting 65 percent of the portfolio, has any sustainable food and agriculture considerations explicitly incorporated into the investment process. Although the investor has allocated real assets to a conventional farmland fund and private equity assets to an AgTech fund, neither of those holdings integrates sustainability considerations; as a result, they are ultimately generating negative social and environmental impacts on the investor’s issues of concern by pursuing business-as-usual strategies within the conventional industrial agricultural system rather than seeking transformative sustainability solutions.

14 “Valuing the SDG Prize in Food and Agriculture,” Business and Sustainable Development Commission, October 2016.

FIGURE 5: BEFORE TOTAL PORTFOLIO ACTIVATION



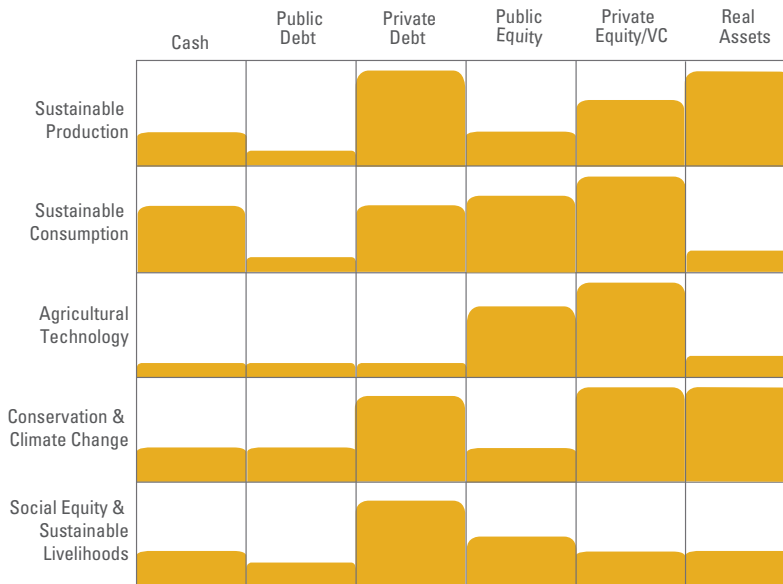
In order to reallocate the portfolio so that it is much more aligned with the investor’s impact objectives, the investor will need to identify its Impact Opportunity Set, by prioritizing the issues of greatest concern and analyzing which asset classes can be most readily activated for impact on those themes. The Impact Opportunity Set provides the investor with a benchmark against which to conduct a gap analysis between current investments and new impact opportunities. Figure 6 provides a Total Portfolio Activation Matrix that highlights an Impact Opportunity Set addressing all five of the broad themes of sustainable food and agriculture identified above: sustainable production, sustainable consumption, sustainable AgTech, climate change and conservation, and social equity and sustainable livelihoods.

As the figure highlights, opportunities are present across asset classes and impact themes, but private debt and real assets are the asset classes with the greatest opportunities for advancing sustainable production systems of crops, livestock, wood products, and fisheries. Private equity and venture capital provide the most opportunities for seeking positive impact on sustainable

consumption and AgTech, with actively engaged listed equity investing following close behind. Positive conservation outcomes and climate change impacts can be pursued most readily in real assets, private equity, and private debt, while impact opportunities to support social equity and sustainable livelihoods in food and agriculture are strongest in private debt and public equities.

With this Impact Opportunity Set before them, investors can begin to identify gaps in their current portfolio and work with a knowledgeable investment consultant or financial adviser to identify new investments to fill these gaps. Ideally, the consultant should be well versed in impact investing and sustainable food and agriculture issues. Networks such as US SIF: The Forum for Sustainable and Responsible Investment and the GIIN provide good starting points for investors seeking professional advice and support through this kind of process. (See the Resources section for additional resources.) We also recommend that investors review and revise their Investment Policy Statements to reflect the changes that have been made in order to integrate their impact objectives around food and agriculture issues into formal investment policy.

FIGURE 6: TPA MATRIX: SUSTAINABLE AGRICULTURE IMPACT OPPORTUNITY SET

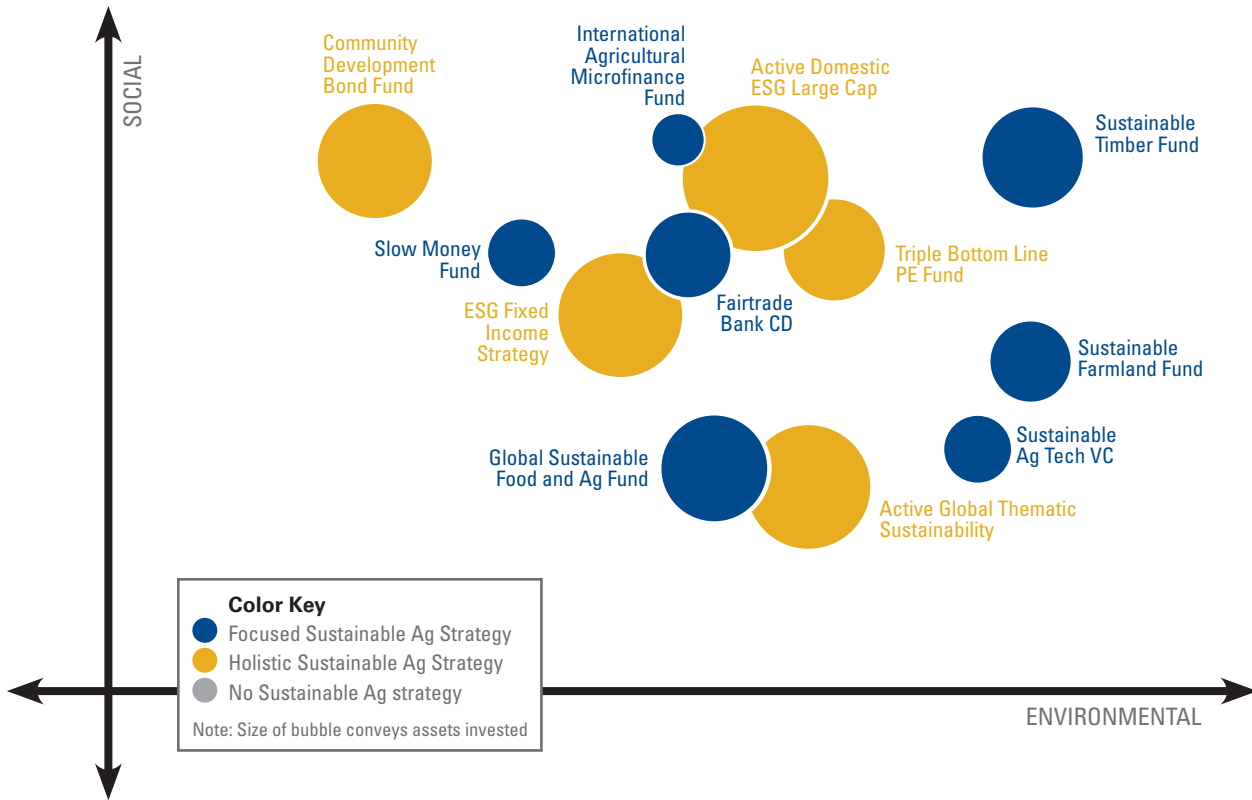


Finally, investors need to begin the process of portfolio re-allocation, exiting positions that no longer fit their newly articulated impact objectives and investing in opportunities that emerge from their analysis. Figure 7 provides a portfolio map after the reallocation process. The resulting portfolio shifts the investor’s impact profile much farther up the positive social and environmental impact spectrum, across all asset classes. Some investments, in blue, provide focused exposure to sustainable agriculture strategies and themes, while others in gold approach sustainable food and agriculture through more holistic sustainable investing strategies.

In cash and cash equivalents, for example, investing in a community bank’s FDIC-guaranteed certificate of deposit, targeted at providing capital to a fair-trade food company, provides a more positive impact than more conventional bank deposits or money market instruments. In public fixed income, a community development bond fund gives some limited exposure to bonds in the food and agriculture system with very strong positive social impacts, while a more holistic ESG fixed-income strategy gives more exposure to sustainable agriculture themes than a conventional bond strategy. In listed equities, particularly high-impact social and environmental opportunities are obtained through investing in actively managed holistic ESG strategies with explicit agriculture-related investing

criteria and a forceful shareholder engagement strategy across food and agriculture value chains. More narrowly focused, thematic listed equity strategies that integrate food and agriculture — whether as a dedicated fund or a sleeve within a more holistic global sustainability strategy — provide exposure to high environmental impact themes, ranging from small- and mid-cap sustainable AgTech to large diversified companies providing sustainable solutions to agricultural problems. However, they also have weaker social impact than other public equity managers working on business and human rights in agriculture supply chains through engagement strategies. Private equity exposures include both targeted sustainable AgTech focused on efficiency, equipment, big data, green chemistry, and the circular economy, and a triple-bottom-line private equity fund that gives more diversification within the asset class, as it invests in food and agriculture companies as one of multiple thematic impact sectors. Opportunities in private debt are pursued through both a domestic Slow Money fund working in relatively modest scale and an international microfinance fund that focuses on smallholder livelihoods, creating very strong positive social impact in the developing world but with a weaker focus on environmental impact. Finally, in real assets a sustainable farmland fund focusing on the organic transition has deep environmental impact qualities, while a sustainable TIMO using FSC certification and conservation finance techniques in working forests in

FIGURE 7: AFTER TOTAL PORTFOLIO ACTIVATION



low-income, rural communities provides exposure to strong social and environmental impacts across rural landscapes.

Although this example of Total Portfolio Activation is merely hypothetical, increasing numbers of asset managers and investors are embracing precisely these kinds of opportunities across asset classes, themes, and

geographies. The following sections, organized by asset class, highlight the many ways that impact investors have begun to integrate sustainable food and agriculture considerations into portfolio management, specifically in cash and cash equivalents, public fixed income and private debt, public equity, private equity and venture capital, and real assets.

Sustainable Agriculture Investment Opportunities across Asset Classes

Cash and Cash Equivalents

For investors seeking to increase the social and environmental impact of their investments, shifting deposits and cash reserves from large mega-banks into mission-oriented community banks and credit unions is a ready starting point. “Mission banking” differs little from other forms of banking, yet it often provides access to capital for lower-income borrowers and a wide range of businesses in targeted geographic regions, including many involved in local food systems.¹⁵ As with conventional investments in this asset class, deposits are highly liquid, transparent, and relatively low-risk, particularly when held at federally-insured depository institutions like banks and credit unions. Banks and credit unions that are certified as community development financial institutions (CDFIs) by the U.S. Treasury Department also support financially underserved low- and middle-income communities. Even when not certified as CDFIs, some community banks and credit unions have integrated sustainability into their operations and include local food and agriculture among the themes of their sustainable lending programs that investor deposits help to finance.

Among certified CDFIs, Self-Help Credit Union is a leading community development credit union with a Green Certificate of Deposit (CD) product that targets environmentally sustainable businesses, including many involved in food and agricultural value chains. The North Carolina-based credit union has lent over \$14.8 million to 37 borrowers in the healthy food supply chain of producers, distributors, and retailers, and it regularly partners with the U.S. Department of Agriculture to finance rural renewable energy products using USDA loan guarantees.¹⁶ Self-Help’s Green CDs offer investors 0.25 to 1.8 percent over terms ranging from three months to five years.

Sustainable food, fisheries, and agriculture are among the transformative sectors where Beneficial State Bank, a certified CDFI based in Oakland, California, with branches across California and Oregon, targets its lending. Unlike Self-Help, Beneficial State does not provide a thematic depository product; instead, the bank integrates sustainable agriculture into its overall loan

portfolio. Although Beneficial State does not currently finance producers directly, by lending to food processors and distributors of healthy and sustainable foods the bank aims to support critical infrastructure in food value chains and promote rural development.¹⁷ Depositors in savings accounts and CDs ranging from six months to three years provide capital to make that lending possible.

New Resource Bank is another community bank based in northern California with a strong sustainability mission and an Impact CD that can be targeted on natural and organic products. Impact CDs offer investors 0.05 to 0.55 percent over terms ranging from one month to five years, with a minimum deposit of \$25,000. Since the bank’s founding in 2006, New Resource has financed a variety of food and fiber companies involved in organic agriculture and fair trade, including Alter Eco, Cowgirl Creamery, Indigenous Designs, Kuli Kuli, Straus Family Creamery, Ritual Coffee, and Veritable Vegetable.

In New England, Eastern Bank, the largest community bank in Massachusetts, partnered with Equal Exchange, a worker-owned cooperative, to develop a specialized three-year CD that would pool capital for a low-interest line of credit to the co-op. Headquartered in West Bridgewater, Massachusetts, Equal Exchange distributes a variety of fair trade, organic products, ranging from coffee to chocolate, sourced from farmer cooperatives in Africa, Asia, and Latin America. The minimum deposit in the Equal Exchange CD is \$500, with an interest rate of 0.4 percent across 36 months.¹⁸

Further north in Maine, an effort is underway to launch a community credit union focused specifically on financing the local food economy, building upon the state’s successful community of Slow Money lenders. Housed at the Maine Organic Farmers and Gardeners Association (MOFGA), the nation’s oldest and largest state organization dedicated to organic agriculture, the Maine Food System Credit Project has undertaken a feasibility analysis for the credit union that has identified \$90 million in unmet demand for farm mortgages in the state. “Farmers have a hard time finding lenders,” says Ted Quaday, Executive Director of MOFGA, which has operated an Organic Farmer

15 Valerie Berezin, Lisa Hagerman, and David Wood, “Cash as a Mission-Related Investment,” Initiative for Responsible Investment, Harvard University, February 2011.

16 Melissa Malkin-Weber, “Self Help Credit Union’s Green Impact Capital,” *Green Money Journal*, January 2016.

17 Beneficial State Bank, “Sustainable Food, Fisheries, and Agriculture,” 2015.

18 Daniel Fireside, “Equal Exchange’s Radical New Approach to Corporate Social Responsibility,” *Green Money Journal*, summer 2011.

Loan Fund with Bangor Savings Bank to provide loans up to \$20,000 to MOFGA-certified organic farmers or farms undergoing organic transition. The new Maine Harvest Credit Union would provide larger loans for farm equipment, building expansions and upgrades, and farmland mortgages that conventional banks have simply failed to finance.¹⁹ If successful, the credit union could provide a model for other states where the financing needs of burgeoning local food economies are not being adequately met.

Fixed Income

Public Fixed Income

Limited opportunities to invest in sustainable food and agriculture can be found in the public debt capital markets, mainly through corporate bonds, municipal bonds, government agency bonds, or supranational development agency bonds, many of which are increasingly being labeled as “green bonds.” Investment exposure to food and agriculture themes with positive impact in public fixed income tends to be relatively indirect, however, while climate change is a leading theme in public bond markets. A handful of bond fund managers have explicitly targeted sustainable food and agriculture as part of their impact investment strategy. In 2014, for example, Community Capital Management committed to investing \$50 million in bonds that finance sustainability initiatives in rural economies. It has deployed \$28 million of that commitment to date, primarily in high-quality municipal bonds, including a taxable revenue bond issued by the Tuolumne Wind Project Authority. The proceeds were used to refinance a utility-scale wind facility in Washington state, providing renewable energy to some 44,000 households in Turlock Irrigation District, which distributes water to more than 5,800 farmers and approximately 150,000 acres of farmland in California’s central valley.²⁰

Numerous asset managers apply some limited agriculture-related ESG criteria to their fixed-income and public-equity investments alike, so investors can get minimal impact exposure to food and agriculture themes through the ESG bond funds and fixed-income strategies that they manage. Food and beverage companies have issued corporate

bonds to finance corporate sustainability initiatives, for example, which ESG bond fund managers might purchase. Proceeds from Starbucks’ Corporate Sustainability Bond were earmarked for supporting coffee farming communities, sustainability initiatives on coffee farms, and climate mitigation efforts.²¹ Unilever’s 2014 green sustainability bond earmarked financing for an energy-efficient Ben & Jerry’s ice cream factory in South Africa and the rollout of more “climate friendly” freezer cabinets that help eliminate the company’s use of hydro fluorocarbons, a significant greenhouse gas.²²

Multilateral development banks have also issued green bonds providing some form of financing to food and agricultural projects, but as part of broader portfolios of green projects. World Bank green bonds have included small-scale, indigenous farmers in Paraguay and an eco-farming project in China, for example, while green bonds issued by the African Development Bank include food security and natural resource management among their investment themes.²³ Although the social and environmental impacts of these kinds of green bonds can be difficult to measure, groups such as the Climate Bonds Initiative are actively developing standards for green bonds and climate bonds related specifically to agriculture, forestry, and land use. Barclays, Credit Suisse, Rabobank, and BNY Mellon are among the investors participating in working groups related to the development of these land use standards for climate bonds.²⁴ Impact investors can use these emerging standards and other Green Bond Principles as part of their toolkit for assessing impact opportunities within the fixed-income asset class.

Private Debt

According to Cheryl Smith, Managing Partner and fixed-income strategist at Trillium Asset Management, private debt provides far more targeted opportunities for investing with positive impact in food and agriculture than the public bond markets. Whether through direct lending or intermediaries, private debt investing often can be done in specific places and with considerable focus on themes such as agricultural production, sustainable livelihoods, and conservation and climate change. Opportunities in this

19 Interview with Ted Quaday, February 1, 2017; Scott Budde, “A Credit Union for the Local Food Economy?” *The Maine Organic Farmer and Gardener*, spring 2014; and Lori Valigra, “Local Food-Focused Credit Project in Maine Seeks Pay Dirt Where Others Just See Dirt,” *Bangor Daily News*, November 7, 2016.

20 Community Capital Management, “Investing in Sustainable Agriculture,” October 2014.

21 Starbucks, “Starbucks Issues the First US Corporate Sustainability Bond,” May 16, 2016.

22 Tamar Wilner, “Unilever ‘Green’ Freezers Cut Energy Use 10%,” *Environmental Leader*, February 15, 2012.

23 The World Bank Treasury, “Bonds for Sustainable Development,” Investor Presentation [no date].

24 See <https://www.climatebonds.net/standard/land-use>.

asset class include both domestic and international options, from local and regional investments using Slow Money or community development loan funds to international microlending to support smallholder agriculture in the developing world.

Since its emergence nearly a decade ago now, Slow Money has galvanized considerable interest in private investing in local food and farming systems. Slow Money's 18 local networks and 11 investment clubs have invested \$50 million into more than 500 farms and enterprises. Although much of this activity is through low-interest individual lending, some pooling of capital occurs through investment clubs and other vehicles. For example, No Small Potatoes of Maine is a well-established Slow Money investment club that provides uncollateralized microloans up to \$5,000 to farmers, fisheries, and food businesses in the state. Each member makes a \$5,000 initial investment and then provides additional investments in \$1,000 increments. As noted earlier in the discussion of cash and cash equivalents, the Maine Organic Farmers and Gardeners Association developed an Organic Farm Loan Fund in partnership with a community savings bank in order to provide loans up to four times larger than a Slow Money investment club like No Small Potatoes has been able to make, providing a useful complement to Slow Money. MOFGA is now supporting the development of the Maine Harvest Credit Union to make even larger investments with mortgages and loans to farmers and food system entrepreneurs.

Numerous certified CDFI loan funds across the country include a focus on sustainable food and agriculture in highly targeted geographies, often meeting capital needs in financially underserved communities. Yet another pioneering institution based in Maine, Coastal Enterprises Inc. (CEI) is a nonprofit community development loan fund that specializes in rural economic development; it has a Sustainable Agriculture & Food Systems Program that constitutes approximately 25 percent of its lending portfolio in addition to another 12 percent in forestry, fisheries, and aquaculture.²⁵ It also partners with the Carrot Project, a Boston-based nonprofit microlender focused on food and agriculture across New England, on the Maine Farm Business Loan Fund that makes small loans up to \$35,000.

Elsewhere in New England, the Vermont Community Loan Fund, a "mission-driven, community-focused alternative lender," recently created The Food, Farms & Forests Fund to

invest in sustainable agriculture, natural resources, and health food enterprises in Vermont. Investors earn up to 1 percent returns over no less than five years. In its first year, the Fund provided over \$1.5 million in financing to 16 entrepreneurs, which led to the creation or preservation of 146 jobs.²⁶

The Cooperative Fund of New England, based in Massachusetts, is a community development loan fund that invests in cooperatives, community-oriented nonprofits, and worker-owned businesses across the region. Investments in its Social Investment Loan Product range from \$1,000 to \$1 million, with 0 to 2 percent interest and a minimum term of one year. Although agriculture is not the Fund's sole focus, food cooperatives have constituted 45 percent of its borrowers.

Further south, the Natural Capital Investment Fund (NCIF), a certified CDFI loan fund affiliated with the Conservation Fund, finances small- to mid-sized rural businesses across nine states in the Southeast. Many of the enterprises in which NCIF invests have agricultural themes, including sustainable food systems, ecotourism, and timber. The Fund also has specific programs directed at assisting farmers of color in North Carolina, agricultural value chains in West Virginia, and sustainable logging across the region.

In the Pacific Northwest, Craft3, a CDFI loan fund providing loans to businesses, nonprofits, and individuals in Oregon and Washington, has invested \$57 million in food-related businesses. Some of the nonprofit's earliest clients came from the food and agriculture or fisheries sector, so accredited investors in its Community Impact Investment Notes will be gaining exposure to regional food and agriculture businesses alongside other community investment opportunities in the region. Craft3's notes have a \$20,000 minimum, terms of one to five years, and returns of 1.25 to 3 percent.

CDFIs often use public policy programs to extend their reach and amplify their impact. The Reinvestment Fund, a CDFI loan fund based in Philadelphia, was recently selected as the National Fund Manager to the USDA's Healthy Food Financing Initiative (HFFI). In this role, the fund will raise private capital, provide financial and technical assistance to partners at the local and national levels, and also finance projects that "improve access to fresh, healthy foods in underserved rural areas." Since starting the Pennsylvania Fresh Food Financing Fund in 2004, the Reinvestment

²⁵ Coastal Enterprises Inc., "Fall 2016 Core Mission Investment Report."

²⁶ Vermont Community Loan Fund, "VCLF's Food, Farm & Forests Fund."

Fund has provided more than \$248 million in loans and grants for over 160 healthy food projects.²⁷ HFFI takes the Reinvestment Fund's state-level work to a national scale.

The restorative farmland finance company Iroquois Valley Farms, owns and provides mortgage financing for organic farmland in thirteen states from Montana to Maine. The firm has historically issued private securities (including medium-term debt) to fund investments providing younger farmer land access, and now with the support of a USDA Conservation Innovation Grant, it is launching a note focused specifically on supporting the critical three-year transition to organic certification. (See case study for more information.) Beyond community development loan funds, numerous lending intermediaries have emerged to provide flexible private debt capital across food and agricultural value chains, some in specific regions, others with broader geographic flexibility.

RSF Social Finance, a national lender based in the San Francisco Bay Area, manages a Food System Transformation Fund that lends to enterprises focused on building local food systems. Designed to ease the burdens of foundations making Program-Related Investments (PRIs), investments in the Food System Fund start at a minimum of \$100,000 and take the form of a non-amortizing five-year loan to RSF, with an annual interest rate of 1 percent. RSF's "integrated capital" approach to financing food systems involves the coordination of multiple forms of capital and non-financial loans that an enterprise might need, from loans and loan guarantees to mezzanine finance, grants, and other non-financial supports. Its investment in Veritable Vegetable, a women-owned organic food distributor in San Francisco, exemplifies this approach. RSF joined New Resource Bank in lending \$1.6 million to the company in order to finance a \$4 million renovation of warehouse space in San Francisco. In order to meet underwriting requirements for its loans, Veritable Vegetable needed \$800,000 in equity-like capital, which RSF helped to facilitate through a combination of grants, loans, and networked connections that helped to leverage USDA funds and \$400,000 in angel investment.²⁸ PRIs in the Food System Transformation Fund help finance RSF's integrated approach to financing the infrastructure of sustainable food systems.

In New England, numerous initiatives blend private debt with other forms of capital. The Fair Food Fund finances sustainable food systems and livelihoods across the region through a combination of debt, equity, and royalty financing, with a minimum investment of \$500,000. Since it was launched, the Fund has provided \$1.8 million to food businesses and served 50 enterprises and more than 350 farms. Fresh Source Capital offers a combination of debt and equity with near market-rate returns. It invests in local food system enterprises across the value chain, including food aggregation, processing, distribution and logistics, and retail; it also considers opportunities in urban agriculture and fisheries. Although Fresh Source Capital currently operates only in New England, it aims to expand its model nationally.

In the Pioneer Valley of western Massachusetts, a group of regional foundations has developed Pioneer Valley Grows, with a \$2.6 million Pioneer Valley Grows Investment Fund offering flexible funding and technical assistance to farmers and food entrepreneurs. The fund has three investment opportunities with various risk/return profiles: the PVGrows Investment Note, PVGrows Patient Capital Note, and the Risk Capital Note.

In the Chicago area, the Fresh Taste Initiative has brought together nearly a dozen philanthropic funders into a network that supports the emerging regional food system in Chicago and the surrounding region of east central Illinois, southern Wisconsin, eastern Iowa, northern Indiana, western Michigan, and northwestern Ohio. In addition to pooling grants into a Good Food Fund, Fresh Taste has helped to convene collaborative initiatives such as the Sustainable Local Food Investment Group (SLoFIG), a network of 30 accredited investors, including the Walter S. Mander Foundation and numerous angel investors, using convertible debt and private debt and equity to invest in a growing portfolio of start-up and early-stage companies across the Chicago food shed.²⁹ After helping to found Fresh Taste, the Lumpkin Family Foundation, a private family foundation that supports people working together to build healthy, sustainable communities in east central Illinois and across the U.S., partnered with the Initiative to conduct a food system asset inventory. The resulting report, "East Central Illinois: A Place to Grow," has played an important role in the Foundation's strategic planning, which has increasingly prioritized agriculture-themed grantmaking

27 Reinvestment Fund, "Reinvestment Fund Selected as National Fund Managers by USDA," January 13, 2017.

28 "Integrated Capital: RSF's Unique Approach and Toolkit," RSF Social Finance.

29 See Ann Dwyer, "Green Scene: Angel Investors Nurture Local-Food Seedlings," Crain's Chicago Business, March 10, 2011; and <http://slofig.com>

and incorporating food, agriculture and rural communities into its investment portfolio.³⁰ According to Bruce Karmazin, the Foundation's Executive Director, Lumpkin is engaging in conversations about how to deepen the Foundation's approach to investing in sustainable agriculture across asset classes in alignment with both the family's values and the Foundation's mission. Through place-based initiatives such as Fresh Taste and national foundation affinity groups such as the Sustainable Agriculture and Food Systems Funders, foundations are increasingly turning to impact investing to extend the reach of their grantmaking.

In addition to domestic private debt, investors can deploy debt capital abroad to support sustainable food and agricultural systems, particularly through international microfinance and other lending vehicles. In the context of disconcerting charges of land grabbing by foreign investors in emerging markets, responsible lending that supports the livelihoods of smallholder farmers in the developing world presents a pressing need, which the UN Sustainable Development Goals only reinforce. According to the International Fund for Agricultural Development, investments should be made through mutually beneficial partnerships between investors and smallholder farming communities rather than require large-scale land acquisitions without community consultation.³¹ The Council on Smallholder Agricultural Finance (CSAF) is an alliance of social lending institutions, including Oikocredit, Rabobank, Root Capital, Shared Interest, and Triodos Investment Management, among others, that aims to create a transparent and sustainable financial market for small and growing agricultural businesses in low- and middle-income countries. The primary target of this lending is the "missing middle," or agricultural businesses that are too large for microfinance but do not yet qualify for loans from commercial banks. These businesses also benefit small farmers by aggregating their products, providing technical assistance, and offering lines of credit. CSAF members meet to identify best practices and develop industry standards around market growth, responsible lending, and social and environmental impact metrics. Additionally, the

Initiative for Smallholder Finance (ISF) is a platform for investors and donors working to close the financing gap for smallholder farmers in Latin America, sub-Saharan Africa, and South and Southeast Asia. Along with mobilizing capital for smallholders, ISF members also seek opportunities to replicate successful models in new parts of the world.

"There are an estimated 450 to 500 million smallholder farmers in the world; as many as 2 billion people live in smallholder farm households."

— INITIATIVE FOR SMALLHOLDER FINANCE³²

Several opportunities have emerged for international private debt investors to respond to these needs in targeted ways in various international geographies. Calvert Foundation estimates that there is \$13 billion in unmet capital needed in the agriculture space. To narrow this financing gap, its agriculture portfolio has approximately \$25 million invested across ten organizations in Latin America and Africa.³³ ImpactAssets, a spin off from Calvert Foundation based in San Francisco, offers a Global Sustainable Agriculture Note that invests in grower cooperatives and agricultural enterprises that both benefit small to midsized farmers and improve environmental performance. Its goals include poverty alleviation, improved soil health, and increased food production. Investments begin at \$25,000, over five years, with targeted returns around 3 percent. Root Capital is an agricultural impact investor focused on improving rural livelihoods in Africa and Latin America. It offers options for senior and subordinated debt as well as targeted impact loans that invest in agricultural businesses in their lending portfolio. (See case study for additional information.) Finally, European-based Triodos Investment Management offers a Sustainable Trade Fund, which builds on the firm's previous work in microfinance. The fund aims to improve the livelihoods of farmers in developing countries, by providing loans to cooperatives and enterprises across sustainable agriculture value chains. The fund also promotes sustainable agriculture as an alternative to conventional agriculture, and it works with organic and fair trade farmers to access European and North American markets.

30 Fresh Taste Initiative, "East Central Illinois, a Place to Grow," July 2014.

31 See Harold Liversage, "Responding to 'Land-Grabbing' and Promoting Responsible Investment in Agriculture," IFAD Occasional Paper 2, International Fund for Agricultural Development, December 2010.

32 Laura Goldman, et al., "Inflection Point: Unlocking Growth in the Era of Farmer Finance," Dalberg Global Development Advisors, Initiative for Smallholder Finance, and Rural & Agricultural Finance Learning Lab, April 2016.

33 Euhbin Song, "Financing the Farming of the Future: How We Assess the Viability of Global Agriculture Finance," Next Billion, January 5, 2016.

CASE STUDY: ROOT CAPITAL

Root Capital is a social investment fund that uses agriculture to improve rural livelihoods in poor, environmentally vulnerable places in Africa, Latin America, and Indonesia. The fund seeks to reduce poverty by increasing access to agricultural markets. To do this, Root Capital provides loans and technical assistance to small agribusinesses that operate as aggregators and buy from small-scale producers in their communities. Increasing credit to these enterprises means that they can buy more products from the farmers as well as invest in community services like health clinics, schools, and electricity.

Root Capital applies both social and environmental criteria when deciding what businesses to invest in. Most importantly, the businesses must support and benefit smallholder farmers. Businesses need not be certified as either organic or fair trade, but according to Director of Investor Relations Rachel Serrota, two-thirds of the businesses have some type of certification. On the environmental side, Root Capital looks at factors like irrigation methods, chemical use, and soil management practices.

Root Capital uses investor funds to lend capital to rural, small and growing businesses that, in addition to providing stable incomes to their members and employees, also generate positive benefits for their communities. Root Capital's loans to clients provide early-stage financing to businesses that export natural products including coffee, cocoa, and nuts as well as

loans to produce goods for domestic consumption. They offer investors the option of investing in their Women in Agriculture Initiative note. Through this initiative, Root Capital seeks to catalyze greater economic security for women by supporting small and growing businesses with access to credit and financial training, and promoting gender-inclusive practices. Accredited investors may choose to invest in a senior or subordinated note product with a minimum investment of \$25,000 with varying tenors and rates. Since inception Root Capital has maintained a 100 percent repayment rate to investors.

One example of a successful sustainable enterprise that Root Capital has loaned to is Serendipalm, the world's first and largest fair trade and organic palm oil farm. Located in Ghana, the company was started in 2006 by the personal care product company Dr. Bronner's, which uses sustainable palm oil in its soaps. The trees are cultivated by 670 farmer members who, by learning organic practices, are able to achieve higher yields and premium prices for their goods. Serendipalm also operates a processing mill, which employs over 240 people at wages 25 percent higher than comparable local wages. Root Capital became the company's first external lender in 2014, and continues to provide financing to pay farmers in a timely fashion and grow Serendipalm's operations.³⁴ Together, they are demonstrating that palm oil production can, in fact, be done in an environmentally and socially sustainable manner, rather than through land grabbing.

34 Lauren Baum, "Asuom, Ghana: Where Sustainable Palm Oil is Not an Oxymoron," Back Roads to Board Rooms, May 7, 2015.

Public Equity

Investing in the listed equities of publicly traded corporations gives investors opportunities for impact in all four areas of investment activity, but particularly through investment selection and shareholder advocacy. Some investors may choose to invest in small- and mid-cap companies that provide exposure to innovative AgTech, ranging from efficient water irrigation to smart transportation that reduces food waste. Other investors may seek exposure to large-cap food and beverage companies, either as a pro-active investment or as a target for shareholder engagement on environmental and social issues.

A small number of public equity managers manage dedicated portfolios focused narrowly on sustainable food and agriculture. Since 2009, Switzerland-based Pictet Asset Management's Agriculture Fund has invested in "solutions to the global agriculture imbalance," through farm professionalism, AgTech, processing, and transportation. The fund is particularly interested in reducing food waste through increased efficiency in distribution. It excludes commodities and has a strict policy on investing in GMOs.³⁵ Pictet also has a Timber Fund that invests in publicly traded companies that are helping to sequester carbon and mitigate climate change within the forest products supply chain.³⁶ In the U.K., specialist manager Impax Asset Management launched an Irish-domiciled Food and Agriculture Fund in 2012. It invests in global food and agriculture companies "addressing the challenges of sustainable food supply, resource efficiency, and nutritious content."³⁷ The Fund includes companies in the packaged foods and ingredients, distribution, packaging and food safety, machinery, and logistics sectors.

Other managers incorporate food and agriculture as a strategic sleeve within broader sustainability themed investment or as part of a more holistic approach to ESG investment. For example, agricultural productivity is one of nine clean technology themes of Essex Investment Management's Global Environmental Opportunities Strategy (GEOS), a global all-cap strategy investing in companies that enable greater natural resource and energy efficiency. Sustainable AgTech and broader clean technologies with agricultural implications, such as autonomous vehicles, GPS and big data aggregation, and precision equipment, shape roughly 16 percent of the GEOS portfolio.

In order to have even greater impact, many public equity managers integrate sustainable food and agriculture investing criteria into their broader ESG analysis and then use shareholder engagement strategies to improve corporate behavior on those issues. Numerous NGOs working on consumer advocacy campaigns have demonstrated that many of the largest food and beverage

companies are also among the most sensitive to consumer and investor feedback and pressure. Groups such as Friends of the Earth, Oxfam, Rainforest Action Network, and WWF routinely target food and beverage companies. Consumer campaigns, whether boycotts or just bad press, can create reputational risks that investors need to monitor and manage, but they also open space for dialogue and constructive engagement on social and environmental issues of concern. WWF, for example, has targeted 100 of the largest food and beverage companies for engagement as part of a long-term, commodity-focused strategy for promoting biodiversity.³⁸ Oxfam's Behind the Brands campaign published online scorecards at 10 major food and beverage companies across seven critical issues, from climate change and land use to water, workers, and women's rights. After three years of dialogue and consumer action, the targeted companies had improved an average of 18 percent on scorecard issues.³⁹

Investors have similarly come together in a variety of different shareholder networks, including Ceres, the Farm Animal Investment Risk & Return (FAIRR) network, ICCR, and the Investor Environmental Health Network, to engage with companies across food and agricultural value chains. For example, in August 2015, more than 60 U.S. and U.K. investors sent investor statements to 15 food and beverage companies requesting more transparency around water risks, given that the global food sector uses 70 percent of

Oxfam's Behind the Brands Supply Chain Scorecard

Seven Key Sustainability Themes at the Largest Food and Beverage Companies

- » Climate Change
- » Farmers
- » Land
- » Transparency
- » Water
- » Workers
- » Women

35 Pictet Asset Management, "Pictet-Agriculture Fund," 2015.

36 Pictet Asset Management, "Pictet-Timber Fund," 2015.

37 Impax Asset Management, "Impax Food and Agriculture Fund."

38 Jason Clay, "How Big Brands Can Help Save Biodiversity," TEDGlobal 2010, July 2010.

39 Erinch Sahan, "The Journey to Sustainable Food: A Three-Year Update on the Behind the Brands Campaign," Oxfam Briefing Paper, April 19, 2016.

freshwater resources worldwide. Of these, ten committed to providing additional information through the CDP Water Survey. Of those who did not respond, Calvert and Walden went on to file shareholder resolutions at Dean Foods, Flowers Foods, and Fresh Del Monte Produce. For investors such as Calvert, data disclosure is only the first step toward more proactive management of these risks and ultimately a much more sustainable approach to water resource use by companies within the sector.⁴⁰

In terms of agricultural production, factory farming and animal welfare are major issues for many highly engaged public equity managers. Calvert Investments and Trillium Asset Management both avoid companies that have controversies related to animal welfare; Clean Yield Asset Management does not invest in factory farming, while the Green Century Balanced Fund also avoids investing in factory farming.⁴¹ According to the 2016 FAIRR Report, exposure to factory farming raises “at least 28 environmental, social, and governance (ESG) issues that could significantly damage financial value over the short or long-term,” affecting companies throughout the value chain, from agribusiness to restaurants.⁴² A number of public equity managers have consequently filed shareholder resolutions and engaged with companies on precisely these issues.⁴³ In 2016, for example, 54 investors with \$1.41 trillion in assets under management launched a campaign against ten of the largest U.S. and U.K. restaurant chains, asking them to end the excessive use of antibiotics in their meat and poultry. The companies targeted included McDonald’s, Domino’s Pizza, Darden Restaurants, Restaurant Brand International, The Wendy’s Company, and Yum! Brands. The investors noted that 80 percent of antibiotics produced in the United States are given to livestock, primarily to accelerate animal growth and to manage overcrowded conditions. There has been moderate progress in engaging with these companies, as they continue

to respond to these requests; some, such as Domino’s, stated that they only use antibiotics to treat disease.⁴⁴

Within the sustainable consumption theme, investors such as Clean Yield Asset Management and Green Century’s MSCI International Index Fund and Equity Fund explicitly include “organic and natural food supply companies” or products and services that include healthy lifestyles or sustainable agriculture.⁴⁵ Calvert specifically highlights the need to protect the interests of organic farmers within their responsible investing principles.⁴⁶ Growing consumer interest in organic products has become a major opportunity that listed equity investors are well placed to seize: in 2015, the United States organic industry sales hit a record \$43.3 billion, demonstrating growth of 11 percent compared with the total food market’s 3 percent.⁴⁷ Overall, the number of organic operators has increased 300 percent since 2002.⁴⁸ Global food and beverage companies are adding organic lines to their products to capitalize on this growing market opportunity that ultimately helps build healthier soil and develop more resilient, pesticide-free forms of agriculture. Additionally, recent shareholder efforts have focused on reducing or ending the use of neonicotinoid pesticides linked to the widespread decline of pollinator honeybees.⁴⁹ In 2013, a coalition of investors led by Trillium Asset Management and The Sustainability Group approached Costco regarding the absence of policies related to neonicotinoids and colony-collapse disorder. After several dialogues with investors and environmental groups, the company developed a publicly available pollinator policy for its live goods suppliers in January 2017.⁵⁰ The Investor Environmental Health Network has also provided investors a platform to engage with publicly traded companies on pollinators and pesticides.

When selecting securities, numerous public equity managers, including Calvert Investments, Clean Yield, Boston Common Asset Management, and Green Century, specifically avoid

40 Welsh and Passoff, “Proxy Preview 2016,” pp. 24-5.

41 Calvert Investments, “The Calvert Principles for Responsible Investment,” 2017; Clean Yield Asset Management, “Environmental and Social Screens,” 2015; Green Century, “Why Choose Green Century”; and Trillium Asset Management, “Environmental, Social, and Governance (ESG) Criteria.”

42 Farm Animal Investment Risk & Return, “Factory Farming: Assessing Investment Risks,” 2016, p. 2.

43 Interfaith Center on Corporate Responsibility, “Food Safety and Sustainability”; and Heidi Welsh and Michael Passoff, “Proxy Preview 2015,” As You Sow, Sustainable Investments Institute, and ProxyImpact, 2015, p. 29-30.

44 Simon Jessop, Martinne Geller and Lisa Baertlein, “Investor Group Launches Campaign to Curb Antibiotic Use in Food,” *Reuters*, April 10, 2016; and Boston Common Asset Management, “Active Investor Social Update,” Second Quarter 2016.

45 Green Century, “Why Choose Green Century”; and Clean Yield Asset Management, “Environmental and Social Screens,” 2015.

46 Calvert Investments, “The Calvert Principles for Responsible Investment,” 2017.

47 Organic Trade Association, “US Organic Sales Post New Record of \$43.3 billion in 2015,” May 19, 2016.

48 USDA, “USDA Reports Record Growth in US Organic Producers,” April 4, 2016.

49 See, for example, The Task Force on Systemic Pesticides, “Worldwide Integrated Assessment of the Impacts of Systemic Pesticides on Biodiversity and Ecosystems,” Notre Dame de Londres, January 2015.

50 Costco, “Costco Wholesale’s Live Good Policy to Protect Pollinator Health.”

companies involved in the production of genetically modified organisms (GMOs). Trillium Asset Management avoids investing in companies with more than 5 percent of revenues coming from agricultural biotechnology. In terms of investor engagement, in 2002, Trillium became the first sustainable investment firm to file a shareholder proposal on the issue of GMOs at Whole Foods Markets. After several years of dialogue and a second proposal in 2005, the company agreed to label all of its Whole Foods brand products. Later, in 2014 Whole Foods went further by announcing that it would require

GMO labels on all products by 2018.⁵¹ In 2013, a group of faith-based institutional investors affiliated with ICCR reached an agreement with PepsiCo around the labelling of GMOs in its ingredients so that consumers could make more informed choices.⁵² Following the influx of corporate money to fight ballot proposals requesting GMO labelling in states such as California, Oregon, and Washington, As You Sow filed resolutions related to political spending on ballot initiatives. While the 2017 resolutions are still pending, a 2016 resolution filed at Monsanto received over 20 percent of the vote.⁵³

51 Jonas Kron and Laura McGonagle, "Trillium's Approach to Investing in Publicly Traded Food and Agriculture Companies," Trillium News, July 9, 2014.

52 Paul Boykas, *PepsiCo Letter to Laura Berry*, March 19, 2013.

53 A database of As You Sow resolutions are available at <http://www.asyousow.org/our-work/current-resolutions/>.

CASE STUDY: TRILLIUM ASSET MANAGEMENT

Trillium Asset Management is an employee-owned investment management firm with a history of investing around sustainable food issues as part of its broader approach to ESG integration and analysis of corporate and financial performance. When considering new investments in publicly traded food and beverage companies, the firm focuses on sustainability factors across several measures, including raw material sourcing, energy use, and human and labor rights. Trillium does not simply screen out companies; when making recommendations, the firm presents a synthesized overview of a company that includes all aspects of its performance.

Given the considerable environmental and social impacts of agricultural supply chains, food system advocacy has been a central component of Trillium's shareholder activism. Trillium began engaging companies on food more than 20 years ago, when it became the first investment firm to file a shareholder proposal on the issue of animal welfare. In partnership with Animal Rights International, Trillium helped persuade McDonalds to adopt a groundbreaking policy regarding the humane treatment of farm animals. Since then, Trillium has engaged companies across the food supply chain on a wide swath of issues, including

food waste, sustainable fisheries, coffee sourcing, GMOs, land grabs, and pesticide management.⁵⁴

Trillium's strong interest in climate change has also made sustainable palm oil an engagement issue because of the commodity's contribution to deforestation and greenhouse gas emissions. In 2012, Trillium undertook a campaign to engage Yum! Brands on the use of unsustainable palm oil throughout its business segments, which include major fast food chains such as KFC, Taco Bell, and Pizza Hut. Yum! Brands estimated at the time that palm oil was used in 30 percent of its 39,000 restaurants. Following sustained dialogue and a shareholder proposal, the firm committed to reduce its reliance on palm oil.⁵⁵ More recently, Trillium engaged WhiteWave Foods and Church & Dwight regarding their palm oil use. Through shareholder proposals and dialogues both companies agreed in 2016 to source palm oil pursuant to standards that go beyond the certification system developed by the Roundtable on Sustainable Palm Oil.

Trillium has also engaged companies on their approach to seafood sustainability most recently with a focus on risks associated with human rights abuses in the industry's supply chain. In early 2015, investigations

54 Trillium Asset Management, "Approach to Food and Agriculture," 2016.

55 Trillium Asset Management, "Yum Brands! – Sustainable Agriculture / Palm Oil Policy," 2015.

by *The Guardian* and *The New York Times* found Thai and migrant slaves working on fishing vessels off the coast of Thailand that sell product to major brands in the U.S., U.K., and Europe.⁵⁶ The following year, Nestle SA commissioned a study on labor conditions in the company's Thai shrimp supply chain, and the report noted that essentially all companies sourcing seafood from Thailand are exposed to the risk of forced labor in their supply chains.⁵⁷ After a series of dialogues with Costco concerning allegations of slavery in its seafood supply chain, in January 2016 the retailer began reporting on its website specific actions aimed at improving labor practices in the Thai shrimp industry. For example, Costco was instrumental in organizing the Shrimp Sustainable Supply Chain Task Force, a multi-stakeholder initiative focused on driving change through improved audits and other accountability mechanisms. Trillium filed a shareholder proposal at J.M. Smucker on this issue after learning that the company's newly acquired pet food business was linked to seafood tainted with forced labor. After a series of meetings, the company implemented a comprehensive social compliance program which led to the successful withdrawal of the proposal.

Food waste has become another key impact area where Trillium has actively engaged as a shareholder.

Approximately 40 percent of all food produced in the U.S. is discarded each year, which also wastes the land and resources used to produce this food, making this one of the most serious issues in food and agriculture today.⁵⁸ Trillium has identified grocery stores as a key link in the value chain for intervening as an investor. While a number of publicly traded grocery chains have made leadership commitments to cut their food waste in half by 2025 (including Wal-Mart, Kroger, and Tesco), to share best practices through the Food Waste Reduction Alliance (Kroger, Safeway/Albertsons, and Target), and to report on relevant metrics in their sustainability reporting, other retailers, including Whole Foods Market, have remained surprisingly quiet on the issue. Trillium recently worked with Green Century Capital Management and First Affirmative Financial Network to co-file the first-ever shareholder proposal on food waste reporting at Whole Foods in 2015. Trillium also filed similar resolutions at Costco, Target, and Whole Foods in 2016. From a financial standpoint, Trillium believes companies that implement food waste reduction strategies can realize significant cost savings and new revenue opportunities. They can also enhance environmental and social performance by, for instance, donating food to help feed the one out of every eight Americans who are food insecure.

56 Margie Mason, Robin McDowell, Esther Htusan and Martha Mendoza, "Shrimp Sold by Global Supermarkets is Peeled by Slave Labourers in Thailand," *The Guardian*, December 14, 2015.

57 Verite, "Recruitment Practices and Migrant Labor Conditions in Nestlé's Thai Shrimp Supply Chain," November 2016.

58 Dana Gunders, "Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill," National Resources Defense Council, August 2012.

The widespread adoption of palm oil is a controversial food and agriculture issue that cuts across several themes, but most investors have engaged with companies in the context of deforestation and its effect on climate change. Although WWF helped create the Roundtable on Sustainable Palm Oil (RSPO) in 2004 in order to bring greater accountability to palm oil supply chains, some investors have voiced concern over its voluntary guidelines and poor enforcement track record. In addition to encouraging the RSPO to strengthen its certifications, a coalition of investors began going directly to companies and demanding that they take greater responsibility for

their supply chains. In 2013, investors began to engage companies directly to reduce deforestation caused by the farming and production of palm oil, the most widely-used vegetable oil in the world. The success stemming from these engagements is a testament to how shareholder advocacy can be used effectively and creatively to influence global supply chains.

In one example, Green Century's engagement efforts with the world's largest palm oil trader, Wilmar International, helped result in the company's announcement of a "No Deforestation, No Peat, No Exploitation Policy" across its

entire supply chain,⁵⁹ which will help avoid 1.5 gigatons of CO2 emissions between 2014 and 2020.⁶⁰ Through its seat on the United Nations Principle's for Responsible Investment Forest Commodity Task Force, Green Century has also worked with five additional key palm oil traders and suppliers to adopt zero-deforestation commitments.

In 2016, Trillium Asset Management pushed Church & Dwight and WhiteWave to move beyond simply purchasing RSPO-certified palm oil and to do more to curtail deforestation and human rights violations (see the case study for more on Trillium's advocacy around palm oil). Clean Yield Asset Management also withdrew a shareholder resolution at Whole Foods Market after the grocery chain agreed to report on palm oil in its supply chain.⁶¹ Meanwhile, groups such as Climate Advisers and Friends of the Earth have educated investors about their exposure to unsustainable palm oil and developed collaborative tools such as Chain Reaction Research helps investors assess the risks of investing in companies that have not yet implemented policies to protect them from potential risks. As investors' work to change the palm oil supply chain has progressed, the focus has transitioned to working with suppliers, traders, and consumer-facing companies to follow up on implementation of commitments. For example, after Green Century secured a zero-deforestation commitment from Kellogg's, the first of its kind by a consumer-facing company, the multinational food manufacturer recently reported that it can now trace 92 percent of its palm oil from zero deforestation suppliers.⁶²

Investors are building on this momentum and expanding engagements to address the risks posed by other agricultural supply chains, such as soy and cattle. In 2015, Green Century and the New York State Common Retirement Fund were successful in securing a cross-commodity zero-deforestation policy from Archer Daniels Midland, the third largest supplier of agricultural commodities in the world, to end deforestation across its global supply chains, with a particular focus on soy and palm oil production. And, as recently as February, 2017 Green Century organized 38 additional U.S. and global investors representing \$617.5 billion, including

Aviva Investors and Actiam, to engage some of the world's largest food companies to ramp up efforts to curb deforestation in South America.

Finally, within the theme of social equity and sustainable livelihoods, sustainable investors focus on company policies around land use, indigenous peoples' rights, and Free, Prior, and Informed Consent (FPIC). Land grabs in places like the Amazon often take place on land traditionally owned by indigenous groups who do not use formal land titles. Avoiding companies with controversies around child labor can also impact this industry; according to the Food and Agriculture Organization of the United Nations (FAO), around 100 million children are working in farming, livestock, forestry, fishing, and aquaculture.⁶³ One example of the impact of investor networks is ICCR's recent work with Mondelez to end forced child labor in cocoa production in West Africa. As a result, the company implemented a program to improve livelihoods for 200,000 cocoa farmers.⁶⁴ Trillium also recently worked with Costco to prevent slave labor in its seafood supply chain (see the case study for additional information). More broadly, Generation Investment Management includes agriculture as a priority sector for poverty reduction at the "base of the pyramid." The firm's strategy also includes investing in organic and fairtrade agriculture.⁶⁵

Private Equity and Venture Capital

Private equity and venture capital provide opportunities to invest directly into private companies working on business and technology solutions across food and agricultural value chains. Investors can gain exposure to the asset class by either investing directly in companies themselves or investing as a limited partner in a private equity or venture capital fund or a fund of funds.⁶⁶ As in other asset classes, private equity fund investors can find opportunities to invest in thematic funds focusing specifically on food and agriculture or in more broadly diversified private equity strategies that include food and agriculture among other triple-bottom-line sectors. Opportunities in private equity exist across a number of impact themes, particularly crop

59 This example is described in greater detail in Electris, et al., "The Impact of Equity Engagement," p. 28.

60 Climate Advisers, "The Climate Impact of Wilmar's 'No Deforestation, No Peat, No Exploitation' Policy," March 14, 2014.

61 Welsh and Passoff, "Proxy Preview 2016," pp. 22-3.

62 Kellogg Company, "Palm Oil Commitment," January 2016.

63 Food and Agriculture Organization of the United Nations, "Child Labour in Agriculture."

64 Interfaith Center for Corporate Responsibility, "The Art (and Science) of Shareholder Engagement," *The Corporate Examiner* 38, no. 5 (2015).

65 Generation Investment Management, "Thematic Research Highlights," May 2007.

66 Ariella Rotenberg and Sam Bonsey, "Private Equity and Impact Investing: A Primer for Families," *The ImPact*, April 2016.

production, conservation and climate change mitigation, sustainable consumption, and agricultural technology.

Sustainable AgTech is a particularly fertile emerging arena for early stage venture investing. Among leading next-generation AgTech innovations that impact-oriented funds are targeting are water management and irrigation, green chemistry, non-GMO biological inputs, seed treatment and soil amendments, alternative protein products, indoor agriculture and vertical farming, post-harvest technologies, methane capture, anaerobic digestion, and food waste solutions.⁶⁷ As in small-cap listed equities, geo-location services, big data, and robotic equipment are driving innovations in “digital precision agriculture,” helping farmers conserve water and inputs and manage climate and weather risks. AgTech Innovation Partners, Better Food Ventures, Closed Loop Capital, Cultivian Sandbox Ventures, Fifth Season Ventures, MissionPoint Partners, and Omnivore Ventures are among several private equity funds with commitments to investing in sustainable AgTech. Fifth Season Ventures, based in northern California, invests early stage venture capital into disruptive technologies designed to support a more sustainable “circular economy,” such as product upcycling, precision irrigation water management, sustainable packaging or materials, and the transformation of agricultural waste into bio-plastics using green chemistry. After seeding AgTech companies such as Full Cycle Bioplastics and HarvestPort through its first fund, the firm is currently raising capital for a second “opportunity fund” that will be tracking environmental impact metrics using relevant standards from the GIIN’s IRIS catalog of metrics. Full Cycle Bioplastics is a company that converts organic waste materials into biodegradable plastic, while HarvestPort provides a cloud-based software platform that helps farmers rent and lease farm equipment in order to facilitate asset sharing. Fifth Season’s principals have worked closely with the management and founders of their portfolio companies, and they were joined by Taylor Ventures and Cultivian Sandbox Ventures in subsequent funding rounds for HarvestPort. San Francisco-based New Resource Bank, one of the sustainable banks discussed earlier, provides the fund with banking services.

On the agricultural production side, private equity firms such as Agriculture Capital Management invest directly in sustainable farming enterprises. The San Francisco-based firm executes its investment thesis, focused on sustainable food production, soil fertility, and healthy foods, by owning

farming operations and facilities for citrus, blueberry, hazelnut, and table grape production along the West Coast. The firm’s portfolio companies use regenerative agricultural techniques designed to maximize positive environmental impacts on biodiversity and soil health. It also proactively pursues positive social impacts on consumer and employee health and broader community benefits.

Through its Sustainable Food Fund, InvestEco invests farther down the value chain in expansion stage, natural and organic food businesses across North America, ranging from pasture-raised dairy companies such as Maple Hill Creamery and Vital Farms to organic direct-to-home food retailers, such as MamaEarth Organics and Chefs Plate. Based in Toronto, Canada, the fund takes a much wider geographic perspective than many other food and agriculture-focused VC funds clustered in northern California.

Beyond funds like these that are focused narrowly on AgTech, farm production, or food businesses, impact investors can also invest with more diversified private equity strategies that include food and agriculture-themed businesses as part of much broader impact portfolios. Arborview Capital, the Global Environment Fund, Renewal Funds, SJF Ventures, and Village Capital are among many more broadly diversified private equity strategies generating strong social and environmental impacts in food and agriculture at various scales, stages, and geographies, alongside other investments in renewable energy, energy and resource efficiency, and other clean technology themes. Among the many food companies that have received private capital from these sources are Alter Eco, a food company that sources fair-trade, organic, and carbon-neutral quinoa, rice, sugar, and chocolate from over 200 small-scale farmer cooperatives; Better Bean, which provides vegan, GMO-free beans grown using methods to improve soil health; Terramera, which creates plant-based alternatives to chemical pesticides; Vital Farms, which produces pasture-raised eggs and butter; the sustainable food processing tech company Aseptia; and Home Bistro, which delivers direct-mail gourmet frozen foods.

Several diversified private equity firms invest in food and agriculture from a more global perspective. The Global Environmental Fund (GEF) was established in 1990 and has invested approximately \$1 billion into the energy, environment, and natural resources sectors globally. A number of funds in its portfolio operate FSC-certified

67 A useful overview can be found in Louisa Burwood-Taylor, “How Does Agtech Fit an Impact Investing Thesis?” *AgFunder News*, October 5, 2016.

forestry companies in Africa, using innovative conservation finance techniques. EcoEnterprises Fund takes a blended approach to investing in small businesses in Latin America that contribute to sustainable, resilient livelihoods, conservation of natural resources and ecosystems, and climate change mitigation. Its sector focus includes sustainable agriculture, agro-forestry, ecotourism, and wild-harvested production. The firm provides investments including mezzanine, quasi-equity, and long-term debt instruments, as well as direct technical assistance and board-level participation. EcoEnterprises is offering expansion capital to 10 sustainable businesses, as well as raising capital for a third fund set to launch in 2017. Since its inception in 1998, the firm has generated over 4,600 jobs and has conserved over 7.9 million acres. For Triodos Investment Management in the Netherlands, sustainable food and agriculture is one of six core investment strategies. Along with its private debt fund discussed earlier, the Triodos Organic Growth Fund offers institutional investors a diversified private equity portfolio of more mature northern European organic and sustainable consumer businesses leading the transition to a more sustainable economy in countries such as Denmark, Sweden, and the Netherlands.

For private equity investors with the risk tolerance and due-diligence capacity to invest directly in companies like these, opportunities abound, but participating in impact-oriented investor networks can help investors source, assess, and co-invest in deals together. Confluence Philanthropy, CREO Syndicate, the GIIN, Gratitude Railroad, The ImPact, Investors' Circle, and The Partners Group are among leading networks where accredited impact investors, whether individuals, foundations, or family offices, routinely gather to learn about direct investment opportunities and to co-invest or create new pooled private equity funds. PG Impact Investments, the impact investing arm of the Partners Group, recently invested in Shared-X, a Latin American agribusiness focused on addressing smallholder poverty by closing the yield gap separating developed and developing market farm operations. Village Capital, which has more than a dozen agriculture-themed companies in its portfolio, provides another forum for direct engagement with agricultural entrepreneurs; it identifies 10-12 entrepreneurs each year who are serving underserved communities or tackling sustainability challenges and then helps them

scale up and become investment-ready.⁶⁸ At the end of the program, two ventures receive seed capital from VilCap Investments and other co-investors in their network.

Real Assets

Real assets — the final asset class under consideration here — provide some of the most direct forms of investing in agriculture through ownership of farmland, forests, and fisheries. Because real assets have a low correlation with other asset classes, they can give a portfolio additional stability while offering a hedge against inflation. Real assets can also provide investors with revenues from two sources: capital appreciation and income from active land management. Additionally, as concern over climate change continues to rise, there is growing interest in “environmental commodity markets” for carbon credits, mitigation banking, and water rights, among other techniques drawn from conservation finance.⁶⁹ According to a recent report from Credit Suisse, McKinsey, and WWF, this sector represents an underdeveloped investment opportunity. An estimated \$300-400 billion in investment is needed each year to provide ample protection to a range of ecosystems, but investors face a lack of investable projects that provide appropriate risk-adjusted returns and conservation benefits. Land investments are widely seen as currently undervalued, from an environmental perspective, given that the full range of their ecosystem services is rarely taken into account.⁷⁰

Encourage Capital is a firm that is currently trying to address these obstacles. Formed in December 2014 through the merger of Wolfensohn Fund Management and EKO Asset Management, Encourage runs the EKO Green Carbon Fund, which “invests in the development of carbon offsets, primarily from land-based carbon sequestration projects in the U.S.” One investment example is a project with the White Mountain Apache Tribe, which seeks to protect 89,000 acres of forest on the reservation. Along with preserving biodiversity and sequestering carbon, the project also provides a revenue stream to the tribe. The Green Carbon Fund also has a parallel fund that distributes carbon assets in kind to investors, rather than via financial returns.⁷¹ Encourage Capital is also the lead partner of a recent \$1.2 million USDA Conservation Innovation Grant,

68 Available at <http://vilcap.com/companies/>.

69 Ariella Rotenberg and Sam Bonsey, “Real Assets and Impact Investing: A Primer for Families,” The ImPact, 2016.

70 Fabian Huwyler, et al., “Making Conservation Finance Investable,” *Stanford Social Innovation Review*, Jan 21, 2014.

71 Encourage Capital, “EKO Green Carbon Fund,” 2017.

which will be used to develop a Working Land Investment Fund. By purchasing carbon offsets generated by agricultural producers and guaranteeing the sale of at least 100,000 tons of credits over three years, the fund aims to mobilize private capital investment into conservation, giving producers steady revenue opportunities even if they are unable to sell credits on the voluntary market.⁷²

Several real asset managers run strategies focused specifically on sustainable farmland and ranchland management, both in the United States and around the world. These funds tend to utilize practices such as regenerative agriculture and holistic planned grazing in order to mitigate climate change through carbon sequestration and building healthier soil with greater resilience to erosion and extreme weather. These funds generally have strong environmental impacts, and varying degrees of social impact. Blackdirt Capital, for example, invests in sustainable, pasture-raised beef and dairy farms in the Eastern U.S. Growing consumer interest in the organic and grass-fed sectors, a pipeline of undervalued properties in certain markets east of the Mississippi, and a history of strong risk-adjusted returns in the asset class are the basic drivers that inform the strategy. With seed support from the Gratitude Railroad network, the firm launched the Gratitude Farmland Fund in 2016 with a target of raising \$140 million; its first acquisition was in Georgia.

On the west coast, Farmland LP purchases conventional farmland and converts it into diversified, certified organic farming operations in Oregon and California. By implementing sustainable farming practices using crops, vegetables, and holistically managed livestock, Farmland LP builds long-term value and taps into the organic pricing premium that has emerged from the persistent undersupply of domestically sourced, certified organic products. At the end of 2016, the firm had converted 1,842 acres into certified organic farmland, and was in the process of transitioning 3,033 additional acres. Farmland LP is currently raising capital for a \$150 million farmland private REIT in order to expand its strategy.

Montana-based Beartooth Capital restores degraded ranchland, and uses conservation techniques and land management to restore wetlands, streams, and other

wildlife habitat. By including conservation easements in their investment plans, the funds are able to benefit from restoration funding, mitigation credits, and recreational incomes, as well as agricultural leases.⁷³ The firm has two funds with over 25,000 acres; more than 60 percent is protected by conservation easements. To achieve positive social impacts as well, Beartooth gives preference to local, fair-trade suppliers and has a community service policy.⁷⁴

Other firms make working collaboratively with farmers a more central component of their investment thesis. Dirt Capital Partners invests in farmland in partnership with farmers using sustainable practices in the Northeastern United States. Because farmers often have difficulty getting conventional loans, Dirt Capital fills this gap by facilitating farmland transitions from one owner to another and by creating long-term leases that allow agricultural enterprises to expand while also providing a clear path to ownership. Iroquois Valley Farms, discussed earlier in the section on private debt, makes similar agreements with the farmers it works with, particularly younger farmers (see the case study for additional information).

Several real asset managers also include land from across the globe in their portfolios. Grasslands LLC, the land management arm of the Savory Institute, uses holistic planned grazing to restore undervalued, degraded grasslands in the U.S. Northern Great Plains as well as New Zealand's South Island. London-based SLM Partners, which was launched in 2012, owns 15 properties in Australia, taking advantage of the year-round grazing opportunity and competitive land prices. SLM's investment strategy focuses on improving soil health, reducing greenhouse gas emissions, and integrating its work with the local communities through increased job opportunities. The firm is also working on strategies in Chile and Ireland.

In addition to farmland and ranchland, sustainable forests also offer compelling social and environmental impact investment opportunities. When managed responsibly, timber is a renewable resource that can provide a source of income for generations. The Forest Stewardship Council is a certification entity that sets standards for responsible forest management; according to FSC, more than 380 million acres of forest are currently certified globally.⁷⁵

72 Rebecca Haynes, "New Project Guarantees Payment for Growers Who Implement Conservation Measures," Environmental Defense Fund, October 3, 2016.

73 David Bank, "Beartooth Capital: Conserving Wide Open Spaces," *Impact Alpha*, September 19, 2014.

74 B Corporation, "Beartooth Capital B Impact Report," 2016.

75 FSC, "What We Do."

Lyme Timber is one of the oldest timberland investment management organizations (TIMOs). Through a large network of conservation groups, Lyme identifies and then buys timberland and converts it to efficient and sustainable forestry practices, while selling easements limiting future development and uses of the land. Once these conservation easements are in place, Lyme typically operates the property for a number of years and then exits through selling the improved operations to other timberland buyers. Along with their targeted conservation strategy, Lyme also has a positive social impact on rural communities, selling local conservation easements, generating additional revenue from recreation, and introducing selective, sustainable harvesting. Lyme Timber has organized and managed four closed-end, pooled investment funds using this strategy and purchased over one million acres, primarily in the Northeast and South. Lyme is currently investing The Lyme Forest Fund IV, which was organized in 2014 with \$250 million in capital commitments.

Ecotrust Forest Management is a for-profit investment subsidiary of the nonprofit Ecotrust that was formed to sustainably manage forestlands in the Pacific Northwest. The firm improves forest health by buying young forests that are less desirable to traditional timberland operators and then harvesting them in a far more selective way. Ecotrust also receives federal tax credits by benefitting low-income communities through local jobs as well as by providing habitat preservation. Through these tax credits the fund is able to secure below-market financing.⁷⁶ Ecotrust has two

funds that comply with FSC principles and criteria: Ecotrust Forests LLC and Ecotrust Forests II LLC.

Finally, The Forestland Group is an independent TIMO dedicated to hardwood timberland in North and Central America. The FSC-certified firm seeks competitive returns while keeping forests productive, with an awareness of each area's unique habitats and biodiversity. The Forestland Group has eight core funds, three of which operate as REITS. The commingled vehicles have terms of 10-20 years and, like Ecotrust and Lyme, make routine use of New Market Tax Credit financing in lower-income rural communities. The triple-bottom-line opportunities associated with low-income tax credits and conservation law highlight the vital importance of policy in expanding the social and environmental impact of real asset managers.

As with the policy arena so too with networks: several real asset managers, their clients, land trusts, and other conservation nonprofits are members of the Conservation Finance Network, which "advances land and resource conservation by expanding the use of innovative and effective funding and financing strategies." The network organizes gatherings, webinars, and trainings and works to increase the amount of financial resources deployed for conservation. The network addresses conservation finance within the areas of forest, agriculture, water, open space, and oceans. Impact investors can expand their reach by taking full advantage of the resources and network effects that emerge from collaborative groups like this.

76 Ellie Winninghof, "Modern Money Trees," *Barron's*, September 27, 2013.

CASE STUDY: IROQUOIS VALLEY FARMS

Established in 2007, Iroquois Valley Farms is a farmland financing company that provides farmers with long-term land access, most frequently facilitating the multiyear transition to organic certification. The firm gives investors exposure to organic agricultural production by directly acquiring farmland and providing mortgage lending to organic family farms, generally in the Midwest, the Northeast, and the upper South. With a mission that aims to maximize environmental, social, and economic benefits, the firm is now enabling broader investor participation through the creation of a Real Estate Investment Trust (REIT).

Central to Iroquois Valley's business is increasing access to land for younger farmers while meeting rising consumer demand for organic products. Millennial farmers, many of whom are from third or fourth generation farming families, constitute 70 percent of Iroquois Valley's farmer tenant base. At the same time, Iroquois Valley's farmers are utilizing sustainable agricultural practices to support increased biodiversity, soil fertility, native plants, ecosystem pollinators, and bird habitats. At the end of 2016, over 5,000 acres owned or financed by Iroquois Valley Farms were certified organic or undergoing the transition to organic certification.

Recently, Iroquois Valley's investors voted to transform from a Limited Liability Company to a Corporate REIT structure, allowing the company to expand its offerings to non-accredited investors over time. In this new form,

Iroquois Valley Farms is offering \$5 million in three-year Soil Restoration Notes, a new private debt product designed specifically to facilitate the critical three-year period required to transition to organic certification one of the most difficult periods in the development of organic farm operations. The offering of the notes is supported by a major Conservation Innovation Grant from USDA's Natural Resources Conservation Service. Iroquois Valley Farms is also issuing a \$15 million offering in REIT shares, first to accredited investors and eventually to non-accredited investors.

Fair Acres Farm in Marion County, Iowa, provides one recent example of how Iroquois Valley works with farming families to transfer organic farmland across generations. The Petersens, a fifth generation farming family who are members of Practical Farmers of Iowa, purchased the property from their second cousins after working as tenants for a number of years. Over the last decade, the cousins made a series of partial farm sales to the Petersens, before mortgage financing from Iroquois Valley helped the family purchase the final portions of the full 320-acre farmstead. The acquisition will allow the Petersens to expand their operations, growing organic grains and raising cattle and sheep on pasture — providing badly needed farm diversification in the heart of the Midwestern corn belt. As part of the purchase, approximately 100 acres of perennial pasture on the farm will be protected through an agricultural conservation easement held by the Iowa Natural Heritage Foundation.

Conclusion

From conventional asset classes such as cash, fixed income, and public equity to alternatives such as private equity, venture capital, and real assets, opportunities to invest in sustainable food and agriculture with positive impact now extend across diversified portfolios. As we have seen, the nature of impact investment opportunities is by no means equally developed across all asset classes. In some cases, such as farmland and ranchland, investors can get very direct exposure to sustainable agricultural production trends, like the growing market for certified organic crops or pastured livestock. In other asset classes, such as public and private equity, investors can focus on financing sustainable AgTech innovations or engaging with publicly traded companies that drive social and environmental impact trends across global value chains. Private lending opportunities range from “Slow Money”

investments into local food systems to international microfinance that supports sustainable livelihoods of smallholder farmers in the developing world. The multiple investment returns generated by the kinds of investments presented throughout this study — financial, social, and environmental — vary across a wide spectrum. Investors seeking to activate a fuller range of portfolio assets to finance more resilient agricultural value chains will therefore need to assess the opportunity set that is most closely aligned with their financial and impact objectives. Total Portfolio Activation provides a useful framework — including both analytical tools and a step-by-step process — for undertaking precisely such an assessment and then re-allocating investments in order to pursue sustainable solutions to some of the planet’s most complex food and agricultural challenges.

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Additional Resources

General Resources

As You Sow
<http://www.asyousow.org/>

Chain Reaction Research
<https://chainreactionresearch.com/>

Confluence Philanthropy
<http://www.confluencephilanthropy.org/>

Conservation Finance Network
<http://www.conservationfinancenetwork.org/>

The Council on Smallholder Agricultural Finance
<http://www.csaf.net/>

Deforestation Free Funds, a joint project of Friends of the Earth and As You Sow
<https://www.deforestationfreefunds.org/>

Farm Animal Risk & Return (FAIRR)
<http://www.fairr.org/>

Forest Stewardship Council
<https://us.fsc.org/en-us>

Fresh Taste
<http://freshtaste.org/>

Friends of the Earth
<http://www.foei.org/what-we-do/land-grabbing>

Global Impact Investing Network (The GIIN)
<https://thegiin.org/>

Grain Collaborative
<http://graincollaborative.com/>

Initiative for Smallholder Finance
<http://www.initiativeforsmallholderfinance.org/>

Interfaith Center on Corporate Responsibility (ICCR)
<http://www.iccr.org/>

Investor Environmental Health Network (IEHN)
<http://www.iehn.org>

Investor Network on Climate Risk (INCR)
<https://www.ceres.org/investor-network/incr>

Mission Investors Exchange
<https://www.missioninvestors.org/>

Organic Grain Collaboration
<http://www.sustainablefoodlab.org/initiatives/organic-grain-collaboration/>

Oxfam America
<https://www.oxfamamerica.org/>

Slow Money
<https://slowmoney.org/>

Sustainable Agriculture and Food Systems Funders
<http://www.safsf.org/>

US SIF: The Forum for Sustainable and Responsible Investment
<http://www.ussif.org/>

WWF
<http://www.worldwildlife.org/>

Cash and Cash Equivalents

Beneficial State Bank
<http://beneficialstatebank.com/>

Eastern Bank
<https://www.easternbank.com>

Maine Harvest Credit Project
<https://maineharvestcp.org/>

New Resource Bank
<https://www.newresourcebank.com/>

Self-Help Credit Union
<https://www.self-help.org/>

Triodos Bank
<https://www.triodos.com/en/about-triodos-bank/>

Fixed Income

Public Fixed Income

Calvert Investments
<http://www.calvert.com/>

Community Capital Management
<http://www.ccminvests.com/>

Domini Social Investments
<http://www.domini.com/>

Trillium Asset Management
<http://www.trilliuminvest.com/>

Private Debt

Accion
<https://www.accion.org/>

Calvert Foundation
<http://www.calvertfoundation.org/>

The Carrot Project
<http://www.thecarrotproject.org/>

Coastal Enterprises, Inc.
<http://www.ceimaine.org/>

Cooperative Fund of New England
<http://www.cooperativefund.org/>

Craft3
<https://www.craft3.org/>

Fair Food Fund
<https://fairfoodnetwork.org/projects/fair-food-fund/>

Flexible Capital Fund, L3C
<http://flexiblecapitalfund.com/>

Fresh Source Capital
<http://www.freshsourcecapital.com/>

ImpactAssets
<http://impactassets.org/>

Iroquois Valley Farms
<http://iroquoisvalleyfarms.com/>

Incofin Investment Management
agRIF
<https://www.incofin.com/en/fund/agrif>

Maine Organic Lenders
<https://www.maineorganiclenders.org/>

Natural Capital Investment Fund
<http://www.conservationfund.org/what-we-do/natural-capital-investment-fund>

No Small Potatoes
www.slowmoneymaine.org/nsp/

Oikocredit International
<https://www.oikocredit.coop/>

Pioneer Valley Grows
<http://www.pvgrows.net/>

Reinvestment Fund
<https://www.reinvestment.com>

Root Capital
<https://www.rootcapital.org/>

RSF Social Finance
<http://rsfsocialfinance.org/>

Slow Money
<https://slowmoney.org/>

Solidarity Capital
<http://www.solidaritycap.com/>

Sustainable Local Food Investment
Group (SLoFIG)
<http://slofig.com/>

Triodos Investment Management
<https://www.triodos.com/en/investment-management/>

Vermont Community Loan Fund
<http://www.investinvermont.org/>

Public Equity

Boston Common Asset Management
<https://www.bostoncommonasset.com/>

Calvert Investments
<http://www.calvert.com/>

Clean Yield Asset Management
<http://www.cleanyield.com/>

Domini Social Investments
<http://www.domini.com/>

Essex Investment Management
Company
<http://www.essexinvest.com/>

Generation Investment Management
<https://www.generationim.com/>

Green Century Capital Management
<http://greencentury.com/>

Impax Asset Management
<http://www.impaxam.com/>

Pictet Asset Management
<https://www.group.pictet/corporate/en/home.html>

Sustainability Group
<http://www.sustainabilitygroup.com/>

Sustainable Insight Capital
Management
<https://www.sicm.com/>

Trillium Asset Management
<http://www.trilliuminvest.com/>

Walden Asset Management
<http://www.waldenassetmgmt.com/>

Zevin Asset Management
<https://www.zevin.com/>

Private Equity and Venture Capital

Agriculture Capital Management
<http://agcapmanagement.com/>

AgTech Innovation Partners
<http://www.agtechinnovation.com/>

Aqua-Spark
<http://www.aqua-spark.nl>

Arborview Capital
<http://www.arborviewcapital.com/>

Better Food Ventures
<http://betterfoodventures.com/>

Clean Yield Asset Management
<http://www.cleanyield.com/>

Closed Loop Capital
<http://closedloopcapital.com/strategy>

Cultivian Sandbox Ventures
<http://cultiviansbx.com/>

EcoEnterprises Fund
<https://www.ecoenterprisesfund.com/>

Fifth Season Ventures
<http://www.fifthseasonventures.com/>

Global Environment Fund
<http://www.globalenvironmentfund.com/>

InvestEco Capital
<http://investeco.com/our-portfolio/>

Investors' Circle
http://www.investorscircle.net/sustainable_ag_investments

MissionPoint Partners
<http://mppgrp.com/>

Omnivore Partners
<http://www.omnivore.vc/>

Pulsar Network Capital's Sustainable Food Fund
<http://www.pulsarnetworkcapital.nl/pulsar-network-capital-fund/sustainable-food-fund-english/>

Renewal Funds
<http://www.renewalfunds.com/>

SJF Ventures
<http://sjfventures.com/>

Triodos Investment Management
<https://www.triodos.com/en/investment-management/>

Village Capital
<http://vilcap.com/sector/agriculture/>

Real Assets

Beartooth Capital
<https://beartoothgroup.com/>

Blackdirt Capital and Gratitude Farmland Fund
<http://blackdirtcapital.com/>

Dirt Capital Partners
<http://www.dirtpartners.com/>

EcoTrust Forest Management
<http://www.ecotrustforests.com/fundmanagement.html>

Encourage Capital
<http://encouragecapital.com/>

Farmland, LP
<http://www.farmlandlp.com/>

The Forestland Group
<http://www.forestlandgroup.com/>

Grasslands, LLC
<https://www.grasslands-llc.com/>

Iroquois Valley Farms
<http://iroquoisvalleyfarms.com/>

Lyme Timber Company
<http://www.lymetimber.com/>

SLM Partners
<http://slmpartners.com/>

Sustainable Farm Partners, LLP
<http://sustainablefarmpartners.com>



**CROATAN
INSTITUTE**

Croatan Institute

Croatan Institute is an independent, nonprofit research institute whose mission is to harness the power of investment for social good and ecological resilience. Based in the Research Triangle of North Carolina, with an extended team of affiliates in Boston, New York, and Geneva, the Institute works at the critical nexus where finance, sustainability, and economic development intersect.

www.croataninstitute.org



IROQUOIS VALLEY FARMS

Iroquois Valley Farms

Iroquois Valley Farms is a restorative farmland finance company that provides leasing and mortgage funding with a focus on the next generation of organic farmers. The Company uses private investment capital to facilitate farmers' expansion plans through secure land access. All real assets owned by the company are leased to family farmers. Mortgage financings are secured by certified organic farmland. Each farmer operates their own business and markets, manages and insures their production. The Company employs a buy-and-hold strategy to match the long-term perspective of the farmer and must manage its business accordingly.

www.iroquoisvalleyfarms.com



Maine Organic Farmers and Gardeners Association

The Maine Organic Farmers and Gardeners Association (MOFGA), formed in 1971, is the oldest and largest state organic organization in the country. The Maine Organic Farmers and Gardeners Association is a broad-based community that educates about and advocates for organic agriculture, illuminating its interdependence with a healthy environment, local food production, and thriving communities.

www.mofga.org



Organic Agriculture Revitalization Strategy

OARS is a new initiative that advances organic agriculture as a strategy for revitalizing rural communities. Developed by Croatan Institute and Earthwise Organics with initial support from Organic Valley's Farmers Advocating for Organics program, OARS aims to identify business and economic development opportunities across regional value chains and to mobilize capital to help build community health and wealth.

www.OARSproject.org



Root Capital

Root Capital is a nonprofit social investment fund that serves agricultural businesses that connect smallholder farmers to world markets. When these businesses grow, they become engines of impact that transform their communities. They increase incomes, create jobs, preserve ecosystems, empower women and give young people the opportunity to lead.

www.rootcapital.org



SOCIAL FINANCE

RSF Social Finance

RSF Social Finance offers innovative opportunities to invest, give and get funding that generate positive social, economic and ecological impact. Since 1984, RSF has made over \$450 million in loans, grants and investments supporting social enterprises in the areas of food & agriculture, education & the arts, and ecological stewardship.

www.rfsocialfinance.org



Trillium Asset Management, LLC

Founded in 1982, Trillium Asset Management is the oldest independent investment advisor focused exclusively on sustainable and responsible investing. Trillium manages assets for clients including individuals, foundations, endowments, religious institutions, and other non-profits.

www.trilliuminvest.com