Sachdokumentation:

Signatur: DS 2172

Permalink: www.sachdokumentation.ch/bestand/ds/2172

Zitierweise für graue Literatur

Elektronische Broschüren und Flugschriften (DS) aus den Dossiers der Sachdokumentation des Sozialarchivs werden gemäss den üblichen Zitierrichtlinien für wissenschaftliche Literatur wenn möglich einzeln zitiert. Es ist jedoch sinnvoll, die verwendeten thematischen Dossiers ebenfalls zu zitieren. Anzugeben sind demnach die Signatur des einzelnen Dokuments sowie das zugehörige Dossier.

*beacons of hope

Accelerating Transformations to Sustainable Food Systems

AUGUST 2019

Lead Authors: Lauren Baker, Barbara Gemmill-Herren, Fabio Leippert

#BeaconsOfHope #FoodSystemsTransformations

www.foodsystemstransformations.org

GLOBAL ALLIANCE FOR THE FUTURE OF FOOD

biovision

Disclaimer
This Beacons of Hope research was commissioned from Biovision Foundation for Ecological Development by the Global Alliance for the Future of Food for use by Global Alliance members to stimulate an understanding of critical issues related to food systems reform, inform individual member foundations, and guide Global Alliance collective action. The Global Alliance has chosen to make it available to the broader community to contribute to thinking and discussion about sustainable food systems reform. This report and associated products constitute the work of independent authors. Any views expressed in this report do not necessarily represent the views of the Global Alliance or of any of our members.

Date of publication: August 2019

Suggestion for Referencing
Biovision Foundation for Ecological Development and Global Alliance for the Future of Food. *Beacons of Hope: Accelerating Transformations to Sustainable Food Systems*. n.p.: Global Alliance for the Future of Food, 2019.

ACKNOWLEDGEMENTS

The Global Alliance for the Future of Food would like to gratefully acknowledge the many people involved in the preparation of this report.

First and foremost, we thank the Biovision Foundation for Ecological Development and their research team for so enthusiastically sharing their expertise, experience, time, and vision related to food systems transformations. We would also like to thank the many contributors, organizations, and advisors that provided valuable perspectives and insights, especially the individuals involved in the Beacons of Hope who are so inspiring and informed the research so deeply.

The report authors and contributors are many. To carry out the project, Biovision assembled an international team of experts:

Biovision Research Team Lead: Barbara Gemmill-Herren (World Agroforestry Centre)

Biovision Team: Fabio Leippert, Stefanie Pondini, Christian Isler, Natalina Töndury, Maurus Bamert

Transitions Experts: Michael Hauser (ICRISAT), Lorenz Probst (BOKU), Hamid El Bilali (BOKU)

Regional Experts: David Amudavi (Africa — BVAT), Lucas Garibaldi (Latin America — FAO), Lim Li Ching (Asia — Third World Network)

Lead Authors: Lauren Baker (Global Alliance for the Future of Food), Barbara Gemill-Herren (Biovision Foundation for Ecological Development), Fabio Leippert (Biovision Foundation for Ecological Development)

Contributing Authors: Michael Quinn Patton (Utilization-Focused Evaluation), Ruth Richardson (Global Alliance for the Future of Food)

Beacons of Hope Initiative Leads:

Agricultures Network
Agroecology Case Studies
Brazil's National Plan for Agroecology and Organic Food Production
Climate Resilient Zero Budget Natural Farming
Community Markets for Conservation
Drylands Natural Resources Centre
Eosta
Farmer to Farmer Agroecology Movement
Hivos Sustainable Food
Institute for Sustainable Development
International Network for Community Supported Agriculture
MASIPAG
Milan Urban Food Policy Pact
North East India Slow Food and Agrobiodiversity Society
Organic Valley

SEKEM Initiative
Soils, Food and Healthy Communities
Timbaktu Collective
Vanuatu 2030
World Food System Center at ETH Zürich
Zero Waste San Francisco

Workshop Attendees:

Molly Anderson, Middlebury College/IPES Food
Lauren Baker, Global Alliance for the Future of Food
Elena Bennet, McGill University
Alison Blay-Palmer, Wilfred Laurier Centre for Sustainable Food Systems
Lim Li Ching, Third World Network
Carol Cribnau, HIVOS
Barbara Gemmill-Herren, Project Lead
Michael Hauser, BOKU/University of Natural Resources and Life Sciences
Alex Kollo, Global Alliance for the Future of Food
Fabio Leippert, Biovision Foundation for Ecological Development
Michael Quinn Patton, Utilization-Focused Evaluation
Jane Rabinowitz, USC Canada
Ruth Richardson, Global Alliance for the Future of Food
Zanele Sibanda, Global Alliance for the Future of Food

Reviewers/Advisors:

Molly Anderson, Middlebury College/IPES-Food
Jennifer Astone, Swift Foundation
Elena Bennet, McGill University
Alison Blay-Palmer, Wilfred Laurier Centre for Sustainable Food Systems
Kyra Busch, Christensen Fund
Matt Dunwell, Tudor Trust
Frank Eyhorn, Helvetas
Patty Fong, Global Alliance for the Future of Food
Harriet Friedmann, University of Toronto
Michael Hauser, BOKU/University of Natural Resources and Life Sciences
Bruce Hirsch, Clarence E. Heller Foundation
Beth Hunter, McConnell Foundation
Amanda Jekums, Global Alliance for the Future of Food
Jonathan Landeck, New Field Foundation
Jane Maland Cady, McKnight Foundation
Meena Nallainathan, Global Alliance for the Future of Food
Oliver Oliveros, Agropolis Foundation
Michael Quinn Patton, Utilization Focused Evaluation
Ruth Richardson, Global Alliance for the Future of Food
Zanele Sibanda, Global Alliance for the Future of Food

The Global Alliance's Agroecology Impact Area Committee must be acknowledged for its guidance in the development of this report. Its commitment to accelerating the transformation to agroecological food systems is both impressive and critical — a commitment felt and appreciated throughout the process. Agroecology Impact Area members include representatives from the following foundations: Agropolis Fondation, Christensen Fund, Clarence E. Heller Foundation, David and Lucile Packard Foundation, Daniel et Nina Carasso Fondation, McKnight Foundation, New Field Foundation, Swift Foundation, Tudor Trust, and WK Kellogg Foundation. This work was generously funded by the following foundations: Agropolis Fondation, Christensen Fund, McKnight Foundation, and New Field Foundation.

We extend deep gratitude to the Global Alliance secretariat: Ruth Richardson, Executive Director; Lauren Baker, Director of Programs, for providing project management and research direction; Zanele Sibanda for operational support; and Alex Kollo and Amanda Jekums for project coordination and communications support. Tracy Bordian/At Large Editorial Services provided editorial oversight, and Studio:Blackwell provided the design and layout of the final publication. This report is all the stronger due to their professional hands in helping to shape its form and content from beginning to end.

THE GLOBAL ALLIANCE FOR THE FUTURE OF FOOD

The Global Alliance for the Future of Food is a strategic alliance of philanthropic foundations working together and with others to transform global food systems now and for future generations.

We believe in the urgency of transforming global food systems, and in the power of working together and with others to effect positive change. Food systems reform requires that we craft new and better solutions at all scales through a systems-level approach and deep collaboration among philanthropy, researchers, grassroots movements, the private sector, farmers and food systems workers, Indigenous Peoples, government, and policymakers.

As the Global Alliance, we aim to: 1) forge new insights and strengthen evidence for global systems change; 2) convene key food systems actors, facilitate meaningful dialogue, and strengthen interconnections; and 3) stimulate local and global action and interaction for transformational change to realize healthy, equitable, renewable, resilient, interconnected, and culturally diverse food and agriculture systems shaped by people, communities, and their institutions.

CONTACT INFORMATION:
www.futureoffood.org
info@futureoffood.org

BIOVISION FOUNDATION FOR ECOLOGICAL DEVELOPMENT

Biovision Foundation for Ecological Development is a not-for-profit, non-denominational, politically independent foundation based in Zürich, Switzerland. The foundation supports the dissemination and application of sustainable ecological approaches to alleviate poverty and improve food security in Sub-Saharan Africa. In addition to field projects with African partner organizations, Biovision is fostering policy dialogue and science-based, integrated policy planning for the sustainability of food systems at national (i.e., in Senegal and Kenya) and international levels (i.e., Agenda 2030 [SDG 2], UN Framework Convention on Climate Change, and Committee on World Food Security). Biovision is also the co-host of the Sustainable Development Solutions Network (SDSN) Switzerland.

CONTACT INFORMATION:
www.biovision.ch
info@biovision.ch

This report is the result of a collaboration between Biovision Foundation for Ecological Development and the Global Alliance for the Future of Food to stimulate information-sharing, learning, and collective action.

#BeaconsOfHope #FoodSystemsTransformations

www.foodsystemstransformations.org

FOREWORD

"So how do you change paradigms? In a nutshell, you keep pointing at the anomalies and failures in the old paradigm, you keep coming yourself, and loudly and with assurance from the new one, you insert people with the new paradigm in places of public visibility and power. You don't waste time with reactionaries; rather you work with active change agents and with the vast middle ground of people who are open-minded."

DONELLA MEADOWS

We have arrived at a new juncture in human evolution, a new geological age, defined by the predominant and profound human impact on the earth's ecosystems and climate never seen before — the Anthropocene. It's a time ripe with change, upheaval, and deep concern for the future of our children, our health, our food, our communities, the planet, and all it provides to life on earth from pollinator bees to seeds to water to the very air we breathe.

Scientists, farmers, Indigenous Peoples, business leaders — people from all corners of the globe and all walks of life — are sounding the alarm. There is growing consensus we are heading into a dark time, a precarious and fragile time. Fortunately this has led to a growing consensus that we need major global transformations in our political institutions, corporate structures, energy systems, governance arrangements, land use, food and agriculture practices, and every other human-made system that guides our actions and interactions. The status quo is not a viable path forward.

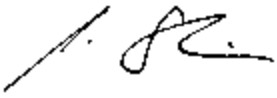
The realization that transformative change is needed creates space for hope. It means that this is a time also ripe with possibility and opportunity. It means we must seize the moment to shine a light on the failures of the old system, on the possibilities of the new, and on the active change agents who are leading the way. This is the spirit in which the Global Alliance for the Future of Food, in collaboration with the Biovision Foundation for Ecological Development, initiated "Beacons of Hope."

Beacons of Hope showcases the groundswell of people transforming our food systems in beneficial, dynamic, and significant ways, through nature- and people-based solutions. It provides a Food Systems Transformation Toolkit built on the principles of renewability, health, equity, resilience, diversity, and interconnectedness as a guide for discussion and collective action. It invites the inclusion of the myriad of other Beacons of Hope not part of this initial, modest effort. And it provides recommendations — gleaned from the Beacons of Hope — on how to accelerate meaningful food systems transformations at this critical time.

It is our hope that this initiative contributes, loudly and with assurance, to the radical change in paradigms this moment calls for through the hope and possibility each "beacon" individually represents, and through the interconnections and interactions of multiple beacons of hope that, together, create innovation, momentum, critical mass, and, ultimately, reach tipping points.

We know from the transition literature that a range of interventions are needed to multiply effects, creating streams of transformation flowing together to generate mammoth changes in global systems, and that no intervention is too small. This is our small contribution. To build on it, we look forward to engaging more Beacons of Hope, deepening the analysis, enhancing the interconnections and synergies among Beacons of Hope, and supporting the transformation process with the shared goal of accelerating systemic change.

RUTH RICHARDSON
Executive Director, Global Alliance for the Future of Food



ANDREAS SCHRIBER
CEO, Biovision Foundation for Ecological Development

TABLE OF CONTENTS

KEY MESSAGES 11

INTRODUCTION:
Accelerating Transformative Change 13

The Change Imperative 13
Understanding Transformations 14
Shared Principles for Sustainable Food Systems 15
About Beacons of Hope: Methodology and Approach 16

BEACONS OF HOPE:
Inspiring, Creative, and Necessary Solutions 19

Agricultures Network 21
Agroecology Case Studies 22
Brazil's National Plan for Agroecology and Organic Food Production 23
Climate Resilient Zero Budget Natural Farming 24
Community Markets for Conservation 25
Drylands Natural Resources Centre 26
Eosta 27
Farmer-to-Farmer Agroecology Movement 28
Hivos Sustainable Food 29
Institute for Sustainable Development 30
International Network for Community-Supported Agriculture 31
MASIPAG 32
Milan Urban Food Policy Pact 33

North East Slow Food and Agrobiodiversity Society 34

Organic Valley 35

SEKEM Initiative 36

Soils, Food and Healthy Communities 37

Timbaktu Collective 38

Vanuatu 2030 39

World Food System Center at ETH Zürich 40

Zero Waste San Francisco 41

THE FOOD SYSTEMS TRANSFORMATION FRAMEWORK 42

The Inquiry Process 42

Frameworks for Change 42

The Elements of Transformation 44

- Global and Local Context: Challenges and Opportunities 44
- Establishing Initiatives: Identifying Priorities to Support Transformation 45
- Confronting Policies and Practices: Levers for Change 45
- Building Legitimacy 46
- Anchoring 46
- Phases of Transformation 46

Applying the Food Systems Transformation Framework 47

Principles for Applying the Transformation Framework 48

WHAT WE LEARNED ABOUT THE TRANSFORMATION EXPERIENCE **49**

Dynamic Transformations 49

Global and Local Context: Challenges and Opportunities 50

Establishing Initiatives: Identifying Priorities to Support Transformation 58

Confronting Policies and Practices: Levers for Change 64

Building Legitimacy 67

Anchoring 69

Phases of Transformation 70

Patterns of Transformation 73

CONCLUSIONS AND RECOMMENDATIONS: The Heart of Food Systems Transformations **74**

Seize Opportunities in Drivers of Change 74

Accelerate Agroecological Approaches and Principles as a Transformation Pathway 75

Influence Policy and Decision-Making 76

Support New Market Mechanisms Based on Economic and Social Inclusion 76

Invest Time and Resources in the Transformation Process 77

Test and Refine the Toolkit and Framework 77

Build a Movement of Beacons of Hope 78

SUPPORTING MATERIAL **79**

REFERENCES **80**

KEY MESSAGES

The Beacons of Hope initiative aims to amplify the power and potential of transforming food systems to address critical global issues such as climate change, biodiversity, equity, and health. There is an urgent need for systems transformation, and this work contributes to the important conversation about how to accelerate transformations to truly sustainable, equitable, and secure food systems now and for future generations. The Beacons of Hope featured in this work provide inspiring examples and evidence that the transformation we collectively seek as a global community is possible. Ten key messages from this work have been distilled to both summarize the key findings and point to next steps.

1. **Around the world myriad people and organizations are working toward sustainable food systems and seeking transformative change. Transformative change is required, it is happening, and it can and must be accelerated.** Farmers, consumers, organizations, institutions, governments, businesses, funders, and investors are facilitating food systems transformations in diverse contexts and geographies. These efforts are contributing inspiring, creative, and necessary solutions to challenging global issues such as climate change, migration, and the need for healthier diets.

2. **Transformative change occurs when multiple and diverse initiatives intersect to create momentum and critical mass, leading ultimately to tipping points.** Broad-based, sustainable transformations emerge from diverse and multilayered innovations and interactions, not centrally conceptualized, controlled, and implemented strategic plans or massive coordinated initiatives. As well, transformations continue to unfold over time through a process that is ongoing and changeable. The diversity of food systems globally means that food systems transformations need to: follow diverse pathways; be both global and local; and be contextually sensitive and rooted, while being globally manifested and sustainable over time.

3. **Multiple entry points exist for people engaged in transformative food systems. In particular, climate change, health, environmental pressures, sustainable livelihoods, migration, and the Sustainable Development Goals (SDGs) are all drivers of transformation.** As a global community we need to identify and embrace opportunities to support transformation implementation, practices, and policies and to overcome related challenges.

4. **Important differences between incremental shifts and transformative change need to be explored and made explicit. To address the multiple and interrelated crises we face, radical transformative change is required; incremental shifts must build towards and contribute to positive and significant systems transformation.** Incremental shifts make established societal rules more coherent or efficient (e.g., a new type of machinery or food safety tests), whereas transformative changes disrupt societal rules, behaviours, and established practices.

5. **Power dynamics shape the transformation process. A defining characteristic of Beacons of Hope is challenging and transforming "deep structures." The Beacons of Hope, as they contend with lock-ins, blockages, and challenges, are "crucial for transitions, because they provide the seeds for systemic change."** Established practices and associated rules, dominant business models, policies, regulations,

institutional arrangements, and governance systems can hinder progress and reinforce the status quo; transformative initiatives often deviate substantially from established policies and practices and serve to overcome resistance from those who benefit from the status quo.

6. **Common interventions across the Beacons of Hope point to key elements in the transformation to sustainable food systems including: protecting, promoting, and supporting family farmers and Indigenous communities producing food using agroecological and diversified approaches and principles; co-creation of knowledge, and knowledge exchange and dissemination; developing cooperative ownership models; emphasizing ideas of circular and solidarity economy; reinforcing the importance of culturally relevant and place-specific sustainable diets; establishing participatory approaches and inclusive governance; identifying new market mechanisms; adopting new metrics; and, engaging in policy development.** These patterns are established by Beacons of Hope early in the transition process and remain at the heart of food systems transformations.

7. **Enhancing, deepening, and broadening interconnections and synergies among Beacons of Hope is a strategic action in support of transformational change.** Augmenting the community of Beacons of Hope, and further developing and refining the suite of tools available to accelerate food systems transformations, will build our understanding of the approaches, indicators, qualities, and characteristics of food systems transformations globally.

8. **Building the evidence of the positive benefits of food systems transformations through Beacons of Hope is a priority. Involving Beacons of Hope in global policy processes is an important opportunity to amplify these positive benefits and their contributions to the health and well-being of people and the planet.** There is a need and opportunity to use true cost accounting to holistically value the externalities of this work and compile and integrate the results into a holistic impact valuation dashboard.

9. **To advance sustainable food systems, key communities need to be engaged.** These include: farmers as central decision-makers related to the future of food; the climate community to make food systems connections as a key driver of climate mitigation and adaptation strategies; the health policy and healthcare communities to advance common goals of fostering holistic community health and well-being; and other communities interested in exploring the increasingly important links between migration, immigration, and sustainable food systems.

10. **Each Beacon of Hope initiative is embedded within a broader context or landscape that influences their activities resulting in a dynamic transformation process that is not straightforward or linear and takes time.** Some initiatives have approached stabilization only to face erosion as political priorities change, illustrating the dynamic nature of transitions and the transformation process and the need for ongoing support.

The Change Imperative

Food has been a life force for our families, cultures, and societies for millennia. But profound changes in the way food is grown, processed, distributed, consumed, and wasted over the last several decades have led to increasing threats to a future of food that is sustainable, equitable, and secure, particularly when coupled with climate change, species extinction, increasing globalization, and shifting global economics, politics, and demographics.

Ensuring the sustainability, security, and equity of our food systems is one of the most defining issues of our time. Food systems are a significant factor in the creation of these daunting challenges and — importantly — they can provide pathways to the solutions.

The predominant industrial food system is too dependent on fossil fuels and non-renewable inputs that result in pollution and environmental damage. It is often at the root of eroding human health, social cohesion, rural livelihoods, and important social, cultural, and spiritual traditions. It is known to undermine the vital contributions of farming, fishing, and forest communities as innovators, producers, and food providers. It is embedded in and thus further supports an economic system that results in liabilities due to hidden costs, global trade vulnerabilities, declining rural economies, and increased inequality.

These impacts are experienced unequally across the globe and between different groups of people in different places, with the burden placed on vulnerable and marginalized populations.

The future of food is at stake, and the status quo is jeopardizing the efforts of many governments, businesses, farmers, civil society organizations, foundations, and others to promote food access, food security, food equity, human health, and a sustainable environment. "Business as usual" will have severe negative impacts environmentally (from increased greenhouse gas emissions to soil erosion, biodiversity loss, and pollution), socially (from increased non-communicable diseases to eroding cultural traditions), and economically (from a decline in rural economies to the volatility of the global market).

Transformative change is needed. Single-focused interventions — increased yields, adequate nutrition, environmental sustainability — at the expense of other interconnected and equally important issues like equity and fairness are insufficient and are bound to have unintended consequences. Food systems reform requires that we craft new and better solutions at all scales through a systems-level approach and deep collaboration between farmers and food systems workers, Indigenous Peoples, government and policymakers, philanthropy, researchers, grassroots movements, and the private sector.

Transformational change at the scale and speed needed will require all actors to do their part as well as significant resources to adequately and effectively support this critical work. For current and future generations, this is a shared responsibility upon which we, as a global community, simply must act to better understand the impacts of food systems, address the most harmful practices, and find new positive pathways forward, together.

Understanding Transformations

What can we learn from past transformations? How do systemic transformations occur, what conditions foster change, and how can we learn from current experience? How do we distinguish between incremental shifts and transformative change?

The language of transformation is increasingly heard across the globe as people convene to contemplate and initiate collective action to deal with critical global issues. A vision of transformation has become central to international dialogues about the future of the Earth and sustainable development. Examining food systems in the face of climate change and related global challenges inevitably leads to the need for major and rapid global systems transformations. Transformations must be multifaceted, multidimensional, multisectoral, multinational, and augmentative. Transformation flows from an understanding that the status quo is not a viable path forward and that action on many fronts using diverse change strategies across numerous landscapes will be needed to overcome resistance from those who benefit from the status quo. A range of transitional interventions are needed to multiply effects, creating streams of transformation flowing together to generate mammoth changes in global systems. Thus, transformation is simultaneously and interdependently global and local, contextually sensitive, and rooted while being globally manifest and sustainable.

A theory of change emerges from studying significant historical shifts and examining current challenges and patterns that portend future possibilities. Transformations that are instructive and ongoing include the fall of the Berlin Wall, turning back the AIDS epidemic, the world wide web (internet), and, today, social media. None of these transformations occurred due to a centrally conceptualized, controlled, and implemented strategic plan or massive coordinated initiative. What these diverse examples have in common is that transformative change occurs when multiple and diverse initiatives intersect to create momentum and critical mass, leading ultimately to tipping points. These historical examples also teach us that the implications of these transformations continue to unfold over time and that the transformation process is ongoing and changeable. Complexity theory explains how dynamic interactions in turbulent and emergent systems result in transformation, and that such transformations emerge and continue to take shape from diverse and multilayered innovations and cross-system interconnections and interactions.

To inform this report, we reviewed the sustainability transitions literature, with a focus on food systems transformations more specifically. The literature review informs both the research process and methodology, as well as the development of a Food Systems Transformation Framework. The cumulative body of research and knowledge from our Beacons of Hope investigation points to interlocking networks and initiatives as the pathway to transformation in complex dynamic systems, especially globally.

Shared Principles for Sustainable Food Systems

This work is guided by a shared set of principles for sustainable food systems: renewability, healthfulness, equity, diversity, resilience, and interconnectedness. Together, these principles help us to see the whole system in necessary and powerful new ways and to make choices about the future of our shared food systems so we can avoid siloed approaches, unintended consequences, and limited, narrow, short-term solutions.

Global Alliance Food Systems Principles

Renewability Address the integrity of natural and social resources that are the foundation of a healthy planet and future generations in the face of changing global and local demands	**Healthfulness** Advance the health and well-being of people, animals, and the environment, and the societies that depend on all three
Equity Promote sustainable livelihoods and access to nutritious and just food systems	**Diversity** Value our rich and diverse agricultural, ecological, and cultural heritage
Resilience Support regenerative, durable, and economically adaptive systems in the face of a changing planet	**Interconnectedness** Understand the implications of the interdependence of food, people, and the planet in a transition to more sustainable food and agricultural systems

About Beacons of Hope: Methodology and Approach

"Beacons of Hope: Accelerating Transformations to Sustainable Food Systems" is a collaboration between Biovision Foundation for Ecological Development and the Global Alliance for the Future of Food. Through this initiative, we aim to amplify the power and potential of transforming food systems to address critical global issues such as climate change, biodiversity, equity, and health. Globally, there is an urgent need for systems transformation, and this work seeks to contribute to the important conversation about how to accelerate transformations to truly sustainable food systems now and for future generations. The Beacons of Hope featured in this work provide inspiring examples and evidence that transformation is possible.

The Beacons of Hope research seeks to:

- Understand the current research and initiatives looking at transitions toward sustainable food systems around the globe;
- Select or develop a Food Systems Transformation Framework drawing from the existing literature and practice;
- Apply cases drawn from the review of the initiatives to the Food Systems Transformation Framework to deeply understand the context in which transitions are unfolding; and
- Document the positive impacts of transitions toward more sustainable food systems and develop recommendations for supporting and accelerating the transformation process.

Key elements of the research include:

- Developing a methodology that allows for the screening of food systems initiatives according to their approach and path of transformation;
- Identifying 21 initiatives (Beacons of Hope) and examining common patterns among them, their transformation process, and the common challenges faced, as well as distilling lessons from their experience related to sustainability transformations; and
- Developing core elements of a Food Systems Transformation Framework that can be applied, tested, and used by other food systems initiatives.

Biovision Foundation for Ecological Development and the Global Alliance for the Future of Food believe that successful transformation requires a diversity of approaches, each reflecting its own unique context. We sought to connect across Beacons of Hope and to identify the factors, approaches, interventions, and challenges that hinder or contribute to the systemic transformation required.

The research involved the following steps. For more information about the methodology, see information about the Supporting Materials on page 79.

STEP 1: Review of sustainable food systems and transitions literature
Biovision carried out a comprehensive review of the global landscape within which sustainable food systems exist, including reviewing the history and origin of relevant movements and initiatives. The literature related to sustainability transitions was also reviewed. Experts were consulted on key aspects to be included in the analysis.

STEP 2: Selecting Beacons of Hope initiatives for profiling
The Beacons of Hope project followed a carefully designed workflow and methodology to select the "Beacons of Hope." The development and application of a transparent method for identifying, reviewing, comparing, and analyzing the initiatives were essential to the research. An expert survey conducted through Global Alliance's and Biovision's networks identified 128 Beacons of Hope. These Beacons of Hope were analyzed against 8 dimensions of sustainable food systems to identify initiatives that took a holistic food systems approach to their work. Finally, we sought to identify Beacons of Hope that were both geographically diverse and diverse in relation to their operational scale and scope along the value chain, as well as whether they articulated a transition pathway. Out of the 128 initiatives, 21 were selected for further profiling in the Beacons of Hope project.

STEP 3: Developing the inquiry process/interview questionnaire
The Beacons of Hope inquiry process and questionnaire were based on the application and adaptation of the Multi-Level Perspective (MLP) framework for socio-technical transitions to food systems (Geels 2011). The MLP was operationalized into an interview guide and methodically applied to the 21 initiatives selected. Through both the inquiry process and questionnaire we sought to highlight the transformative elements in the experience of each initiative in order to understand how they work to make food systems more sustainable, diverse, and equitable.

STEP 4: Summarizing the interviews
The research team summarized the interviews and developed fact sheets on each of the Beacons of Hope, exploring each initiative's transition pathway in relation to the MLP levels and interactions.

STEP 5: Analyzing the interviews
In order to derive insights about more nuanced aspects of the transition process, the research team identified key words and themes from each of the interviews. They then reviewed and analyzed the interviews to identify patterns, key lessons, and leverage points across the heterogeneous set of Beacons of Hope.

STEP 6: Soliciting feedback via workshops
Two workshops were held throughout the research process. The first was at the Global Alliance's International Dialogue in May 2017 to solicit early feedback on the research. The second was in Toronto in May 2018 to review the technical report and co-create the Food Systems Transformation Framework.

STEP 7: Developing the Food Systems Transformation Toolkit
Drawing from existing literature and practice, we developed an interactive Food Systems Transformation Toolkit, which includes a Framework and Discussion Guide, with the goal of amplifying the power and potential of food systems transformations and contributing to the global discussion about sustainability transitions more broadly. The Framework draws on the transitions literature and proposes a process for promoting sustainable food systems transformations. The Discussion Guide provides key questions to facilitate conversation, reflection, and action. Both the Framework and Discussion Guide are meant to be refined over time.

As a global community, we need to move beyond questioning *if* food systems transformations are occurring to recognize that transformations *are* occurring, and to identify how to embrace opportunities and overcome challenges in implementation, practice, and policy. We need to recognize the ways in which these transitions are transformative and not just "business as usual." Achieving the ambitious goals outlined in the SDGs and the Paris Agreement requires us to better understand how to support and facilitate these transformative processes in place-based, contextual ways. We look to Beacons of Hope to guide this understanding.

BEACONS OF HOPE

Inspiring, Creative, and Necessary Solutions

Around the world, an extensive network of people and initiatives are currently engaged in transformative change, seeking to build sustainable food systems. Each holds the promise of hope, is a bright light providing guidance through turbulent waters, and is a source of inspiration. To learn across this diversity of approaches, we reached out to our expert network to ask them for their "Beacons of Hope." By sharing their stories, we aim to strengthen the connection between initiatives seeking food systems transformations, better understand the transition process, and engage in the global dialogue about systemic change.

These Beacons of Hope contribute inspiring, creative, and necessary solutions to urgent global issues such as climate change, migration, urbanization, and the need for healthier and more sustainable diets. While these issues pose a serious threat to the well-being of the planet and people, they also create opportunities for systemic change.

For the purpose of this project, and using a rigorous selection process, we identified 21 Beacons of Hope that address sustainability in an integrated way to better understand their transformation processes. We would have liked to have included many more initiatives in the study but were limited by scope and budget. By sharing a small sample of these 21 incredible stories and experiences, we have made a start and — through these initial efforts — hope to amplify the tremendous work of all Beacons of Hope and further contribute to the global dialogue about food systems transformations.

The Beacons of Hope we interviewed illuminate key elements of the transformation to sustainable food systems. They demonstrate that transformative change is happening and can be accelerated. Farmers, consumers, organizations, institutions, governments, businesses, funders, and investors are facilitating food systems transformations in diverse contexts and geographies. We are inspired by their individual and collective efforts and achievements.

Our selection process involved screening and ranking the 128 Beacons of Hope identified through the expert survey against multiple dimensions of sustainability. The Beacons of Hope also feature a number of instructive cases to enrich the sectoral and geographic sample of Beacons of Hope. The selection process reflected what is called in qualitative inquiry *a purposeful sample*. The logic and power of purposeful sampling lies in choosing information-rich cases for in-depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term *purposeful sampling*. Studying information-rich cases yields insights and in-depth understanding. Selecting exemplars and success cases is one type of purposeful sampling (Brinkerholf 2003).

Our research team analyzed the Beacons of Hope against multiple dimensions of sustainable food systems to identify initiatives that took a holistic food systems approach to their work. Each of the initiatives was then also reviewed against the following criteria to ensure a diverse selection of case studies:

- Geographic location;
- Operational scale (local, regional, national, global);
- Scope along the food system (production, processing, distribution, consumption, waste, other);
- Whether a transition pathway was articulated; and
- Whether the approach is highly unique and noteworthy.

Because the Beacons of Hope are working holistically, they are difficult to categorize. Of the Beacons of Hope described, there are three global civil society networks, two research-oriented initiatives, five initiatives based in government, five private-sector initiatives, and six farm-to-table initiatives focused on working with farmers to link production to consumption. A description of the 21 selected for this project follows.

* Agricultures Network

LOCATION: SENEGAL
CATEGORY: CIVIL SOCIETY NETWORKS

This global network facilitates knowledge co-creation and advocacy within the community and with farmer organizations, researchers, academia, extensionists, and civil society actors. They produce regional/global magazines with a readership of approximately 1 million. What makes this network stand out is their commitment to family farmers. Their slogan is "collectively connected and locally rooted."

The Agricultures Network (AN) is working for a world that places farmers at the centre of development and agriculture. They also envision a future where family farming goes hand-in-hand with agroecology. The focus is on the cultural, ecological, social, human, and political dimensions of sustainability. They hope to change the general public's views on agriculture as only the production of goods and to show how deeply agriculture is rooted in a community's food systems and local culture. In addition, the AN shows that sustainable food production also reduces inequality; increases social equity and inclusion; fosters a healthy society, soil, and environment; reduces youth unemployment; counters climate change; and deals with dietary changes and land issues.

To help achieve their goals, AN highlights mainstream scientific evidence for more sustainable and agroecological practices. They facilitate co-creation of knowledge between key actors and disseminate it widely. The organization is not focused on increasing the numbers of the network; instead, they work to ensure the involvement of quality organizations that support their vision. The anchoring mechanisms for AN are ownership, reciprocity, and personal relationships. Funding for the network has ceased, but they are still going strong as it has never been about the money. The network members invest their time and resources, benefit from the knowledge exchange and support, and have built strong relationships with other members.

Bara Gueye, the director of IED Afrique (which hosts AN), told a story about a researcher at Senegal University who was active in promoting local innovation. As a test of the magazine's impact, they published an article on his work and then observed the significant number of people who reached out to the researcher, not only from within the same region but also internationally. This showed the magazine's, and therefore the network's, reach.

CONTACT INFORMATION:
www.magazines.agriculturesnetwork.org
www.facebook.com/agricultures
birame.faye@iedafrique.org

Agroecology Case Studies

LOCATION: AFRICA
CATEGORY: RESEARCH INITIATIVES/ FARM INITIATIVES

This collection of 33 African case studies counters dominant narratives about agricultural investments and land-grabbing and shows the potential of agroecological methods to raise incomes, sustain productivity, improve livelihoods, and adapt to climate change. These examples can be used to show that Africans have found successful solutions to their own problems. The Oakland Institute organized these cases in collaboration with partner organizations and researchers.

These case studies present evidence that agroecology can provide better yields, pest management, soil fertility, increased biodiversity, and increased farmer incomes compared to conventional farming. The intent of this work is to challenge the dominant narrative around food production that pressures the national government to privilege foreign investment over local natural resource management through agroecology. It seeks to build credibility for farmers' lived experiences, which are often overlooked by research institutions and academics.

Frédéric Mousseau, the policy director at the Oakland Institute, told a story about a man named Zephaniah Phiri from Zimbabwe. Zephaniah faced extreme barriers to planting and growing, such as an apartheid government, unequal land distribution, and poor land quality. Despite it all, he managed water in such a way that he could plant a piece of dry land with dozens of plants and trees and became nationally and internationally known for it. Before his recent passing, Zephaniah achieved incredible success and showed the resiliency and determination of family farmers.

CONTACT INFORMATION:
www.oaklandinstitute.org/agroecology-case-studies
fmousseau@oaklandinstitute.org

* Brazil's National Plan for Agroecology and Organic Food Production

LOCATION: BRAZIL
CATEGORY: GOVERNMENT/FARM INITIATIVES

Brazil's National Policy for Agroecology and Organic Production (PNAPO) is a federal policy in Brazil, created in 2012, aimed at the widening and consolidation of actions toward sustainable rural development. All relevant stakeholders and government are involved in PNAPO, while creating critical spaces for participatory planning, implementation, and monitoring, and including "transdisciplinarity" in policymaking (FuturePolicy.org).

PLANAPO is linked to other food security and nutrition policies, and is coordinated by 10 ministries with 194 initiatives. This plan follows 6 strategic axes: 1) production; 2) use and conservation of natural resources; 3) dissemination of knowledge; 4) commercialization and consumption; 5) land and territory; and 6) socio biodiversity.

The Brazilian government focuses on two parallel agricultural streams: conventional and alternative. Through the implementation of programs and actions that foster the agroecological transition, they work toward goals to improve the quality of life of the population by aiming for sustainable rural development and increased consumption of healthy food. The impacts and outcomes of this transition are: 1) strengthening the Family Farming Program; 2) promoting technical assistance and rural extension; 3) promoting transition to sustainable production systems; 4) developing and providing technological innovation; 5) promoting agroecological training; 5) improving access to water production; 6) supporting seeds suitable for organic production on an agroecological basis; 7) supporting the promotion and marketing of organic and agroecological products; and 8) increasing the share of organic and agroecological products in local markets, the region, and institutionally.

Because of Brazil's current political and economic situation, the second cycle of PNAPO, PLANAPO 2016–2019, faces drastic budget cuts. The political turmoil and economic crisis have affected the implementation of the cycle (FuturePolicy.org).

Rogério Neuwald, the executive secretary of the National Commission for Agroecology and Organic Production, spoke about how PLANAPO arose after the "March of the Daisies" in 2012, where rural women demonstrated for sustainable rural development, gender equality, and better conditions for rural populations. This grassroots beginning shines through in the presence of civil society in the planning, implementation, and monitoring of the policy and programs.

CONTACT INFORMATION:
www.mda.gov.br/planapo/

* Climate Resilient Zero Budget Natural Farming

LOCATION: ANDHRA PRADESH, INDIA
CATEGORY: GOVERNMENT/FARM INITIATIVES

The Climate Resilient Zero Budget Natural Farming approach, led by the Government of Andhra Pradesh's Department of Agriculture, is on target to engage 1 million farmers by 2019–2020 to increase yields and promote resilience through agroecological processes. It is a broad state policy with multiple objectives including enhancing farmers' welfare, consumer welfare, and the conservation of the environment. The work is done through farmer–to–farmer mentoring, short tutorials and films, and modern communication methods.

Zero–Budget Natural Farming (ZBNF), pioneered by an Indian agriculturist and Padma Shri awardee, Dr. Subhash Palekar, is built on four core principles: 1) BEEJAMRUTHAM: Microbial seed coating through cow urine and dung–based formulation; 2) JEEVAMRUTHAM: Enhance soil microbiome through an "inoculum" of fermented cow dung, cow urine, and other local ingredients; 3) ACHHADANA (cover crops and mulching): ground to be kept covered with crops and crop residues; and 4) WAAPHASA: Fast build–up of soil humus through ZBNF leading to soil aeration, soil structure, and water harnessing. These principles help farmers by reducing costs, increasing yields, reducing risks, reducing water required, enhancing soil fertility, promoting biodiversity, providing higher pricing, and enhancing resilience to climate change. This approach features: farmer–to–farmer dissemination of training and support; an agriculture ministry focused on building the capacity of farmers; community–based leadership and resource people, making ZBNF inputs available; building farmer's institutions, especially women's organizations; a focus on the very poor; and a strong information and communications technology (ICT) background.

Vijay Kumar Thallam, advisor to the Government of Andhra Pradesh, shares that it is extremely important to take unprecedented measures to tackle global warming and climate change. ZBNF is "smart" agriculture where farmers not only enjoy the direct economic benefits but also get resilient crops, improved health due to safe agriculture practices, and consumption of chemical–free food, increased biodiversity, soil and water security, along with ecosystem regeneration.

CONTACT INFORMATION:
www.apzbnf.in
vjthallam@gmail.com

* Community Markets for Conservation

LOCATION: ZAMBIA
CATEGORY: FARM INITIATIVES/ PRIVATE SECTOR

This initiative seeks to work toward healthy soil, healthy food, and a healthy diet in rural Zambia. Program participants agree not to kill wildlife and to use agroecological approaches and diversification learned through farmer training.

Community Markets for Conservation (COMACO) was established in 2009. It is a non-profit company that channels market incentives to rural economies in Zambia through the adoption of renewable, climate-smart technologies. This model is well-established and proven to promote strategies of free knowledge exchange, achieve household food and income security, enhance the market value of surplus crops, and reduce environmental degradation and biodiversity loss through placing the interests of poor, small-scale farmers at the forefront.

The company advances two strategies: 1) farmer support services that provide inputs and effective climate-smart agriculture and sustainable land management training to 167,400 low-income, small-scale farmers and 67 farmer cooperatives who are managing these services themselves; and 2) a business that manufactures and sells value-added products from the farmers trained by the organization. They believe that by bringing knowledge and skills, as well as market incentives, to small-scale farmers, they will be able to help transform communities into stewards of their own land and its resources. By 2019, they will be supporting up to 200,000 small-scale farmers or 1.2 million family members. COMACO uses a business approach to identify economic solutions to end poverty for small-scale farmers while influencing better strategies for sustainable conservation. The farmers sign a "conservation pledge" and are compensated for their crops once they demonstrate their commitment to protect the land. Additionally, COMACO is working with the African Development Bank and the Zambian government on scaling the initiative to other landscapes.

In an interview with Dale Lewis, the president and founder of COMACO, he shared a story about how the initiative was created, in part, to help stop illegal elephant hunting. Poor and hungry villagers were hunting the animals for food. Now, with this initiative, they are able to grow their own food and create a livelihood outside of elephant hunting, which benefits the environment as well as the health of the smallholder farmers. In an area where a cotton company had cleared forest, a chief was asked, "If a kudu (antelope) would come out and walk through the village, what would you do?" The chief answered, "I would shoot it, unless I had enough food. Then I would admire it." This illustrates how hunger can undermine people's relationship with nature. COMACO provides an alternative that benefits the community and the environment.

CONTACT INFORMATION:
www.itswild.org
dlewis@itswild.org

* Drylands Natural Resources Centre

LOCATION: **MBUMBUNI, KENYA**
CATEGORY: **FARM INITIATIVES/ PRIVATE SECTOR**

The Drylands Natural Resources Centre (DNRC) works in Kenya to regenerate dryland resources holistically. It addresses three pillars of development: environmental, economic, and social. This small-scale and self-funded initiative promotes change through organic growing, processing, tree planting, farmer summits, and seedling sales. The DNRC promotes diversified local trees for food, nutrition, fuel, fibre, medicine, timber, and fodder. DNRC maintains a tree nursery of 25 species of drought-resistant trees, a seed bank, and demonstrative farms on agroforestry and agronomy practices. Their farmer training provides education on organic and agroecological methods.

Some of the DNRC's goals are to: 1) engage farmers as partners in collaboration on learning, community building, and sustainable business development; 2) improve the environment, protect natural resources, build lasting capabilities, and generate wealth for participants; 3) equip farmers with the knowledge and capital needed for success in the restoration of degraded land, prudent investments, knowledge sharing, and increased income; 4) aspire to model accountability, evidence-based innovation, financial self-sufficiency, long-term community commitment, and transparency; and 5) respect local communities' preferences, practices, and histories through tackling problems and pursuing solutions.

Nicholas Syano, director and founder of the DNRC, shared a story from a participant who used to have to travel very far to find firewood, leaving her child alone for extended periods of time. Now, the farmer says, "We have more than enough firewood and don't have to travel a long distance to find firewood."

CONTACT INFORMATION:
www.dnrckenya.co.ke
nmsyano@yahoo.com

Eosta

LOCATION: **WADDINXVEEN, NETHERLANDS**
CATEGORY: **PRIVATE SECTOR/ FARM INITIATIVES**

This award-winning private-sector initiative is dedicated to the production and importation of sustainable, organic, and fair trade fruits and vegetables. Eosta is an international distributor with relationships with over 1,000 growers in 6 continents. They provide full traceability of their products, provide extension services to farmers, promote true cost accounting, and build a sustainable market with consumers. This traceability allows consumers to make well-informed purchases at prices fair to producers, society, and the environment. As "orchestrators of the production and supply chain," Eosta provides agroeconomic advice, finances, packaging, product innovation, logistics, marketing, and distribution to their customers.

The core values at the heart of their approach are responsibility, togetherness, and authenticity. Eosta is Europe's most innovative importer, packer, and distributor of fresh, organic produce. They work with major retailers and natural food stores in Europe, the United States, Canada, and the Far East. The mission of Eosta is to contribute to healthy food, a sustainable environment, and social responsibility, or "Healthy, Organic, Fair." Their vision is to enhance sustainability through a 4M approach: monitor, manage, monetize, and market sustainability.

The initiative promotes the co-creation and exploration of synergies, private-sector leadership, transparency, and making visible the true cost of food. Eosta believes that sustainability cannot be anchored in niches but must instead be mainstreamed and that the private sector has to align with sustainability and be a driver toward it.

CONTACT INFORMATION:
www.eosta.com
volkert.engelsman@eosta.com

* Farmer–to–Farmer Agroecology Movement

LOCATION: CUBA
CATEGORY: FARM INITIATIVES/ PRIVATE SECTOR

This grassroots initiative is a part of the Cuban National Association of Small Farmers (ANAP), a member of the La Via Campesina movement. It focuses on Cuban farmer autonomy through agroecological practices, participatory plant breeding, and farmer–to–farmer approaches. Through this initiative, the small farm sector in the country is achieving higher production at lower costs (compared to conventional, chemical–sensitive monoculture farming systems). The sector is increasing national food production and is more resistant to adverse effects of climate change as well as economic or political shocks.

The farmer–to–farmer approach is a methodology used to further disseminate agroecological practices. After the food crisis in Cuba, it was the only definitive answer. It is a dynamic process that is successful because farmers trust other farmers. The Farmer–to–Farmer Agroecology Movement (MACAC) initiative has more to do with social processes than specific technologies. Implementation is based on local resources to lessen the dependency on external actors or resources to ensure sustainability. MACAC was assisted by the Ministry of Higher Education (not Agriculture) and worked to change researchers' ideas about agriculture and agroecology. Their future goal is to connect small farmers directly to the markets and to increase consumer demand.

The MACAC knowledge paradigm is supported by institutional actors and programs who learn from the expert farmers in a more equal exchange. Some examples of this work include a bus trip of employees from various organizations that visit farms; a quarterly journey to visit farmers in all provinces of the country; cooperatives; and literature such as brochures, books, and magazines. This farmer–to–farmer initiative has worked to increase the number of agroecological farmers in Cuba from 200 in 1999 to 110,000 in 2009, which is about one–third of the small–scale farmers.

Humberto Rios, an agronomist, researcher, and ANAP member, shared that when he was in university in the 1990s, he learned to produce food only with agrochemicals. To find the necessary solutions for Cuba at the time, he knew he had to learn from smallholder farmers. They taught him about seed diversity and organic plant production and maintenance. For example, at the university, they maintained 4 to 5 varieties of beans, whereas the farmers maintained over 200 different varieties.

CONTACT INFORMATION:
Humberto.Rios@icra-edu.org
www.viacampesina.org/en/agroecological-revolution-the-farmer-to-farmer-movement-of-the-anap-in-cuba/

Hivos Sustainable Food

LOCATION: GLOBAL
CATEGORY: CIVIL SOCIETY NETWORK

Hivos addresses global challenges — growing world populations, climate change, food system challenges, nutrition insufficiency — with smart solutions including rethinking ecosystems as the basic foundation of societies and economies and putting citizens at the centre of building new food systems.

This initiative promotes healthy and sustainable food systems for all across the globe using a variety of intervention strategies. Hivos works for stronger consumer and citizen voice in food system governance as well as better-integrated policies. Through supporting place-specific behaviour change, creating and raising awareness, and facilitating exchanges with key actors, they bring consumers into the discussion about food system change. Hivos furthermore convenes generally excluded groups — such as small-scale producers, women, youth, and street vendors — to start initiatives to accelerate a shift toward more sustainable, diverse, and healthy production and consumption practices.

Hivos works at levels of strategy and intervention. The first strategy is to finance the development of technical and business skills among early-stage food entrepreneurs and link these entrepreneurs with potential investors. This impact investment strengthens entrepreneurship. The second strategy is to create coalitions of the willing that bring multiple stakeholders together to jointly develop local, national, and international examples of how food systems can be transformed. Finally, Hivos uses evidence generated by citizens to advocate with governments and international forums so their policies will promote diverse and healthy food, sustainable production methods, and enable the scaling of successful solutions.

Hugo Verkuijl, Hivos's program development manager, shared a story about work with partners in Fort Portal, Uganda, where food and food systems have yet to be included in the urban planning of a fast-growing city. Hivos facilitated a broad, multi-stakeholder dialogue on how to sustainably feed the population of Fort Portal. This discussion included private organizations, youth movements, religious organizations, the public sector, civil society, citizens, research, private sector, and cultural organizations and included previously excluded groups, such as street food vendors who had been marginalized by the municipal government as they did not realize how critical these actors were to the low-income residents of the city. This dialogue led to the creation and financing of the "sustainable diets for all" initiative to approach structural food systems change in the city.

CONTACT INFORMATION:
www.hivos.org/sustainable-food
hverkuijl@hivos.org

* Institute for Sustainable Development

LOCATION: NORTHERN ETHIOPIA
CATEGORY: FARM INITIATIVES

Beginning in 1996, this farmer-led initiative, based in Ethiopia, has worked closely with rural agricultural communities to alleviate poverty, reach food security, and rehabilitate the degraded environment. Their initiatives land within the following areas: 1) system of rice and crop intensification; 2) agroforestry; 3) soil fertility and enhancement; 4) bio-slurry and biogas; 5) push-pull technology; 6) supporting innovator farmers; 7) awareness-raising activities; 8) adapting to the effects of climate change; and 9) research support.

The Institute for Sustainable Development (ISD) sustainable community development program promotes ecological agriculture based on local inputs and improved natural resource management, partnering with local experts and administrative authorities. The main goal is to improve ecosystem services and raise crop yields for farmers and the community. They provide training and education and extension services, and facilitate experience-sharing.

Gizaw Gebremariam, the program manager, explained that when they first introduced the system of row-planting, the farmers laughed at them. Now, 90% of farmers in the Tigray region are using row-planting in their own fields, which results in growing more crops in less space, fewer weeds, and healthier soil.

CONTACT INFORMATION:
www.iisd.org
gizawgeb@gmail.com

* International Network for Community-Supported Agriculture

LOCATION: CHINA
CATEGORY: CIVIL SOCIETY NETWORK/ PRIVATE SECTOR/ FARM INITIATIVES

International Network for Community Supported Agriculture (URGENCI) is both a community of practice and a network of partners affiliated with community-supported agriculture (CSA). It brings together citizens, small farmers, consumers, activists, and political actors globally using an alternative economic approach called "Local Solidarity-based Partnerships between Producers and Consumers." This approach allows the development and maintenance of small-scale organic family farming and the possibility of achieving local food sovereignty regionally and globally. The goal is to transform the food system through impacting CSA policy, creating food sovereignty and a solidarity economy, and working with similar social movements. This is done through international symposiums, action plans, and working groups and builds coherence between local, regional, national, and global projects.

Globally, URGENCI members organize around four fundamental ideas: 1) partnership; 2) local exchange; 3) solidarity and inclusiveness (in risk and benefit sharing, in many cases with variable price structures based on income); and 4) the producers and consumers working in tandem (based on non-hierarchical person-to-person contact and trust). The network values fairness, solidarity, and reciprocity. The initiative views CSAs as a way to contribute to greater solidarity between rural and urban areas. It promotes food systems transformations through the benefits of inclusiveness and access to affordable, healthy food; fair and farmer-led pricing; risk sharing between producers and consumers; low-impact agroecological farming approaches and low fossil fuel input; and reduced food loss and waste.

In an interview with URGENCI president Judith Hitchman, she told a story about a CSA network in the Philippines that was set up after the typhoon Haiyan. This natural disaster created urgency for resilience solutions, and the CSA was considered one of these solutions.

CONTACT INFORMATION:
www.urgenci.net
hitchman@club-internet.fr

*MASIPAG

LOCATION: **LAGUNA, PHILIPPINES**
CATEGORY: **CIVIL SOCIETY NETWORK**

This initiative is a longstanding, farmer-led network of civil society organizations, NGOs, and scientists in the Philippines. It reaches about 35,000 farmer members in 3 regional zones of the Philippines. The goals are to sustainably manage biodiversity through farmer-controlled seeds and biological resources, agricultural production, and associated knowledge. MASIPAG was created to break the control of local and multinational fertilizer and pesticide companies, multilateral rice research institutes, and rice distribution cartels. To improve the quality of life of small farmers, the initiative takes a holistic approach to development, community empowerment, and people's control of agricultural biodiversity.

MASIPAG's approach to empower farmers in breeding their own local rice varieties and to collaborate with academic sectors uses the following interactions: bottom-up decision-making, planning, and implementation; farmer-scientist partnerships; farmer-led research; farmer-to-farmer mode of diffusion in training; and advocacy on farmers' rights issues. The results of the initiative's research calls for governments to support sustainable agriculture for better food security, better health, and better income outcomes, all while offering the potential to reduce climate change emissions from agriculture.

The national coordinator of MASIPAG, Cris Panerio, told a story of a typhoon that hit a community in Nueva Ecija. The typhoon destroyed all of the rice crops in the community except for one that was grown by a farmer who had propagated his own variety of rice. That particular farmer had also been farming organically for over 10 years. Similarly, in nearby communities, other organic farmers also had a good harvest, while crops grown by conventional farmers had been destroyed.

CONTACT INFORMATION:
www.masipag.org
info@masipag.org

* Milan Urban Food Policy Pact

LOCATION: **MILAN, ITALY**
CATEGORY: **GOVERNMENT**

This pact, signed by 150 cities globally and led by Milan, provides 37 suggestions in voluntary guidelines that work toward sustainable food systems. The Milan Urban Food Policy Pact (MUFPP) builds commitment to coordinate international food policies and engages with the mayors of cities to recognize their role in making positive changes. The members meet in person yearly as well as regularly through video conferences. This allows members to network and highlight good practices and policy throughout the cities.

The recommended actions for MUFPP signatories fit into the following categories: 1) governance; 2) sustainable diets and nutrition; 3) social and economic equity; 4) food production; 5) food supply and distribution; and 6) food waste. Some examples of the recommended actions are: to facilitate collaboration across city agencies and departments; enhance stakeholder participation at the city level; identify, map, and evaluate local initiatives and civil society food movements to transform best practices; develop or revise urban food policies and plans; and develop or improve multisectoral information systems.

Maurizio Mariani, general manager of Eating City, a network of cities working on sustainable food procurement based in Europe, shared some stories of city successes within the MUFPP. For example: Copenhagen's food council has led the way by mandating that 90% of the food served in their canteens must be organic; Valencia's mayor is taking an active role in food systems transformation; and the City of Toronto is taking a bottom–up and inclusive approach to their role within the MUFPP.

CONTACT INFORMATION:
www.milanurbanfoodpolicypact.org
m.mariani@risteco.it

North East Slow Food and Agrobiodiversity Society

LOCATION: MEGHALAYA, INDIA
CATEGORY: CIVIL SOCIETY NETWORK

This initiative, which started in 2012, brings together partners from different sectors to work on the enhancement of agrobiodiversity to improve food security and climate change management. North East India Slow Food and Biodiversity Society (NESFAS) is a network of NGOs, institutions, governments, and like-minded people based in Meghalaya, India. Their aim is to enhance local biodiversity and food sovereignty through conservation, promotion, and dissemination of traditional Indigenous knowledge and farming systems.

NESFAS facilitates a mutually respectful dialogue between people with traditional ecological knowledge and those practising modern science. NESFAS focuses on the facilitation of community-level networks to empower local communities to defend their practices and have a voice in food policy at local, national, and international levels. The initiative promotes local agricultural practices by educating consumers on the importance of local food that is responsibly produced, protects the environment, preserves biodiversity and traditional knowledge, enhances health and well-being, reaffirms cultural pride, and recognizes women's roles. Their innovative work connects elders and young people through a digital storytelling approach, which promotes Indigenous knowledge to the greater public.

Carl Oswald Rangad, the vice chairman of operations, shared two compelling stories about NESFAS's work. He explained that in their culture, song and dance are typical, so a schoolteacher composed a song about composting to teach people about the process and how to use it. He also told a story about a village called Mawihang, where they had a World Environment Day. Citizens were encouraged to grow deciduous plants, and they covered a hill in trees. A year later, 80% of the trees were still growing. The following year, the community created their own initiative to fill gaps and plant more trees in another location, all with local trees.

CONTACT INFORMATION:
www.nesfas.in
carl.nesfas@gmail.com

* Organic Valley

LOCATION: **WISCONSIN, USA**
CATEGORY: **PRIVATE SECTOR/ FARM INITIATIVES**

This independent farmers' co-op, founded in 1988 in the United States, is based in La Farge, Wisconsin. Organic Valley works with 2,000 farmer-owners across the United States, Canada, Australia, and the United Kingdom to support middle-sized agriculture through a cooperative structure. They believe that agroecology is the only sustainable way forward and that education is the key to this transformation.

Organic Valley markets its products across all 50 U.S. states and exports to 25 countries. They have impressive statistics: they earn $1.1 billion in annual sales; manage 500,000 acres of organic farmland; produce 40% of the organic milk sold in the U.S.; and represent 15% of all organic farmers in the country. Sustainability is at the core of what they do, as well as renewable energy and promoting the organic food movement. They hope to show consumers the link between health, environmental health, and conventional agriculture production.

Theresa Marquez, a mission executive for CROPP Cooperative, Organic Valley, and Organic Prairie, highlighted the need for this work by citing studies — studies that she feels are suppressed by large agtech companies — that show women who live in the U.S. corn belt should try to avoid pregnancy during spring due to the high risk of birth abnormalities caused by exposure to pesticides.

CONTACT INFORMATION:
www.organicvalley.coop
theresa.marquez@organicvalley.coop

*SEKEM Initiative

LOCATION: **CAIRO, EGYPT**
CATEGORY: **PRIVATE SECTOR/ FARM INITIATIVES**

This private-sector initiative based in Egypt was founded with the vision of sustainable development and giving back to the community. SEKEM believes in a holistic approach that integrates ecology, economy, and societal and cultural life. Since 1977, SEKEM's goals have been to restore and maintain the vitality of soil and food and the biodiversity of nature through sustainable, organic agriculture and social and cultural development.

Their network includes over 2,000 farmers and partner organizations. SEKEM operates under fair trade and fair pricing principles, promotes good governance, focuses on education at all levels, believes in holistic approaches to building fertile soils and providing guaranteed pricing and income security for farmers.

In 1991, SEKEM recognized that there were planes spraying 36,000 tons of pesticides on cotton fields annually, which also affected SEKEM's biodynamic cultivation. SEKEM started to do fieldwork and research on how to fight the cotton pests without using chemical pesticides. After three years, SEKEM could prove the effectiveness of sustainable pest control across Egypt and convinced the Egyptian government to change the law to prohibit spraying chemical pesticides by plane on cotton fields. The amount of pesticides used in Egypt's cotton production has been reduced by more than 90%.

CONTACT INFORMATION:
www.sekem.com
thomas.abouleish@sekem.com

* Soils, Food, and Healthy Communities

LOCATION: **EKWENDENI, MALAWI**
CATEGORY: **FARM INITIATIVES**

This farmer–led initiative, based out of Malawi, uses agroecological methods to address food security and nutrition issues. They use a participatory research model, allowing farmers to do their own research and teach others their findings. They also produce peer–reviewed scientific publications.

Soils, Food, and Healthy Communities (SFHC's) goal is to support rural Malawians to build healthy, sustainable, equitable, and resilient communities. SFHC focuses on gender, social equity, nutrition, and health (especially for children). They work with communities using transformative, participatory methods of training on agroecological practice and discussions about nutrition, gender, and governance. They are advocates for policy change.

Rachel Bezner Kerr described how the initiative is exploring a variety of ways to share its findings and information — through seed fairs, field days, drama, and increasingly through media articles. SFHC is becoming known as a source of "farmer to farmer" shared knowledge. One woman works on her own on a farm and was able to achieve food security for her family. She said that she is an experimental scientist, and this is the result of "farmer to farmer" exchange.

CONTACT INFORMATION:
www.soilandfood.org
rbeznerkerr@cornell.edu

Timbaktu Collective

LOCATION: CHENNEKOTHAPALLI, INDIA
CATEGORY: FARM INITIATIVES/ PRIVATE SECTOR

This initiative, which began in 1990, is a registered NGO working with marginalized women, men, children, the landless, and the disabled in the drought-prone Anantapur district of Andhra Pradesh, India. As of April 2019, the Timbaktu Collective works in 179 villages and serves 22,879 families. Their vision is to empower rural communities to govern themselves, live in social harmony, and maintain a sustainable lifestyle. Their mission is to enable those who are marginalized to enhance their livelihood resources, get organized, work toward social justice and gender equity, and lead meaningful and joyous lives.

Timbaktu believes in autonomy and helps set up people-owned business enterprises. They develop models that address the rights of the marginalized through the ecological restoration of wastelands, organic farming and marketing, alternative banking, credit creation, legal aid and counselling for women, child-friendly education and spaces, animal husbandry, and disability support. They have a farmers' cooperative and processing and packaging plants, and provide numerous extension services.

Bablu Ganguly, the secretary and chief functionary of the Timbaktu Collective, shared a story about a village that had lost almost all of their investments due to lack of rain during a long period of drought. Through help from the Collective, a group of 30 farmers were able to convert to organic farming. Their soil has since improved and the farmers now depend only on themselves.

CONTACT INFORMATION:
www.timbaktu.org
bablu@timbaktu.org

* Vanuatu 2030

LOCATION: VANUATU
CATEGORY: GOVERNMENT

Vanuatu 2030 is Vanuatu's national sustainable development plan. It aims to build alternate pathways to sustainability based on culture, values, natural wealth, and indicators of happiness. It is the country's highest-level policy framework and has three pillars of focus: society; the environment, and the economy.

Vanuatu believes that sustainable food systems are integral to improving the agricultural sector, climate change, and health. Their plan focuses on a devolution of authority to local area councils that merge with customary boundaries based on shared culture. The plan addresses land reform and governance issues that affect the food system in Vanuatu.

Ralph Regenvanu, Minister of Lands and Natural Resources, shared that the cabinet evaluated their organic policy last year and recognized that the government needed to set an example for the rest of the country. They decided that all government canteens must serve 50% organic food, and they are soon increasing that percentage to 75%.

CONTACT INFORMATION:
www.gov.vu/en/publications/vanuatu-2030
ralph@graonmojastis.org

* World Food System Center at ETH Zürich

LOCATION: ZÜRICH, SWITZERLAND
CATEGORY: RESEARCH INITIATIVES

The World Food System Center at ETH Zürich (ETHZ WFSC) aims to support the transformation toward sustainable food systems through systems-oriented research, education, and outreach. The mission of the initiative is "a healthy world through sustainable food systems." This research supports healthy food production, food, and nutrition security, environmental sustainability, and social well-being using a food systems approach with inter- and transdisciplinary methods. The objectives of ETHZ WFSC are to: 1) generate new scientific knowledge and disseminate to key stakeholders; 2) provide leadership and foresight on food systems issues; 3) build capacity of the next generation of decision makers; 4) build strategic partnerships with industry, foundations, research institutions, policymakers, international organizations, NGOs, and other stakeholders; 5) engage with partners to strengthen information dissemination and impact; and 6) act as initial reference location for reliable and up-to-date information on the global food system.

Through partnerships with 40 research groups and external partners from different sectors, they focus on research, education, and outreach. The ETHZ WFSC's core values are to: 1) commit to upholding the independence of university research, education, and outreach; 2) understand that social and environmental sustainability are key; 3) be diligent in disseminating new knowledge to relevant stakeholders; 4) offer an accessible and visible platform to cultivate discussion, debate, and exchange; 5) focus on integration, collaboration, and innovation; 6) work with strategic partnerships; and 7) orient the work toward global challenges of high societal relevance. The initiative disseminates research results through stakeholder engagement in the form of collaborations, events, workshops, and dialogue.

The founding executive director of WFSC, Michelle Grant, reiterated the initiative's desire to build the capacity of the next generation by investing in students. She shared a story about the summer schools that international students at the beginning of their career can attend. This allows them to better understand complex food systems challenges and explore solution approaches in multicultural and transdisciplinary settings. Michelle finds it very motivating to see the students' perspectives and ways of working, setting them up to create positive change toward sustainable food systems.

CONTACT INFORMATION:
www.worldfoodsystem.ethz.ch
mgrant@ethz.ch

* Zero Waste San Francisco

LOCATION: SAN FRANCISCO, USA
CATEGORY: GOVERNMENT

This initiative works to reorganize waste management in San Francisco through the shift to a circular system. They attempt to "work upstream" and focus on the beginning of the waste cycle. Their approaches target: growers through "ugly food" campaigns; wholesale markets through links to food banks; diversion for animal feed; retail food date issues; food establishments; diversion of grease and fat; consumer behaviours; information technology; composting; policy on labels; and three-stream recycling mandates.

This initiative is ambitious, with a "zero waste" goal and legal mandates for recycling. San Francisco's progressive, activist government has led the way, supported by civil society. Zero waste has become a social norm among citizens and the business community.

San Francisco Zero Waste staff noted that it is important to institute a legal mandate at the right political time. They instituted theirs after having spent many years educating the public and promoting voluntary measures, which prepared the public when a legal mandate to recycle was established. They announced that the legal obligation was coming, and asked people how they can help them meet the requirements. They saw a real pick up in recycling and waste diversion even before the mandate went into effect, due to the effort spent on preparation of the public.

CONTACT INFORMATION:
www.sfenvironment.org/zero-waste-in-SF-is-recycling-composting-and-reuse

THE FOOD SYSTEMS TRANSFORMATION FRAMEWORK

The Inquiry Process

The Food Systems Transformation Framework builds on the key interventions, lessons learned, and patterns identified across the 21 Beacons of Hope we interviewed.

It is important to note that none of the Beacons of Hope interviewed claim to have completed their transformation process — each are at distinct points in their own trajectory toward sustainable food systems. We sought to learn from these diverse experiences and not to compare between them. The 21 initiatives were at a wide range of points within the transformation process, and had a wide range of scales and complexity, yet the Framework proved to be robust enough to apply, and be useful, in all instances.

In the following pages we outline why frameworks are useful. We then introduce the Food Systems Transformation Framework, discussing each of its six elements, as well as outline the opportunities for applying it.

Frameworks for Change

Why do we need frameworks? Frameworks for change create new ways of thinking about how to get to a better system. By changing the framework, we change the paradigm, we change the perceptions, and we change the actions and behaviours that flow from the framework.

Frameworks help us understand, analyze, and shift systems — whether they are energy systems, political systems, social systems, or food systems — through their ability to highlight the shortcomings or deficiencies of the current system and point to changes needed to bring about a more desirable system based on a set of values, knowledge, principles, and action. These frameworks can be applied in multicontextual ways to identify diverse solutions across food systems globally.

Frameworks are believed to have the power to affect individual and institutional mindsets at a large scale, which can ultimately change behaviours across society as a whole, compounding the work of many individuals and organizations to create systems change, e.g., universal human rights (Kim 2015).

Frameworks:

- Set the agenda for inquiry;
- Provide the focus of learning;
- Are the container for knowledge;
- Make theory possible;
- Guide action; and
- Are the foundation for interconnected theories of transformation and theories of action (Patton 2017).

Framework adequacy, meaningfulness, and utility can be judged by whether they are:

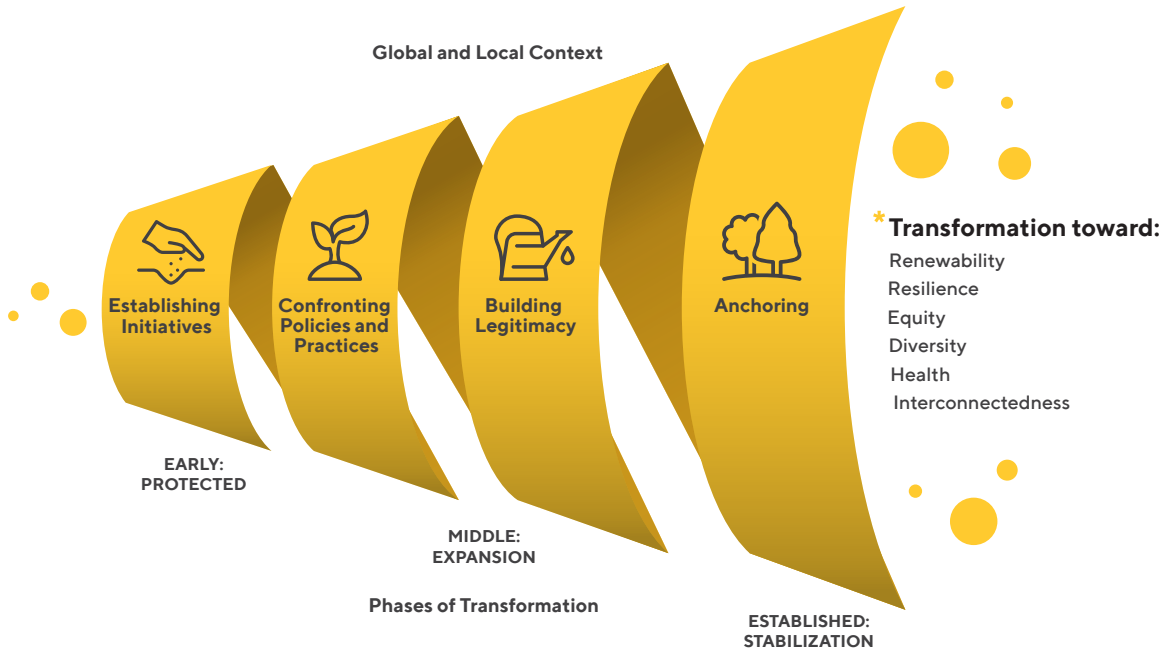
- Understandable and easily communicated;
- Relevant and provide practical guidance;
- Coherent, meaningful, and have practical utility;
- Adaptable;
- Context-specific;
- Unique or fill a distinct niche in a world of competing frameworks;
- Built on knowledge and experience; and
- Evaluable (Patton 2017).

The Elements of Transformation

From our review of the sustainability transitions literature and what we learned from the Beacons of Hope interview process, we distilled the following elements of transformation:

- Global and Local Context: Challenges and Opportunities
- Establishing Initiatives: Identifying Priorities to Support Transformation
- Confronting Policies and Practices: Levers for Change
- Building Legitimacy
- Anchoring
- Phases of Transformation

Below we describe each of the elements, drawing on the sustainability transitions literature.



GLOBAL AND LOCAL CONTEXT: Challenges and Opportunities

The global and local context, with its associated challenges and opportunities, reflects the external environment that influences interactions across the transformation experience. These are the deeper structural trends that influence the Beacons of Hope but cannot be changed directly by any actors. Important considerations include the following:

- Interactions between initiatives, established policies and practices, and the global/local context should be considered as realms of influence (Darnhofer 2014), not as interactions between scales of activity or spatial categories (i.e., local, national, regional).

- While it may be tempting to see initiatives as forces that rise up to "disrupt" established policies and practices, Geels (2011) advises that most initiatives do not emerge *within* existing societal structures but often *outside* them, inspired by movements that cross borders and localities.
- If a transition is to be successful, processes across initiatives, established policies and practices, and the global context need to be aligned (Sutherland et al. 2014). Transformation results from interaction between these dynamics during periods when initiatives build internal momentum, when the global context creates pressure on established policies and practices, and when the destabilization of established policies and practices creates windows of opportunity for initiatives (Geels 2011).

ESTABLISHING INITIATIVES: Identifying Priorities to Support Transformation

An initiative is a project or organized activity in which different actors advance a unique approach to sustainable food systems. Such initiatives could be quite small scale and highly diversified, or they could be broad-based and seek to make connections across many dimensions of food systems. Food systems initiatives include, for example, business and market development, policy creation, educational programs, and new networks. These initiatives often exist initially in "protective spaces" where unique approaches can be piloted, incubated, elaborated, and adapted without being directly subject to the pressure of prevailing policies and practices (Hinrichs 2014; Markard et al. 2012).

CONFRONTING POLICIES AND PRACTICES: Levers for Change

Initiatives, through their activities, seek to challenge established policies and practices. In the transitions literature, these are understood as the "locus of established practices and associated rules that stabilize existing systems" (Geels 2002). Such sets of rules and behaviours grant stability to predominant practices, production processes, product characteristics, skills and procedures, and ways of defining problems, as embedded in institutions and infrastructures. They are "deep structures," not easily changed, and lend stability to existing power relations. The established policies and practices can be created and influenced by producers, consumers, policymakers, alliances and associations, research communities, and investors, as well as broader trends and factors.

Food systems policies, regulations, rules, behaviours, beliefs, practices, and institutional relations can be challenged by initiatives (Geels 2011). If successful, the initiative activities may replace existing food systems policies, practices, regulations, rules, and behaviours. The process is never straightforward or linear, as the established policies and practices are stabilized by many lock-in mechanisms or blockages. Initiatives, as they contend with such lock-ins, blockages, and challenges, are "crucial for transitions, because they provide the seeds for systemic change" and are seen as approaches that deviate substantially from the established policies and practices (Geels 2011).

BUILDING LEGITIMACY

Over time, initiatives build legitimacy through their activities. Different indicators of legitimacy include science-based evidence, policy/politics, legal precedent, experiential knowledge, civic engagement, etc. (Montenegro de Wit and Iles 2016). Processes of delegitimization are also important to address, including the forces that actively seek to discredit or undermine transitions, or have very different transition ideas.

ANCHORING

As the transformation process unfolds, initiatives find ways to embed themselves in policy and practice, finding stability to sustain their work. This "anchoring" creates social, political, institutional, and economic stability for initiatives.

PHASES OF TRANSFORMATION

Some systems transformations take place over a long period of time, while other transformations are swift. The slow pace of a transformation can be seen as beneficial, giving more time for policies, practices, institutions, organizations, legislation, and regulations to evolve. Much of the sustainability transition literature pays attention to "event chains" or "sequences" (Geels 2010), although it is acknowledged that there have not been enough empirical studies to conclusively identify a range of patterns in the unfolding of transitions (Darnhofer 2014). Slow or fast, the transformation process is rarely linear. Blockages, feedback, and circularity are key dynamics.

The dynamic interactions that occur between initiatives, established policies and practices, and the global context can be divided into three phases:

PHASE 1 | Early: Protected
An early phase when actions are initiated, usually in a protected space.

PHASE 2 | Middle: Expansion
A mid-phase as the initiative expands and engages key levers, builds legitimacy, and begins to anchor.

PHASE 3 | Established: Stabilization
A final phase where established policies and practices are significantly impacted and stabilized in new forms.

Applying the Food Systems Transformation Framework

From this theoretical and practical exploration of the elements of transformation, we developed the Food Systems Transformation Framework.

The Framework is a draft in need of application, testing, and refinement. It identifies principles, patterns, barriers, opportunities, and key questions relevant across dynamic, complex contexts, and can be used for discussion, sharing, and movement-building. The Framework presents key factors and transformation pathways for discussion. We understand the process of transitioning to be a dynamic, non-linear process with both temporal dimensions and resourcing issues.

The Food Systems Transformation Framework can be applied and tested by powerful agents of change throughout food systems, including farmers, policymakers, corporate leaders, citizens, and donors seeking to analyze and accelerate food systems transformations.

We invite you to apply, test, and refine the Framework using the Toolkit available on the Beacons of Hope website **www.foodsystemstransformations.org**. Over time we anticipate creating a space for results of these applications, tests, and refinements to be shared.

The Framework can be useful at any stage of the transformation process, and there are many ways to use the Framework. For example:

- A group or individual can explore the Framework in order to better understand food systems transformations and systemic change processes.
- Several complementary initiatives, organizations, or enterprises can apply the Framework to better understand their impact and transformation processes and how they might better support one another or work together to effect transformational change.
- The Framework can be applied to government, business, or farm decisions in order to better understand how to influence and shape policy and practices.
- Donors or advisors to initiatives can apply the Framework in an effort to better understand the transformation process and understand which supports are needed at each stage.

Principles for Applying the Transformation Framework

At a workshop in May 2018, participants reviewed the findings of the Beacons of Hope initiative and collectively refined the Framework and Discussion Guide. Principles to guide the process of applying the Framework and think about transformations were drafted and include:

- Applying a systems perspective;
- Attending to multilevel interactions and feedback loops throughout;
- Nurturing supportive relationships and interactions among key stakeholders: farmers, consumers, policymakers, and allies;
- Articulating and adhering to core values: equity, mutual respect, community and stakeholder engagement, and others;
- Engaging in reflective practice in support of learning and ongoing adaptation;
- Acknowledging and managing the relationships (and tensions) between short-term results, longer-term systems changes, and the overarching vision of sustainable transformation;
- Developing inclusive governance, partnerships, and alliances, especially the participation of farmers, women, Indigenous Peoples, and those left out of decision-making processes;
- Attend to the "truth" and dynamics of growth and change, and accept the verdict of the data; and
- Seek to maximize benefits across objectives (e.g., the SDGs) and minimize trade-offs.

WHAT WE LEARNED ABOUT THE TRANSFORMATION EXPERIENCE

The Beacons of Hope initiative seeks to understand the possibilities for food systems transformations globally, across different contexts and in different places. Through the research process, each Beacon of Hope described its own change imperative, the barriers and lock-ins experienced, and specific challenges and opportunities. The research team then analyzed the responses to identify cross-cutting patterns and themes, revealing overarching global trends, policies, practices, and challenges and opportunities hindering or enabling food systems transformations.

Dynamic Transformations

Each Beacon of Hope has a rich experience and compelling story to share about their transformation process. When we analyzed the Beacons of Hope interviews, interesting patterns emerged. The dynamic transformation experience reflects interactions between each Beacon of Hope, their activities and priorities, and the broader global context. Our research team identified and documented both the levers for change used by the Beacons of Hope and their strategies for confronting established policies and practices, building legitimacy, and anchoring their work. The Beacons of Hope articulated their work as part of a dynamic transformation process that takes time. These findings (summarized in the following pages) provide an excellent starting place for future discussions on food systems transformation processes.

Each Beacon of Hope initiative is embedded within a broader context or landscape that influences their activities, including deeper structural issues that cannot be addressed or changed directly (climate change and the environment, migration, trade agreements, corporate concentration, and shifting consumer demands). Through their actions, the Beacons of Hope seek to address the impact of these issues on the ground and in their specific locales, thereby indirectly addressing broader global issues.

Interacting and overlapping with these deeper structural issues are specific policies and practices that hinder or enable the work across Beacons of Hope initiatives. The Beacons of Hope seek to change these policies and practices, including food systems policies, regulations, practices, programs, institutional relations, and mindsets. These policies and practices reinforce and stabilize the dominant system and thus impact the Beacons of Hope.

Although each Beacon of Hope defines opportunities for transformations to more sustainable food systems from their specific sectoral and geographical vantage points — and each is at a different phase in their transformation process, reflecting a wide range of scales and complexity — when examined together, definite patterns and themes emerge. The Framework proved to be robust enough to apply, and be useful, in all instances.

Global and Local Context: Challenges and Opportunities

Global and local issues, trends, and challenges directly influence the Beacons of Hope, shaping opportunities and decision-making. The broader context both hinders the Beacons of Hope and offers unique and systemic opportunities to advance their work. Overlapping and interconnected global and local trends, challenges, and opportunities illustrate both the imperative to change as well as how the process of change is stymied.

The 21 Beacons of Hope experience these trends and challenges in specific contexts as they address their unique set of priorities and activities. They define opportunities for transformation to more sustainable food systems from their sectoral and geographical vantage points. However, we identified distinct themes across the challenges and opportunities described by Beacons of Hope.

CHALLENGES FACED BY THE BEACONS OF HOPE

1. **Climate change and the environmental crisis**
2. **Immigration and migration**
3. **Trade agreements, governmental policies, and corporate concentration**
4. **Resource governance**
5. **Negative perception of diverse smallholder farming**
6. **Consumer demands and shifting diets**
7. **Research and education**
8. **Political stability and long-term support**

1 Climate change and the environmental crisis

During our research, the Beacons of Hope widely referenced climate change and the environmental crisis as common challenges, including extreme weather events, environmental contamination from chemical inputs, soil fertility and biodiversity loss, drought, and the wider need for environmental conservation.

2 Immigration and migration

The Beacons of Hope identified immigration and migration (not only from one country to another but also within countries) as driving food systems change. In particular, rural–urban migration, with the corresponding growth of cities and depopulation of the countryside and loss of farmers, was a key trend. The interviewees agreed on the imperative to provide opportunities for people to remain in a country, in the countryside, and in farming, in order to prevent the broad social, cultural, and economic losses that can accompany migration, including the loss of knowledge of how to farm in specific and changing landscapes.

For example, the Milan Urban Food Pact (MUFPP) recognizes the demands for change brought about by the influx of migrants in the Mediterranean area. Migrants have different cultural eating behaviours, and the cities integrating migrants must ensure access to affordable and culturally appropriate food. As well, the MUFPP also recognizes that reversing rural–urban migration is necessary to ensure sustainable rural food production, employment, and livelihoods.

3 Trade agreements, governmental policies, and corporate concentration

The Beacons of Hope also mentioned trade agreements, governmental policies, and corporate concentration as interrelated global structural trends negatively impacting their activities. The lock-ins created by government policies that support global agrochemical input companies, monocropping, and unfavourable seed laws, including the use of GMOs, were noted. Threats and challenges from the agrochemical lobby and dominance of large multinational companies were identified as persistent obstacles to sustainable food systems transformations. Interviewees from Zambia, Malawi, Kenya, India, and the Philippines each described how the power, presence, and ability of large multinational companies to influence public policy and research in their favour hinder their activities. For example, MASIPAG mentioned that consolidation of input providers through mergers is leading to increased corporate concentration in the seed market and is making it difficult to develop a resilient, regionally adapted seed supply.

Another challenge they identified is the global pressure to liberalize food imports and trade agreements that run counter to building context-appropriate forms of agriculture and governance. The Beacons of Hope described both global- and national-level policies as favouring industrial agriculture and as adversarial to their activities. The interviewees highlighted the important role governments play in achieving long-term transformations. Beacons of Hope based in the Global South consistently mentioned unfavourable international policies as a structural trend.

For example, the Timbaktu Collective and ZBNF in Andhra Pradesh, India; Community Markets for Conservation in Zambia; the Farmer-to-Farmer Agroecology Movement in Cuba; Soils, Food and Healthy Communities in Malawi; and MASIPAG in the Philippines all mentioned a lack of agricultural policy coherence on the national level as a big challenge and barrier to sustainable food systems transformations. Some initiatives believe conflicting policies exist because, currently, sustainable food production systems are perceived as lacking the capacity to generate income for large industrial input providers, making it less attractive to politicians. The Cuban Farmer-to-Farmer Agroecology Movement noted that the political arena doesn't encourage mature, independent, and organized farmers or organizations empowering farmers, as this may lead to strong civil society movements.

4 Resource governance

Beacons of Hope also identified that resource governance, the restriction of access to natural resources, lack of land ownership or land titles, land-grabbing, and access to water were overarching structural trends and challenges hindering transitions to sustainable food systems. For example, the Timbaktu Collective addresses drought and water policies that impact farmers through encouraging diversification and the growing of heritage crops such as millet. In Kenya, the DNRC counteracts government policy that promotes maize — a crop with an 80% chance of failure in the drylands — by providing training and support for farmers to plant trees and improve microclimates.

5 Negative perception of diverse smallholder farming

Some Beacons of Hope noted the general misconception held by governments that smallholder farmers who produce ecologically are not as productive and do so by default only because they have no money for chemical inputs. Interviewees explained that this negative image of diverse, smaller-scale farming hinders promising pathways for better livelihoods and increased food security.

6 Consumer demands and shifting diets

Consumer demands and shifting diets that result in increased consumption of meat or processed foods were identified as a key trend impacting food systems transformations. Increasing incomes, marketing, and the availability of highly processed foods facilitate this negative trend and make promoting local food difficult.

7 Research and education

Barriers exist both in education and the conceptual approaches that underlie education. The 21 Beacons of Hope described how education systems are failing young people by neglecting to provide that generation with the tools needed for future sustainability. For example, the interviewee from SEKEM in Egypt expressed concern over a weak education system that does little to inspire pioneering solutions to face the challenges of climate change. The Organic Valley cooperative in the United States blames the lack of funding in education for the "dumbing down" of the public. They note that education is the base for democracy and cooperation and thus sustainability.

8 Political stability and long-term support

Political stability *and* long-term support were also cited as key challenges — both of which are important for civil society and the private sector. Government initiatives such as Vanuatu's National Sustainable Development Plan, as well as Brazil's PLANAPO, recognize the need for greater long-term stability and endorsement by political and government institutions, independent of election results. The conservatism of governments was also noted. Many of the Beacons of Hope recognized that the incentives and innovations required for transitioning to sustainable food systems were unlikely to come from governments except in rare cases, and that vested interests and a lack of awareness and evidence for food systems alternatives prevents policymakers from being supportive. The Beacons of Hope identified that new models of co-creation between civil society, the private sector, and government are needed to facilitate transformations, to apply true cost accounting (TCA) to food systems, and for food policy reform over the long term.

OPPORTUNITIES IDENTIFIED BY THE BEACONS OF HOPE

1. **Growing public awareness about health and nutrition**
2. **Environmental and climate resilience**
3. **Research and education**
4. **Agenda 2030 and the Sustainable Development Goals**

1 Growing public awareness about health and nutrition

The Beacons of Hope interviewees described a growing public awareness of health and nutrition — people are regaining an appreciation for traditional and locally produced, healthier foods. For example, in the Philippines, an increased interest in natural food is resulting in more locally grown organic food. Globally, food safety concerns are supporting the growth of community-supported agriculture. Private-sector Beacons of Hope, including Eosta, Organic Valley, and COMACO, are trying to build on consumers' increased sensitivity by transparently marketing the positive health benefits of their products. Issues of inequality and justice figure centrally here, as any transformation would have to address income inequality and access to healthy food.

The Beacons of Hope interviewed frequently view health holistically. Two examples stand out: NESFAS, based in India, and SFHC, in Malawi.

NESFAS celebrated cultural food and agriculture values through the Terra Madre Festival, receiving international recognition. NESFAS has taken a digital storytelling approach, enabling them to bridge the intergenerational gap between elders (local knowledge holders) and young people, and to pass on valuable cultural practices and techniques to the younger generation. They've trained proactive young community members in 41 partner villages in videography and interview techniques. The videographers in turn interview elders so their wisdom can be shared with the broader public. NESFAS aims to increase society's value in indigeneity and to make it attractive to young people in order to enhance sustainable food production and healthy consumption patterns. NESFAS is also rebranding agricultural production and local diets by revaluing local farming systems, which were migrating toward industrial agriculture. They promote agrobiodiversity, dietary diversity, health, and food sovereignty.

In Malawi, the hope for better child nutrition has opened the door to systemic changes in food production and gender issues, along with healthy diets. Going well beyond sustainable farming practices alone, the SFHC initiative touches on many robust attributes of food systems, placing clear focus on social equity, gender, and nutrition. They see their participatory work with communities (including facilitated discussions about nutrition, gender, and governance) as particularly transformative. SFHC's approach originates with hospital partners but extends to agroecological production. The Government of Malawi and its extension services are beginning to see the benefits of agroecological practices and have begun promoting these approaches.

2 Environmental and climate resilience

In the same way that awareness about health is rising, so too is environmental and ecological awareness. Climate change has brought a sense of urgency to systems change and could lead to favourable political momentum for food systems transformations. The Beacons of Hope we interviewed are confident in the ability of agroecological approaches to provide resilience against extreme weather, drought, and other climate impacts. A focus on sustainable diets — grounded in specific cultural and ecological contexts — has emerged as a framework for understanding the interconnections between health and environment.

A story from MASIPAG demonstrates the potential for increased crop resilience. During the wet season, a typhoon hit a community in Nueva Ecija, a province north of Manila. It destroyed all the rice crops in that community, except for one farmer's self-bred variety. This man had been an organic farmer for over 10 years. Interestingly, organic farmers in other communities experienced the same thing: while the crops of neighbouring farms were destroyed by the typhoon, their organic farms survived and yielded good harvests.

A story from the Timbaktu Collective highlights the potential of healthier soils to provide increased drought resilience. In Anantapur (a region in Andhra Pradesh), a village was faced with a long drought period. The farmers were growing "crops with chemicals" and had lost much of their investment because of the lack of rain. A group of 30 farmers decided to convert to organic farming with the help of the Collective. As a result, not only has their soil, and thus systemic resilience improved, but also their yield and net income have increased as they no longer have to buy inputs. Because the soil fertility was improved, crops were able to withstand future droughts.

In "Vanuatu 2030" — the overarching guide for national sustainable development — the government of Vanuatu noted that according to the United Nations disaster risk ranking, their country is the most prone to natural disasters in the world. They decided to treat this as more of an opportunity than a problem and to build resilience to risks by promoting traditional and organic food production. The Beacons of Hope interviewee explained that their approach addresses another looming challenge: the increasing consumption of imported foods and accompanying increases in diet-related noncommunicable diseases.

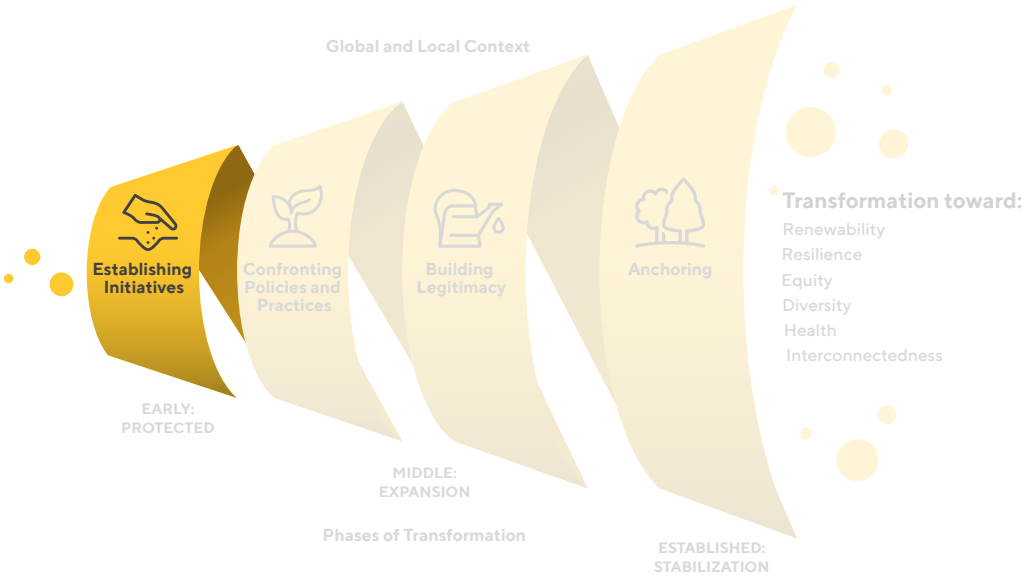
3 Research and education

Many of the Beacons of Hope identified research and education as an opportunity as well as a barrier, as outlined above. For example, the WFSC at the Swiss Federal Institute of Technology (ETH Zürich) — which brings together 40 different research groups and external partners from a number of different disciplines, scales, and sectors of the food system — focuses on addressing disciplinary silos in research and education. The cluster encourages various departments and researchers to work together and look for systemic solutions. The availability of the WFSC's pool of expertise — ranging from agriculture to nutrition to health — to engage in systemic, fundamental, and applied questions makes this initiative unique. While all elements of food systems are addressed (food production, processing, distribution, education), the issue of sustainability is central, with a focus on the health of food. Research is integrated and cross-disciplinary. The WFSC is trying to incentivize this systemic, integrated perspective by providing access for new funding of projects, providing support, lowering transaction costs, building communication across disciplines (e.g., meetings and workshops), and offering the possibility to contribute to something larger by addressing societal challenges. This is particularly difficult in the academic world where a strong emphasis is placed on specializing and publishing in high-level journals.

4 Agenda 2030 and the Sustainable Development Goals

The Beacons of Hope identified the global Agenda 2030 and the Sustainable Development Goals (SDGs) as important opportunities for their initiatives. Sustainable food systems are integral to meeting global priorities and interlinked targets such as No Poverty (SDG1), Zero Hunger (SDG2), Health (SDG3), Responsible Consumption and Production (SDG12), Climate Change (SDG13), and Biodiversity (SDG14 and 15). The integrated nature of the SDGs provides a common framework and thus an opportunity for many initiatives to highlight their integrated and cross-sectoral approaches positively impacting an array of different goals. For example, Brazil's PLANAPO, the Milan Urban Food Policy Platform, the National Sustainable Development Plan of Vanuatu, the private-sector company Eosta, and Hivos all mentioned Agenda 2030 as providing important momentum for their work.

Establishing Initiatives: Identifying Priorities to Support Transformation



Across the 21 Beacons of Hope, a series of activities and priorities were identified in the early phases of initiatives that were central to those initiatives becoming established, including promoting agroecological practices, co-creating knowledge and knowledge exchange with diverse actors, developing cooperative ownership models, emphasizing ideas of circular and solidarity economy, reinforcing the importance of culturally relevant and place-specific sustainable diets establishing participatory approaches and governance, identifying new market mechanisms, adopting new metrics, and engaging in policy development. In the following pages, each of these is described, with examples from the Beacons of Hope.

ESTABLISHING ACTIVITIES AND PRIORITIES ACROSS THE BEACONS OF HOPE

1. **Promoting agroecological approaches and principles**
2. **Co-creation of knowledge, and knowledge exchange and dissemination**
3. **Developing cooperative ownership models**
4. **Emphasizing ideas of circular and solidarity economy**
5. **Reinforcing the importance of culturally relevant and place-specific sustainable diets**
6. **Establishing participatory approaches and inclusive governance**
7. **Identifying new market mechanisms**
8. **Adopting new metrics**
9. **Engaging in policy development**

1 Promoting agroecological approaches and principles

The majority of the 21 Beacons of Hope are focused on improving health and livelihoods, either in specific communities or through their broader networks. Those dedicated primarily to agricultural production to transform food systems focused strongly on promoting agroecology (13 out of 21 Beacons), while others mentioned related approaches such as zero-budget natural farming, and organic or sustainable agriculture.

Both Brazil's PLANAPO and Vanuatu's National Sustainable Development Plan focus on agroecology as a strategy to address poverty and enhance food security in rural areas. Organic Valley, a private-sector cooperative in the United States, maintains a strong focus on the contribution of whole, uncontaminated milk, produced through agroecological farming systems, for human health. The Soils, Food, and Healthy Communities initiative in Malawi originated with child health experts in local hospitals and evolved their focus to agroecology projects. Looking to the future, the MUFPP recognizes that to increase its impact, it must extend its scope beyond cities to food producers in rural areas, and include in its focus rural job creation and livelihoods as well as agroecological practices.

In Andhra Pradesh, the ZBNF initiative is working to change the way in which food is being produced in the state. Through mentoring, they are helping farmers move away from using fertilizers, pesticides, and other chemicals on their fields. Master farmers (supported through the initiative) convince other farmers to change their production methods by showcasing the benefits on the ground ("seeing is believing"). A broad range of impacts has occurred including enhanced crop resilience, improved livelihoods and food security, an increase in women engaged in peer-to-peer outreach, and improved net income and the overall economic situation of farmers, thereby reducing farmer suicide rates.

2 Co-creation of knowledge, and knowledge exchange and dissemination

Another key lever used by the Beacons of Hope relates to knowledge transfer and the co-creation of knowledge. Several Beacons of Hope describe their approach as a learning process rather than as a singular endpoint or clearly planned intervention logic or model. Several Beacons of Hope focused on sharing and disseminating evidence, information, and experience in their communities, and sensitizing consumers through education campaigns. Scientific knowledge was produced and shared through interesting farmer-scientist partnerships, farmer-to-farmer partnerships, and peer-to-peer sharing models, or through participatory research methods.

For example, the SFHC project in Malawi, MASIPAG in the Philippines, and MACAC in Cuba have introduced and promoted farmer participatory research methods, which are slowly being recognized among more mainstream research and extension bodies. AN provides access to information and evidence (awareness-raising and sensitization) through their online and widely read publication. Organic Valley and Eosta work with farmers to strengthen their production as well as to educate consumers about the social and ecological dimensions of their business, and feel this is key to advancing sustainable food systems and enabling a more sustainable business model. SEKEM, which has existed for 40 years, figures that they will only mature in 200 years, recognizing that sustainability is a process, not a goal, and will require constant adaptation and development. Others have stressed that moments of seeming failure have provided opportunities to learn.

3 Developing cooperative ownership models

The Beacons of Hope described diverse ways of encouraging partnership and ownership, either through cooperative business structures or through cooperation more broadly by supporting participatory extension and research, farmer-to-farmer knowledge sharing, and farmer-scientist collaboration, or establishing research centres for agroecology. For example, the Timbaktu Collective, MASIPAG, DNRC, and URGENCI embrace cooperative models of governance and ownership, building capacity for farmers to manage businesses, creating small community-scale businesses, linking farmers to markets, and developing equitable supply chains. The Beacons of Hope articulate non-hierarchical organizational principles and develop collective forms of ownership, such as cooperatives.

Organic Valley has 2,000 farmer-owners across the United States, Canada, Australia, and the United Kingdom. The co-op represents 15% of all organic farmers in the United States, and they are farming nearly 500,000 acres of organic land. Organic Valley is organized in a cooperative structure, building on the classical democratic model containing a management team, a board (7 farmers are the owner-members), and executive committees by commodity. The interview notes "high standards with a lot of meetings are needed in such a system, but that's the nature of cooperation and democracy."

4 Emphasizing ideas of circular and solidarity economy

Several of the Beacons of Hope emphasize ideas of circular and solidarity economy. In San Francisco the municipal government has worked to establish a circular system, recognizing the embedded resources in all materials. The city works across the food system — with growers, wholesalers, retail and food establishments, and consumers to rethink, reduce, reuse, and recycle waste. Compostable waste is turned into a high-quality organic input that is applied to regional farms. This activity is supported by policy and legislation. As well, a number of other Beacons of Hope noted that

agroecological practices embody notions of circularity, with a focus on rotation, organic fertilizers, and waste recycling.

Solidarity economy concepts were also noted by several Beacons of Hope working on market-oriented initiatives. For example, Eosta evaluates a product's human, social (freedom, justice, solidarity) and ecological (soil, water, climate, energy) impact. URGENCI notes that over 30 countries have framework legislation for solidarity economy.

5 Reinforcing the importance of culturally relevant and place-specific sustainable diets

The majority of the Beacons of Hope promote culturally relevant and place-based diets. This includes promoting traditional crops and diets, and food that is based in the local culture. Culinary traditions are celebrated by Beacons of Hope, including NESFAS, ZBNF, and COMACO. Other Beacons of Hope are recovering traditional crops and recipes. These traditional crops and diets are being revalued in the context of pressure to transition to imported and processed foods.

6 Establishing participatory approaches and inclusive governance

Participatory approaches and governance models are key levers used by the Beacons of Hope. Inclusion was a key theme across Beacons of Hope. This ranges from participatory research to creative forms of governance to the development of multi-stakeholder platforms. Government-led initiatives reflect the need to strengthen the participation of civil society, in particular women, Indigenous People, and youth. Respecting feedback from farmers has also provided valuable lessons to governments. For example, the PLANAPO in Brazil was created after the "March of Daisies" in 2012, when rural women demonstrated for sustainable rural development, gender equality, and better living conditions for the rural population.

The ZBNF initiative has created a Federation of Self-Help Groups, as well as Village and Cluster Federations and Farmer Producer Organizations, to facilitate trainings and reap important benefits like solidarity, savings and credit, vulnerability reduction, insurance, aggregation of produce, local marketing, and quality assurance and traceability. The focus of ZBNF is to improve the well-being of farmers by reducing costs, increasing yields, reducing risks, reducing water requirements, enhancing soil fertility, promoting biodiversity, realizing higher prices, and enhancing resilience to climate change and heavy rains.

SFHC in Malawi outlined how the initiative's strength has come from the iterative process based on implementing participatory action research, reflecting on it, sharing findings with the community, and getting their feedback. This has been extremely instrumental and helped to orientate and plan next steps while learning from each other in a transdisciplinary fashion.

Hivos's approach has been to build on the voices of the negatively affected and relatively unheard, building a stronger and more inclusive community for citizens. For example, in Fort Portal, Uganda, government policy outlawed street vendors. Consumers, who recognized that low-income citizens depend heavily on street food (which was produced in a safe, healthy manner), managed to change the mindset of the politicians. As an initial strategy, Hivos looks for people or movements who are well positioned and motivated to be change agents around social issues such as diet-related disease or the ecological impact of the conventional food system (monocropping, high-input agriculture, etc.). They have found the greatest success in working with people who show initiative and a vision to contribute to change, and then facilitating their involvement across multiple levels through the platforms they create. Bringing committed voices to multi-stakeholder meetings, such as the "Peoples Summit on Food," has been a catalyst for change.

7 Identifying new market mechanisms

Another key lever for the Beacons of Hope is to identify new market mechanisms in order to catalyze better market linkages, improve livelihoods, and secure investments to grow markets. COMACO in Zambia pays farmers in advance for their goods and for protecting wildlife. Eosta provides full traceability of its products through their system "Nature & More," which reaches back to the individual farmer and evaluates a product's human, social (freedom, justice, solidarity), and ecological (soil, water, climate, energy) impact. DNRC in Kenya recognizes that developing processing facilities and aggregating the marketing of products is a key leverage point to enable farmers to make small pieces of land more productive and profitable.

Several of the Beacons of Hope aim to establish market linkages and integrate with the private sector to become financially sustainable in the future. For example, MACAC in Cuba and the SFHC initiative in Malawi, as well as Brazil's PLANAPO, outlined how securing institutional sustainability through integration into market approaches is a forward-looking aspiration. Establishing market linkages was identified as an area needing improvement and acceleration.

Overall, the main transition foci of the Beacons of Hope are on ecological (16 of 21), social/human (14 of 21), and cultural (14 of 21) aspects, with fewer initiatives addressing economic facets such as the financial (7 of 21) and physical (3 of 21) requirements of sustainable food systems. Strikingly, the private-sector initiatives have a stronger focus on financial and physical requirements.

8 Adopting new metrics

Many of the Beacons of Hope interviewees described the importance of metrics for their work and when making the case for food systems transformations. Strategies include documentation, broadening the metrics collected, and showcasing evidence in the field. TCA is used by Eosta to enhance the transparency of its supply chain, and the company monitors its food products through the food system to improve traceability and monetize externalities. Hivos's sustainable food initiative sees great opportunities for TCA, where positive and negative externalities and impacts would be internalized through, for example, sugar taxes or carbon taxes. Hivos recently applied TCA to maize production in Zambia.

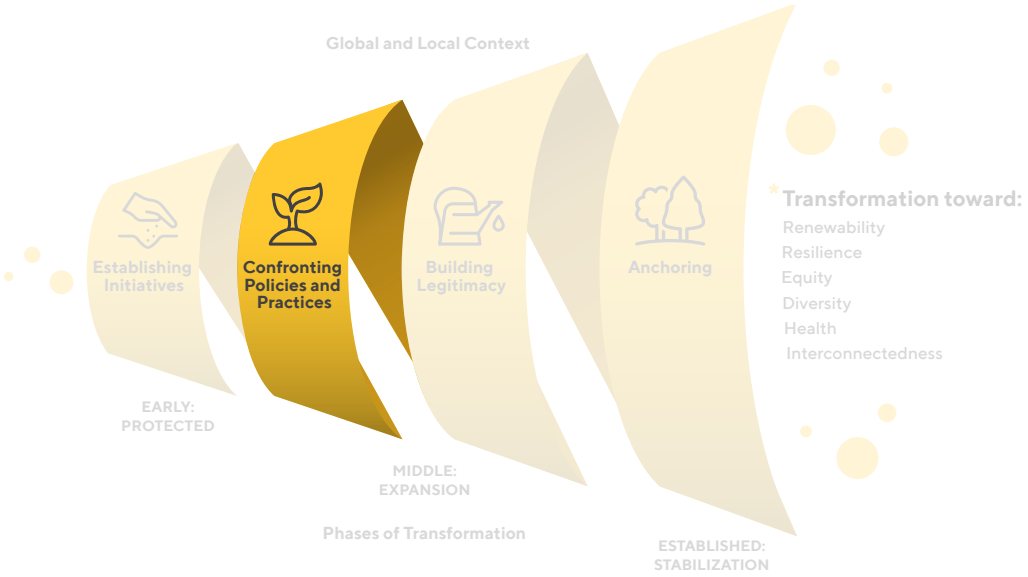
ZBNF in India promotes the use of modern communication tools to enable farmers to exchange information and gather evidence. In San Francisco, Zero Waste tracks and publicizes metrics on the amount of waste sent to landfill as well as per capita waste generation. The state of California has followed suit and adopted these same metrics. Many of the Beacons of Hope interviewees expressed that "seeing is believing" and emphasized the importance of showcasing evidence and metrics targeted for specific audiences (e.g., consumers, farmers, citizens, investors, policymakers).

Another, more complex, spotlight on the use of metrics as a transformation pathway was highlighted by three out of the four private-sector initiatives, and one civil society initiative: the importance of price transparency. TCA was stressed, noting that a market mechanism is flawed so long as environmental and social costs and benefits are not included. Non-transparent pricing was often declared as a barrier to transformation. Several interviewees emphasized that as long as the price allocation is not working correctly, the transition toward sustainable food systems will always be hindered through the unfair preference of less sustainable but cheaper alternatives.

9 Engaging in policy development

Policy formation and engagement is another lever used by the 21 Beacons of Hope. Interviewees describe mobilizing new constituencies to engage in food policy formation. The MUFPP, for instance, has assisted 60 to 70% of its signatory cities to create food councils, bringing relevant and affected stakeholders together to develop policy-oriented action plans that integrate a proposed set of recommendations into coherent and sustainable policies. Zero Waste San Francisco introduced a major policy change by instituting a legal mandate to recycle but did so only after having spent many years educating the public and promoting voluntary measures to ensure a smooth transition. The Agroecology Case Studies seek to provide the evidence base for agroecology in order to reorient the policies of bilateral and multilateral investors such as international cooperation agencies and the World Bank. In Vanuatu, respecting traditional structures and devolving authority to local levels related to highly sensitive and politicized issues such as land tenure.

Confronting Policies and Practices: Levers for Change



As the Beacons moved through the transformation process, all confronted the growing need to change established policies and practices, both directly and indirectly. The established policies and practices reinforce and stabilize the status quo, and the Beacons of Hope seek to influence and change these through their work on sustainable food systems. The predominant policies and practices confronted relate to production, processing, distribution, and consumption, as well as education, extension, research, and cultural norms.

POLICIES AND PRACTICES CONFRONTED

1. **Production, processing, distribution, consumption, and waste**
2. **Education, extension, research**
3. **Revitalizing culture**

1 Production, processing, distribution, consumption, and waste

The Beacons of Hope are challenging the established policies and practices related to food production processing and distribution, developing holistic and more transparent ways of "doing business" in the food sector. As an example, Organic Valley

conducts studies and creates campaigns on the health benefits of their products, promoting these perspectives through short videos. Their target markets are young women and millennials due to their interest in and awareness of health issues. Organic Valley reaches out to these target groups through new products (e.g., a new "pasture butter" from milk produced by pasture-fed cows) and humorous advertising campaigns, (e.g., one that educates on the dangers of promoting protein shakes with synthetic ingredients and chemicals). Organic Valley, as well as Eosta, see connecting with these consumers as a key opportunity to transition to sustainability and make the case for policy reform.

The Egyptian company SEKEM has also promoted TCA in agriculture, demonstrating that organic production is, in fact, cheaper than conventional when considering the external costs. They used fieldwork and research to produce data in order to change national policy. The documentation that 36,000 tons of pesticides were being sprayed on cotton fields annually and SEKEM's proof of a functioning and sustainable pest control alternative convinced the Egyptian government to change the law, banning the spray of chemical pesticides and leading to a 90% reduction of pesticide use in cotton.

2 Education, extension, research

Diverse strategies are used to confront established policies and practices related to education, extension, and research. For example, DNRC, Timbaktu Collective, ISD, SEKEM, COMACO, and ZBNF use a range of creative methods to provide education and extension and to promote research on sustainable food production, processing, and consumption, fostering learning processes and co-creation of knowledge instead of simply providing finalized solutions. MASIPAG and MACAC focus on participatory breeding and develop farmer-scientist partnerships. NESFAS promotes intergenerational knowledge transfer and innovative storytelling.

The SFHC project in Malawi has derived strength from fostering information exchange and discussion on the nexus of nutrition, health, gender, and agroecological production. Focusing on any one of these alone would not have resulted in the deep changes that the project facilitated. The focus on children's health and, ultimately, the relationship between children's health and soil health has been particularly compelling.

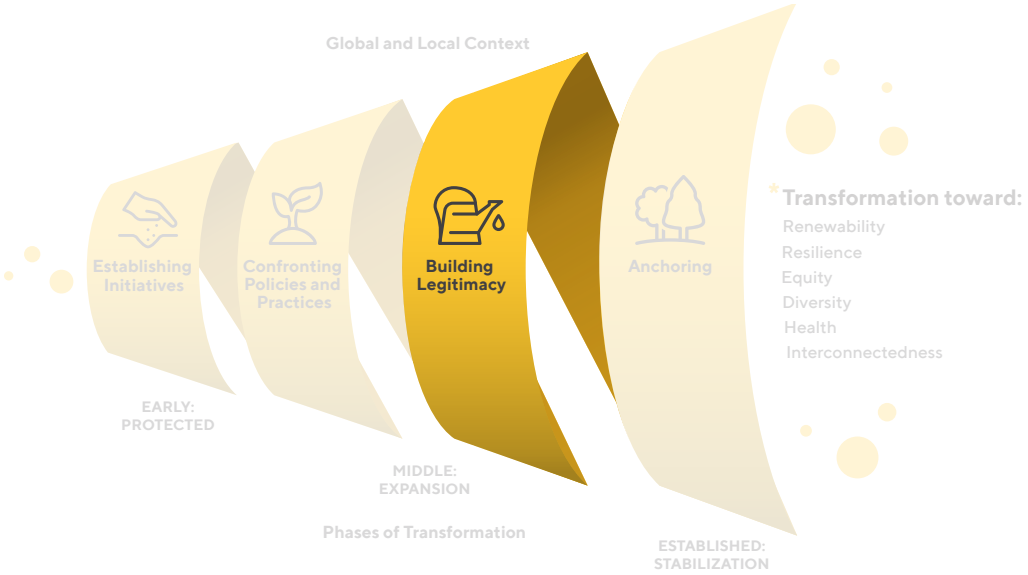
The WFSC recognizes that too often key interactions in education and sharing knowledge fail to occur, particularly in academic settings where people are incentivized to advance their research through academic publications, with few rewards for cooperation and coordination. Their approach is to sensitize and enable present and future researchers and leaders in integrated and challenging ways to look for solutions across scales, silos, scientific disciplines, and sectors.

The MACAC initiative in Cuba openly recognizes that a key to their early success was their collaboration with a network within higher education, supported by the Ministry of Higher Education. This network became a forum for participatory plant breeding and supported the Cuban National Association of Small Farmers. Before the Special Period (early 1990s) in Cuba, there was a strong emphasis on inputs and technology in agriculture. All research had to be approved by scientific councils. With the crisis, ANAP and the farmers' movement became decision-makers around the nature of farming, and scientists aligned with a new paradigm. In the process, a number of researchers completely changed their conception of agriculture, from green revolution to agroecology, further advancing the initiative.

3 Revitalizing culture

There are several examples of how the Beacons of Hope use culture strategically to shift established policies and practices. NESFAS in India promotes the value of traditional indigenous farming knowledge and indigenous food by implementing an intergenerational knowledge exchange program and organizing traditional food festivals that attract guests from all continents. By bringing together farmers and scientists, MASIPAG in the Philippines not only promotes research on sustainable agriculture but also strengthens the self-esteem and the cultural image of farmers and farming. Government policies such as Vanuatu's National Plan for Sustainable Development, "Vanuatu 2030," and Brazil's PLANAPO also use culture as an entry point to achieve more sustainability. In Andhra Pradesh, the ZBNF initiative seeks to embed agroecology within existing cultural norms (e.g., having a *desi* [holy] cow and supporting other spiritual beliefs). The policies highlight the value of traditional agricultural methods and aim to strengthen the image of traditional farming. "Organic farming by choice and not by default" seems to be an important message of both policies.

Building Legitimacy



The concept of legitimacy is increasingly coming to the fore in sustainability transitions literature (Montenegro de Wit and Iles 2016). Each of the 21 Beacons of Hope demonstrated their understanding of the concept and how it relates to their transformation pathways.

STRATEGIES TO BUILD LEGITIMACY

1. **Building the evidence base**
2. **Developing new practices and partnerships**
3. **Practising transparency**

1 Building the evidence base

Providing evidence to policymakers is the most commonly used strategy to build legitimacy. The Beacons of Hope collect data and assemble evidence in order to demonstrate agroecology as a holistic approach. In the process, the Beacons of Hope explore effective ways of documenting the non-monetary, social, and environmental benefits and costs of their activities (Garibaldi et al. 2016).

The Beacons of Hope also seek to provide an evidence base through case studies and journalistic articles that tell the story from the field, in a narrative sense. DNRC in Kenya is undertaking efforts to collect data and record experiences, drawing on scientific forms of documentation. Organic Valley in the United States conducts and publishes scientific studies to differentiate their products. Eosta in the Netherlands has funded studies on methodologies to monetize aspects of sustainability.

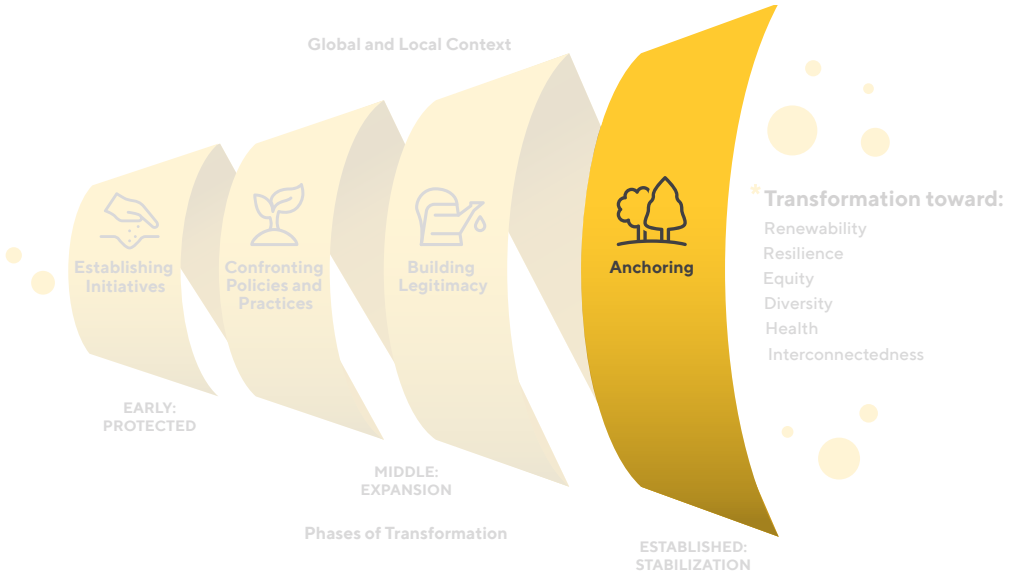
2 Developing new practices and partnerships

Many initiatives are developing new practices and partnerships to establish their credibility. For NESFAS in India, for example, the "new sustainability" will come from validating traditional wisdom through scientific evidence. MASIPAG in the Philippines fosters farmer–scientist partnerships to expand knowledge of organic, rice-based diversified farming systems. AN sees that by facilitating the co-creation of knowledge between farmer organizations, researchers, and academia, they can support the transformation toward more sustainable food production. The "Campesino a Campesino" (farmer-to-farmer) movement in Cuba was able to have a major impact on agricultural paradigms in the country, in large part because they were open to working with scientists, and scientists began working with them. As the DNRC in Kenya notes, "when farmers see that what DNRC proposes works, they want to try it for themselves." These are important measures for validation but have a limited, more direct reach to the localized public.

3 Practising transparency

Using transparency to build trust and, through that trust, gain legitimacy was mentioned by SEKEM, Eosta, and the Timbaktu Collective. Beacons of Hope mentioned that understanding the true cost or value of food was key to transparency. Eosta provides full traceability for their products and monetizes their externalized impacts. SEKEM seeks transparency by publishing reports and data from their production. The Timbaktu Collective adheres to organic principles as part of their way of building transparency.

Anchoring

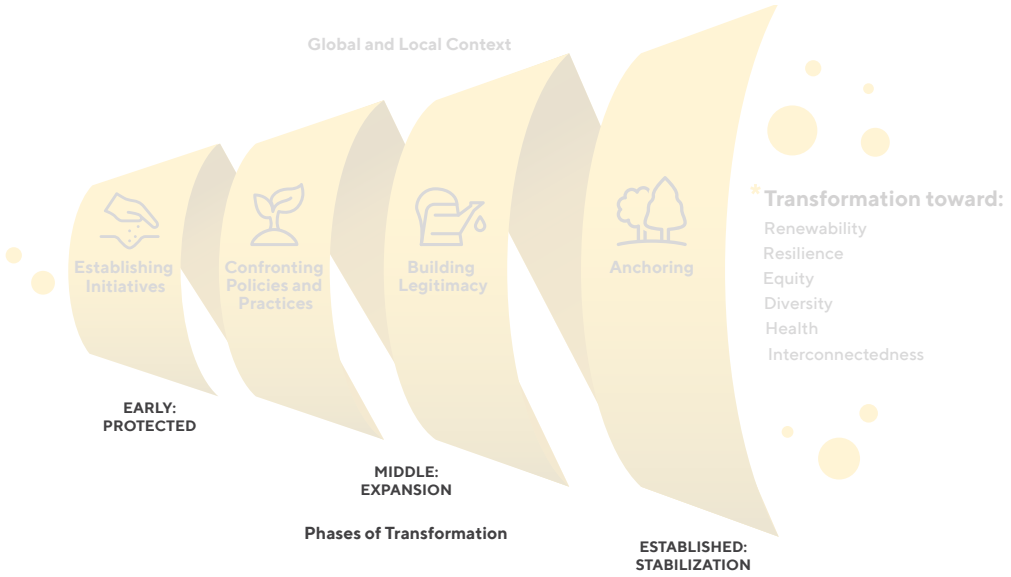


Anchoring mechanisms relate to how initiatives find stability to sustain their work. Among the Beacons of Hope, dominant anchoring mechanisms included collective or cooperative ownership or governance of businesses, research processes, platforms, policies or programs, and financial stability. For example, the Timbaktu Collective started Participatory Guarantee Systems (PGS), in which farmer groups certify each other, resulting in a strong sense of ownership over the process and products. COMACO, Organic Valley, and URGENCI establish functioning cooperatives that are based on mutual trust and collective decision-making. These new models and institutions confront established policies and practices that support the industrial food system, corporate ownership, and the concentration of power.

Government respondents also identified community and stakeholder ownership — through local governance — as an anchoring mechanism. Vanuatu emphasizes partnerships with local (government) councils aligned with traditional land and community boundaries, thus giving communities jurisdiction over areas that share a common culture. Traditional leaders chair the local councils, with representation of women, children, and the private sector encouraging local ownership. Similarly, Andhra Pradesh anchors its ZBFN initiative in a strong network of farmers. The ISD in Ethiopia works closely with government structures, resulting in the institutionalization of many of their activities into the agricultural extension system, from the district to the federal level. This guarantees the sustainability of ISD's efforts, ensuring that the expertise stays within the region via agriculture officials should ISD leave an area.

As we can see from the research, anchoring mechanisms take on many forms and structures from informal networks, as in the case of ZBNF, to formal institutions, as in the case of Organic Valley. What makes an anchoring mechanism effective, regardless of structure, is wider adoption, visibility, and social, cultural, and political legitimacy.

Phases of Transformation



The Beacons of Hope identified three phases of transformation: 1) an early phase when actions are initiated, usually in a "protected" space; 2) a mid-phase as the initiative expands and engages key levers, builds legitimacy, and begins to anchor; and 3) a final phase where established policies and practices are significantly impacted and stabilized in new forms.

PHASE 1 | Early: Protected

Many of the Beacons of Hope begin with: knowledge generation or co-generation of knowledge between communities, farmer organizations, researchers, and civil society actors; developing educational materials (AN); mapping and sharing experiences (URGENCI); fostering discussions across academic silos (WFSC); or expanding the initiatives, contextual understanding, and dimension of issues (COMACO).

Malawi's SFHC initiative originated from within the health and nutrition communities, which spent time reflecting on the connections between child nutrition and healthy soils. The relatively quiet nature of this early stage is demonstrated in DNRC's observation that it had been advantageous to start without any funding. Building ownership from the beginning was very important, and initial funding might not have allowed that.

Hivos's sustainable food initiative has a very measured way of starting campaigns. Once an issue is apparent, their strategy is to invest in individuals, seeking innovators who can bring about change between producers and consumers. Hivos is constantly looking for people or movements who are concerned about the social consequences of food systems and support these individuals or their enterprises.

Some initiatives arose out of urgent needs; for example, the ANAP in Cuba, which arose from the crisis created by the collapse of Soviet support and the U.S. embargo on trade with Cuba. The political climate necessitated the demonstration of how farmer innovation on ecological approaches could substitute for inputs. This case, however, is an exception. In other places, the concept of a farmer-led initiative, such as MASIPAG in the Philippines, took quite some time to be accepted. SEKEM's initial efforts to establish new ways of working, investing profits back into the community, was also met with scepticism. Networks and cooperatives such as URGENCI and Organic Valley have a different genesis, as they are not starting as a small niche, but rather originate from a collaboration between groups or enterprises. A precondition for establishing such networks, as emphasized by Organic Valley, is building trust within the relevant community. San Francisco's Zero Waste recycling initiative began as a voluntary program and, with considerable investment in public education, was able to gradually expand its recycling efforts and make it mandatory.

PHASE 2 | Middle: Expansion

The middle stage of transition processes generally occurs when initiatives expand and gain a larger share of attention and buy-in. Several of the Beacons of Hope achieved this by engaging in multi-stakeholder platforms and bringing together people from different sectors to collectively advocate for change. Hivos has supported initiatives to expand by creating "coalitions of the willing" (engaging with diverse stakeholders to create momentum for food systems change). Several initiatives built buy-in through a membership structure, providing a sense of mutual benefit to members.

Brazil's PLANAPO saw its progress accelerated after the "March of the Daisies" in 2012, when rural women demonstrated for sustainable rural development, gender equality, and better living conditions for the rural population. The engagement of civil society in the development and implementation of Brazil's agroecology program led to its acceptance and acceleration.

After the initial stages of reflection and problem identification, some initiatives grew into a middle stage of expansion by developing unique approaches and business models. For example, COMACO pivoted from a focus on wildlife conservation to the health of rural areas and began to address food security through agroecological approaches, diversification, and market mechanisms as a way to achieve their goals for both people and wildlife. Several initiatives have found pathways to expansion and stability by entering into markets that sustain their initiatives and align with their goals, such as processing diverse crops to support rural livelihoods in Kenya (DNRC), Zambia (COMACO), Egypt (SEKEM), and India (Timbaktu). For private-sector initiatives like Eosta and Organic Valley, expansion has come through greater consumer awareness and interest in health and environmental issues, thus creating market demand.

For both MASIPAG in the Philippines and MACAC in Cuba, the middle stages of acceleration and growth occurred when they were accepted by farmers' organizations as providing viable alternatives that addressed farmers' needs. The ISD in Ethiopia gained traction once farmers could see that the alternatives they were proposing actually worked.

International attention has garnered credibility and acceptance for several initiatives. SEKEM described a turning point when the founder of the initiative, Professor D. Ibrahim Abouleish, won the Right Livelihood Award in 2003. This allowed the organization to move from a start-up to a consolidation mode. NESFAS gained momentum in 2015 when they organized the Indigenous Terra Madre Festival (International Mei-Ramew), which attracted more than 600 delegates from all continents. The SFHC initiative also gained momentum when it was featured by global journalists. URGENCI reports that Community Supported Agriculture is present on all continents and now involves approximately 3 million people.

For San Francisco's Zero Waste initiative, residents and businesses were legally mandated to recycle and thus meet the city's waste-reduction targets, but this was only instituted after laying careful groundwork through education and support of voluntary recycling practices.

PHASE 3 | Established: Stabilization

Stability and speed are determined by actions that occur in the middle stage, as an initiative builds legitimacy, finds ways of anchoring, and creates institutional and economic security. Very few of the 21 Beacons of Hope have attained this final stage, and those that have are the government initiatives, which are in a position to set policy and enact public measures.

The four government initiatives — ZBNF, PLANAPO, Vanuatu, and Zero Waste — have had some measure of success in changing established policies and practices.

In Andhra Pradesh, for example, ZBNF has been institutionalized at the political level through the creation of a state-level governmental organization, a non-profit company called Rythu Sadhikara Samstha. PLANAPO is the main instrument used to strengthen organic and agroecological agriculture in Brazil (however, the plan is not public policy of the Brazilian federal government). The island country of Vanuatu has instituted a national sustainable development plan, "Vanuatu 2030." The new plan replaces a more orthodox development plan. It charts an alternative pathway toward sustainability suited to Vanuatu's culture, values, and natural wealth, aiming to enhance quality of life and resilience. San Francisco's Zero Waste program has redefined policies and practices on food waste with an ambitious agenda — they became the first city with a zero-waste target *and* a specified date and legal mandate to support reaching the target. Some government initiatives have approached stabilization only to face erosion as political priorities change; e.g., PLANAPO in Brazil and ANAP in Cuba illustrating the dynamic nature of transitions and the transformation process.

Within the private sector, Eosta works within many forums and with key stakeholders and leaders to promote their work and to motivate other actors to follow their example. These forums include working with banks and investors, the IFOAM, the FAO of the United Nations, Schmidheiny Forum (where all big food companies were present), and the WBCSD, among others. The Timbaktu Collective's end goal is to make all the cooperatives they promoted independent by 2020. Some states, including Germany and China, have legislated support for Community Supported Agriculture.

Interestingly, some initiatives found it difficult to answer questions about their "points of acceleration." It may be challenging for an initiative to step outside of itself and see its own trajectory over time. Two of the Beacons of Hope indicated that they were not seeking to accelerate at this time. SEKEM in Egypt felt that, at times, the international awards they received garnered them so much attention that it diverted their focus from their core work. They recognize the need, at particular points in the transition process, to slow down and focus on key issues and processes to prepare for a new phase in the company's development.

Patterns of Transformation

Throughout the Beacons of Hope research and analysis, we were looking for patterns of transformation. These patterns were established early in the transformation process, and separate incremental from transformative change. Incremental changes involve initiatives or innovations that are readily adopted or that make the established societal rules more coherent or efficient (e.g., a new type of machinery or food safety tests). Transformative initiatives or innovations disrupt societal rules, behaviours, and established practices (Ploeg et al. 2004). This can be related to the depth of transition, as articulated by Hill and MacRae (1996) and Gliessman (2016), and transformations that change the broader structural foundations of how food systems are organized.

The 21 Beacons of Hope are geographically dispersed, work across scales and issues, reflect work by different sectors, address multiple dimensions of food systems, illustrate a holistic approach, and articulate a change or transformation processes.

When we analyzed their activities, approaches, and interventions, we identified that the following patterns were established early and maintained throughout the transformation process:

- **Promoting agroecological approaches and principles;**
- **Co-creation of knowledge, and knowledge exchange and dissemination;**
- **Developing cooperative ownership models;**
- **Emphasizing ideas of circular and solidarity economy;**
- **Reinforcing the importance of culturally relevant and place-specific sustainable diets;**
- **Establishing participatory approaches and inclusive governance;**
- **Identifying new market mechanisms;**
- **Adopting new metrics; and**
- **Engaging in policy development.**

These patterns are at the heart of food systems transformations and represent important characteristics and qualities of the future of food.

CONCLUSIONS AND RECOMMENDATIONS

The Heart of Food Systems Transformations

Biovision Foundation for Ecological Development and the Global Alliance for the Future of Food believe that food systems transformations require a diversity of approaches, each reflecting its own unique context. We sought to connect across Beacons of Hope and identify the factors, approaches, interventions, and challenges that hinder or contribute to the systemic transformation required. The key themes, conclusions, and recommendations for supporting and accelerating food systems transformations that emerged from the Beacons of Hope analysis are outlined in the following pages..

1. Seize Opportunities in Drivers of Change

Climate change is called out as the predominant overriding challenge facing Beacons of Hope, and is identified as a key driver of change across food systems. Food systems are both vulnerable to the changing climate and can be transformed to provide nature-based climate solutions.

Awareness of the health impacts of current food systems, and the opportunity to build healthy communities, emerged as an equally important driver and an opportunity for transformation pathways that link different aspects of the food system. The positive health benefits of the Beacons of Hope are well documented in their communities.

Migration and immigration emerged as important drivers of change across many Beacons of Hope. The movement of people from rural to urban areas, as well as across borders, impacts food systems, and in particular agriculture and health outcomes.

Strengthening the image of farming and showcasing that farming can also be a promising pathway to the future, resulting in sustainable livelihoods and prosperity, is key to supporting food systems transformations. The Beacons of Hope highlight the need to support young farmers so as to avoid further migration to cities.

RECOMMENDATIONS

While challenging, there are opportunities inherent in the global drivers of change: a) work with the climate community to acknowledge and understand food systems as a key driver of climate mitigation and adaptation strategies; b) connect agriculture and food policy and practices more directly with health policy and health care, and build on increasing health awareness to promote holistic community health and well-being; c) augment and support research on the under-explored links between migration, immigration, and sustainable food systems.

2. Accelerate Agroecological Approaches and Principles as a Transformation Pathway

A majority of Beacons of Hope placed agroecology and agroecological approaches and principles at the core of their vision and transformation pathway. Linkages between agroecology and health were one of the most salient pathways by which food systems were holistically addressed. Beacons of Hope articulated a range of ways by which agroecological approaches increase food systems resilience, and uphold the broad benefits of agroecological activities and holistic approaches, such as yields, livelihoods, ecological restoration, food security, and community well-being.

In particular, interviews surfaced the value of: farmer-to-farmer shared experiences and farmer field schools, highlighting the importance of "seeing is believing"; building the capacity of farmers and communities over time given the knowledge-intensive nature of agroecological approaches; alternative transfer of knowledge and technology practices challenging top-down approaches via conventional agriculture extension; finding innovative ways to present agroecology "in the court of public opinion;" and developing new metrics and evidence by which sustainable food systems are measured and documented that get us away from a focus on single crop yield alone.

RECOMMENDATIONS

Amplify and build the evidence base for agroecology: a) We understand that most Beacons of Hope collect information that is useful to their own evaluation and development process. Through a participatory process that engages Beacons of Hope, this evidence should be compiled and integrated into a holistic impact valuation dashboard. True cost accounting could be used to holistically value the externalities of this work, both positive and negative. Beacons of Hope partners should work together to build the evidence base and amplify the positive benefits of food systems transformations. b) Governments, extension agents, and the private sector should acknowledge that agroecological systems are replacing external inputs with knowledge and skills, shifting the emphasis to peer-to-peer training, capacity building, education, integrated research and knowledge dissemination. c) Investors, policymakers, and private-sector actors need to find new ways to incentivize more sustainable ways of producing food.

3. Influence Policy and Decision-Making

Beacons of Hope are influencing policy development and engaging with political stakeholders as a key lever to catalyze change — indeed it's one of the main stages of the transformation process as initiatives move toward stability and legitimacy. Many seek to do so through collaborations with scientists and by providing evidence to decision-makers. However, science alone may not be enough to influence policy and decision-making or to effect the systemic transformation sought. Recognizing other levers such as promoting diverse knowledge or encouraging new ways of gathering and promoting evidence (such as participatory research) could be more locally relevant and result in locally adapted, place-based, sustainable solutions. Engaging Beacons of Hope in the global policy agenda is of central importance as climate, biodiversity, health, and sustainable development agendas are defined by national governments and other stakeholders.

RECOMMENDATIONS

When engaging new Beacons of Hope, work to mobilize diverse evidence from Indigenous knowledge to peer-reviewed science through creative strategies as a way to influence policy. Support diverse Beacons of Hope leaders to participate in global policy processes.

4. Support New Market Mechanisms based on Economic and Social Inclusion

Beacons of Hope are creating new market mechanisms and economic models based on solidarity, cooperation, and social inclusion. Several fairly small-scale initiatives have devised their own innovative measures to build supportive markets, such as a commitment to pay farmers in advance. A consistent theme and leverage point throughout the Beacons of Hope is ownership of resources and the inclusion of farmers (farmer-to-farmer sharing, participatory research methods, devolution of authority to local governance, cooperative models of ownership). The discussion around true cost valuations of negative and positive externalities, and how this might be addressed through policy and practice, is highly relevant here. It has been noted that governments are unlikely to lead on true cost accounting, therefore co-creation of true cost accounting applications and methodologies between private sector, civil society, and governments are needed.

RECOMMENDATIONS

New market mechanisms should be identified, developed, and supported by policy and practice. Existing markets should be reformed to address issues of equity, inclusion, and ownership. Environmental and social externalities should be internalized by policy and markets in order to balance the playing field on which initiatives addressing sustainability are currently disadvantaged. Innovative, long-term thinking and creative partnerships and investments are required across the private sector, civil society, and government to transform food systems so that negative externalities are minimized and positive benefits — economic, social, ecological, and cultural — are enhanced and valued.

5. Invest Time and Resources in the Transformation Process

The Beacons of Hope illustrate that food systems transformations are dynamic, non-linear, and include feedback loops of learning as well as adaptive and creative iteration. In the early stage of the transformation process, initiatives operate in protected spaces where they can develop their interventions, respond to local needs, build networks, and establish their approach and interventions. The transformation process takes time, requires support in early stages, and usually involves multistakeholder engagement. The Beacons of Hope take advantage of systemic opportunities and respond to challenges at the local and global levels. The initiatives use anchoring mechanisms to establish stability, including cooperative ownership models based on mutual trust and collective decision-making that involve a broad number of stakeholders. Institutionalization was also identified as an anchoring mechanism, embedding initiatives in government, in local institutions, or through new or existing policies. Significant investments are needed to scale the work of Beacons of Hope up and out.

RECOMMENDATIONS

Food systems transformations are unique and have not been adequately documented over time and across contexts and scales. There is an opportunity to both learn from past initiatives as well as apply those learnings to facilitate and accelerate food systems transformations. Identify and systematically engage more Beacons of Hope to better understand food systems transformations, levers, opportunities, challenges, pathways, and indicators, as well as probe the non-linear and circular dynamics of transition processes. Invest more resources and funding in Beacons of Hope globally over the long term. Finance and investments need to be significantly shifted to accelerate systems transformations.

6. Test and Refine the Toolkit and Framework

Building on the literature reviewed and the Beacons of Hope interviewed, we developed a Food Systems Transformation Toolkit that can be applied by other food systems initiatives. The Toolkit includes the Food Systems Transformation Framework and a Discussion Guide. The Framework identifies principles, key factors, patterns, barriers, opportunities, and key questions relevant across dynamic, complex contexts, and can be used for discussion, sharing, and movement-building. The Toolkit can be used and tested by powerful agents of change throughout food systems, including farmers, policymakers, corporate leaders, citizens, and donors seeking to analyze and accelerate food systems transformations.

RECOMMENDATIONS

Support the process of using the Toolkit and testing and refining the Framework with different stakeholders. Document what is learned through this process and refine the Framework, Discussion Guide, and principles. Share the results of these applications, tests, and refinements.

7. Build a Movement of Beacons of Hope

Our research found that the following approaches are at the heart of their transformation processes: promoting agroecological approaches and principles; co-creation of knowledge, and knowledge exchange and dissemination; developing cooperative ownership models; emphasizing ideas of circular and solidarity economy; reinforcing the importance of culturally relevant and place-specific sustainable diets; establishing participatory approaches and inclusive governance; identifying new market mechanisms; and adopting new metrics.

We recognize that the current suite of 21 Beacons of Hope is not statistically significant. However, adding other Beacons of Hope from different sectors, geographies, scales, and with different food systems foci will allow us to deepen our analysis of the patterns of transformative elements of these initiatives. Throughout the Beacons of Hope initiative, the Beacons of Hope did not have opportunities to exchange information or share their experiences among themselves. There would be great value in fostering linkages between Beacons of Hope, strengthening connections and interconnections.

RECOMMENDATIONS

Increase the Beacons of Hope sample size (e.g., from 21 to over 50) in order to better understand the approaches, patterns, qualities, and characteristics of food systems transformations globally. Refine the suite of tools supporting food systems transformations. Enhance, deepen, and broaden interconnections and synergies among Beacons of Hope as a strategic action in support of transformational change.

SUPPORTING MATERIAL

The Beacons of Hope process included: a) a literature review on sustainable food systems and sustainability transitions; b) the development of a methodology for selecting Beacons ofHope; and c) the summaries of the Beacons of Hope interviews. If you are interested in more information about this supporting material, please contact info@futureoffood.org.

REFERENCES

Brinkerhoff, R.O. 2003. The Success Case Method: Find Out Quickly What's Working and What's Not. San Francisco, CA: Berrett-Koehler.

Darnhofer I. 2014. "Farming Transitions: Pathways Towards Regional Sustainability of Agriculture in Europe." Conceptual Framework. (Deliverable of FarmPath project.) Available: https://cordis.europa.eu/project/rcn/99423/reporting/en

Meadows, D. 2008. Thinking in Systems: A Primer. White River Junction: Chelsea Green Press.

Garibaldi, L.A., Gemmill-Herren, B., D'Annolfo, A., Graeub, B., Cunningham, S.A., Breeze, T.D. 2016. "Farming Approaches for Greater Biodiversity, Livelihoods and Food Security." Trends in Ecology and Evolution 2167: 1–13.

Geels, F.W. 2002. "Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study." Res. Policy 31: 1257–1274.

Geels, F.W., Schot, J.W. 2010. "The Dynamics of Transitions: A Socio-Technical Perspective." In Grin, J., Rotmans, J., Schot, J., Geels, F.W., Loorbach, D. (Eds.), Transitions to Sustainable Development: New Directions in the Study of Long-Term Transformative Change. New York: Routledge, 9–87.

Geels, F.W. 2011. "The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms." Environ. Innov. Soc. Transitions 1: 24–40.

Gliessman S. 2016. "Transforming Food Systems with Agroecology." Agroecology and Sustainable Food Systems, 40: 3, 187–189.

Hill, S.B., MacRae, R. J. 1996. "Conceptual Framework for the Transition From Conventional to Sustainable Agriculture." Journal of Sustainable Agriculture, 7(1): 81–87.

Hinrichs C.C. 2014. "Transitions to Sustainability: A Change in Thinking About Food Systems Change?" Agric Hum Values. 31:143. doi:10.1007/s10460-014-9479-5

Kim, M. 2015. "Rethinking the Impact Spectrum." Ashoka. Accessed Jan. 9, 2019, at https://ashokau.org/blog/rethinking-the-impact-spectrum

Markard, J., Raven, R., Truffer, B. 2012. "Sustainability Transitions: An Emerging Field of Research and Its Prospects." Research Policy 41: 955–967.

Montenegro de Wit M. & Iles A. 2016. "Toward Thick Legitimacy: Creating a Web of Legitimacy for Agroecology." Elem Sci Anth. 4: 115.

Patton, M. Q. 2017. Principles Focused Evaluation. New York: Guilford Press.

Ploeg, J.D.V., Bouma, J., Rip, A., Rijkenberg, F.H.J., Ventura, F., and Wiskerke, J.S.C. 2004. "On Regimes, Novelties, Niches and Co-Production." In Wiskerke, J.S.C, and Ploeg, J.D.V. (Eds.), Seeds of Transitions: Essays on Novelty Production, Niches and Regimes in Agriculture. The Netherlands: Royal Van Gorcum, Assen, 1–30.

Sutherland, L.-A. 2014. Transition Pathways Towards Sustainability in Agriculture: Case Studies from Europe. Wallingford: CABI.

Photos: Zero Budget Natural Farming (page 24); Community Markets for Conservation (page 25); Hivos Sustainable Food (page 29); SEKEM Initiative (page 36); Soils, Food and Healthy Communities (page 37); Timbaktu Collective (page 38); Vanuatu 2030 by Dan McGarry (page 39); Zero Waste San Francisco by Larry Strong (page 41).