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Beacons of hope: accelerating transformations to sustainable food systems

In 2019, the Global Alliance for the Future of Food and Biovision Foundation for Ecological Development published the report “Beacons of Hope: Accelerating Transformations to Sustainable Food Systems.”¹ The report illustrates the positive impacts of food systems on the environment, livelihoods and health. The initiatives selected as Beacons of Hope are not only a source of inspiration for food systems transformation, but also help to better understand how to support and facilitate these transformative processes.

IAASTD's Legacy

The questions you pose dictate the answers you get. For some, the central question asked related to the future of food is “how can net calorie availability be delivered in the most efficient way possible?” For others it is “how can we feed all people well and equitably through a diversity of channels without harming the planet?” In 2009, IAASTD posed the question: “how can we reduce hunger and poverty, improve rural livelihoods and facilitate equitable, environmentally, socially and economically sustainable development through the generation of, access to, and use of agricultural knowledge, science and technology?” Through the process of exploring and answering the question IAASTD created a conceptual framework for food systems transformation that informed our work on the “Beacons of Hope” report. In the Beacons of Hope report we sought to understand “how do we accelerate the transformation toward healthy, equitable, renewable, resilient, inclusive, and culturally diverse food and agriculture systems?” Embedded in the questions are inherent objectives for the food system, and either narrower or broader conceptual frameworks for addressing food system challenges and opportunities in the 21st century. IAASTD positioned these food systems objectives as broad and interconnected, with the potential for facilitating a number of co-benefits across the system. There are three ways that IAASTD continues to inform the global discussion:



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1. By introducing a holistic systems perspective: examining food systems in the context of both the full value chain – from inputs to consumption and waste – and a wide breadth of interconnections and impacts;
2. By promoting an inclusive process to generate the report and compile relevant knowledge: interdisciplinary, both regional and global, multi-thematic, multi-spatial, multi-temporal, multi-stakeholder and intergovernmental, open and transparent in relationship to mechanisms for input and peer review;
3. By considering diverse knowledge and evidence: not only scientific, but other relevant knowledge paradigms including Indigenous, farmer and traditional knowledge, the role of diverse institutions, governance, markets, and trade. Historical analysis was considered, as well as future-casting to 2050 in order to inform recommendations.

This framework for considering food systems is more relevant than ever as we grapple with the complexity of climate, biodiversity, health and equity challenges and the ways they manifest locally and globally. It is important to remember that 10 years ago, when IAASTD was published, few were talking about food systems transformations. Over the last year there have been multiple reports published and processes calling for systems transformations, with the recognition that multiple transformations across food systems are critical to meet the Sustainable Development Goals, biodiversity and climate targets.

MASIPAG, PHILIPPINES: Agricultural biodiversity and resilient seed systems

MASIPAG² 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 modes of diffusion in training; and advocacy on farmers' rights issues.

About Beacons of Hope

Several years ago, the Global Alliance for the Future of Food and Biovision Foundation for Ecological Development³ set out to better understand the possibilities and pathways for food systems transformation globally, across different contexts and in different places. We were looking for counterpoints to the daunting news of the climate emergency, ecological crisis, growing inequalities, and

skyrocketing costs of diet related diseases. The “vicious cycle” of negative impacts of food systems (IAASTD Global Report, 2) is well articulated in the IAASTD report. But what are the positive impacts of food systems managed for health, equity, resilience, renewability, inclusivity and diversity?

Global Alliance for the Future of Food members and Biovision Foundation for Ecological Development have the great privilege of supporting a wide range of food systems initiatives seeking to address these interrelated crises. We wanted to illustrate the positive impacts of food systems so clearly described in the IAASTD (Global Report, 21).

Around the world “Beacons of Hope” are working to transform food systems. Thousands of initiatives are contributing inspiring, creative, and necessary solutions to urgent global issues such as climate change, migration, urbanization, and the need for healthier communities and more sustainable diets. The Beacons of Hope report sought to amplify their stories and better understand their impact in order to strengthen our understanding of the transformation process.

To uncover the diversity of approaches, we asked our networks to share their Beacons of Hope. We then worked through a rigorous selection process to identify 21 initiatives that were geographically dispersed, worked across scales and issues, reflected work by different sectors, addressed multiple dimensions of food systems, illustrated a holistic approach, and articulated a change or transformation processes. The initiatives selected are not only a source of inspiration for food systems transformation, but also help us better understand how to support and facilitate these transformative processes in place-based, contextual ways.

EOSTA, NETHERLANDS: Toward the true cost of food

This award-winning private-sector initiative is dedicated to the production and importation of sustainable, organic, and fair trade fruits and vegetables. Eosta⁴ is an international distributor with relationships with over 1,000 growers in six 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 agro-economic advice, finances, packaging, product innovation, logistics, marketing, and distribution to their customers.

A pillar of EOSTA’s approach is transparency through true cost accounting. True cost accounting is an evolving approach and methodology to make visible the full costs of food by identifying, measuring, and valuing the positive and negative environmental, social, and health externalities of food and agricultural systems.

Understanding sustainability transitions

To better understand sustainability transitions more broadly, and food system transitions more specifically, we reviewed the sustainability transitions literature focusing on contributions from: 1) Harriet Friedmann and Philip McMichael (1989), who trace the legacies of historic “food regime” transitions; 2) Hill and MacRae (1996) and Gliessman (2016), who explore agriculture and food system transitions, and have developed frameworks to assess and guide the depth of these transitions; and 3) the “Multilevel Perspective” elaborated by Geels (2002) and others to describe broader sustainability transitions.

Throughout history, food systems have undergone a process of continuous change. In this context of constant change, where have significant transformations occurred? Friedmann and McMichael (1989) trace the legacies of historic “food regimes” – major transformations that have shaped labour, agriculture, markets, diets, social movements, and nation-state systems. Their analysis of these transformations helps us understand transitions as dynamic, contested, historic, systemic, and connected to and influencing broader social, political, and economic processes.

In 1996, Hill and MacRae explored possible transitions from conventional to sustainable agriculture, developing the Efficiency-Substitution-Redesign Framework. This framework has been adapted to apply to the food system as a whole. Gliessman (2016) extends Hill and MacRae’s Efficiency-Substitution-Redesign Framework to analyze five levels of agroecological food systems transitions. The Hill and MacRae and Gliessman frameworks helped us to: a) conceptualize transition phases; b) evaluate the depth of transitions; c) distinguish between incremental and transformational change; and d) identify transformative elements of the transition process as we developed the food system transformation framework. Theoretical constructs for sustainability transitions beyond food systems are also instructive. Sustainability transitions are seen as processes that are long term, multidimensional, and creating fundamental transformations that cause shifts in established socio-technical systems to more sustainable modes of production and consumption (Geels 2002 and 2011). The environmental and social problems that sustainability transitions are addressing generally require many years, if not decades, for the full effect of changes to take place, and inevitably involve multiple solutions rather than “silver bullets” (Lachmann 2013).

Food system transition pathways are less technology-oriented, and instead depend on social processes of learning

The “Multilevel Perspective” elaborated by Geels is a well-known and debated transition theory. When reviewing the literature and discussing the MLP with sustainability transition experts it became clear that applying the MLP to food systems is a challenge. Energy and transportation sustainability transitions can more easily be mapped to a set of technological solutions and to how technological changes are incorporated in social functions (Geels 2002). In contrast, food system transition pathways are likely less technology-oriented, and instead depend on building

social networks and social processes of learning. Nonetheless the MLP concept of “niches” – initiatives that promote alternatives to the dominant practices and rules and that can serve as transformative elements – has shown itself to be useful concept applied to Beacons of Hope.

Sustainability transitions often focus on the trajectory of specific technology “innovations” and the consequent changes in user practices, regulation, industrial networks (supply, production, and distribution), infrastructure, and symbolic cultural meanings (Geels 2002). While these aspects are relevant to the food system as well, sustainable food systems transitions will need to address how to introduce change into the additional complexity and diffuseness of food systems and consumer behaviour (Anderson et al 2019; Gaitán-Cremaschi et al 2019). The transitions literature above was adapted for the purposes of understanding the transformations occurring throughout the Beacons of Hope. Terminology was changed to wording that is more meaningful in the context of our project, focusing on food systems transformations. Figure 1 illustrates our conceptualization of the food systems transformation process.

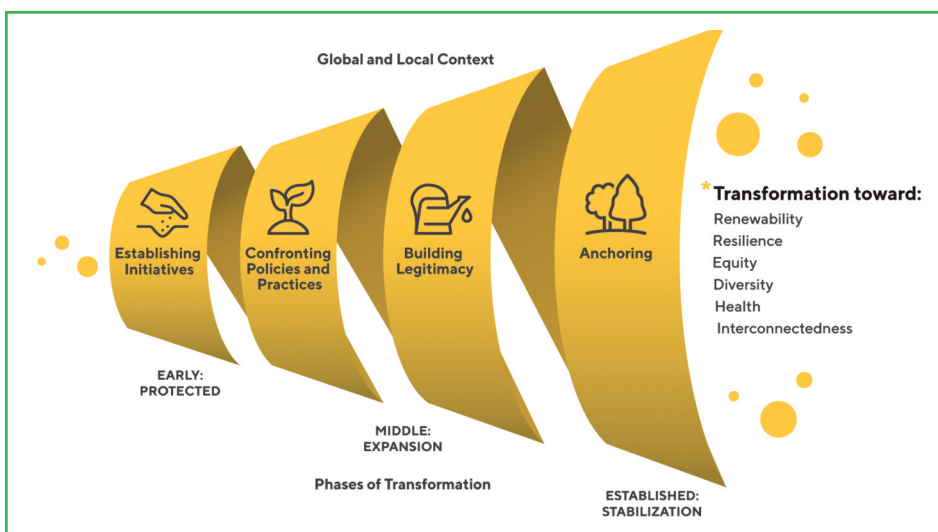


Figure 1: Beacons of Hope food systems transformation framework

From our analysis of the Beacons of Hope case studies, key elements in the transformation to sustainable food systems were identified. These included: 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 holistic metrics; and, engaging in policy development.

Most significantly, the Beacons of Hope work contributed to the development of a Theory of Transformation adopted by the Global Alliance for the Future of Food. This theory of transformation recognizes that when diverse actions, networks, and individuals intersect and converge across sector and issue silos, the global and local, the macro and the micro, critical mass and momentum builds toward tipping points that lead to systemic change that endures over time.

COMMUNITY MANAGED NATURAL FARMING, ANDHRA PRADESH, INDIA: Agroecological transformation

The Community Managed Natural Farming⁵ 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.

Transformation pathways

Going forward, we are building on and deepening this important work. A vibrant network of change agents has been engaged in the Beacons of Hope and we see great potential to link these initiatives, deepen our analysis about food systems transformations, better understand transformation pathways, and build the evidence of their positive impacts. The next phase of Beacons of Hope includes linking this work into the global policy agenda and forging local-global linkages. We return now to the central contribution of IAASTD articulated above. By introducing a holistic systems perspective, promoting an inclusive process, and considering diverse knowledge and evidence, IAASTD continues to inform and guide our systemic view, our approach, the breadth of knowledge and diversity of research methods and evidence needed to navigate the complexity of food systems transformations in the current political and ecological moment.

Endnotes

1 https://foodsystemstransformations.org/wp-content/uploads/2019/08/BeaconsOfHope_Report_082019.pdf

2 <https://foodsystemstransformations.org/masipag/>

3 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. Biovision Foundation for Ecological Development is a not-for-profit, non-denominational, politically independent foundation based in Zürich, Switzerland that supports the dissemination and application of sustainable ecological approaches to alleviate poverty and improve food security in Africa and beyond.

4 <https://foodsystemstransformations.org/eosta/>

5 <https://foodsystemstransformations.org/climate-resilient-zero-budget-natural-farming-cr-zbfn/>

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Dr. Barbara Gemmill-Herren, until she retired in 2015, was Delivery Manager for the Major Area of Work on Ecosystem Services and Biodiversity at the UN Food and Agriculture Organization (FAO). She was previously Executive Director of Environment Liaison Centre International, an international environmental non-governmental organization based in Nairobi, Kenya. Barbara has contributed to major global initiatives related to pollination, ecosystem services, true cost accounting and agroecology.



Fabio Leippert works in Biovision's Policy & Advocacy Team on issues relating to agroecology and climate change at the international level as well as at the country level. He holds a Master in Conservation Biology and an MAS ETH in development cooperation. As a biologist he is particularly interested in the dynamics between biodiversity, climate change and agriculture and a systemic and sustainable approach to agriculture and food systems.