

## Scope 4: How to grow sustainable sourcing to measureable impacts in regions and commodity systems

Seven years ago, Gene Kahn, then a VP at General Mills, hosted a boardroom meeting for business leaders in the Sustainable Food Lab. He described the environmental footprint of General Mills' products, acknowledged that the largest part of that footprint was in agriculture, but urged others to join him in focusing on packaging because it was something they could control.

At the time, Kahn lacked the resources and support to take on the largest impacts. All this has changed. Sustainability in the food, beverage, and agriculture sector now extends to impacts embedded in the whole supply chain, including purchased energy and raw materials. These layers of impact and responsibility are sometimes categorized as scopes 1, 2, and 3: operations, purchased energy, and raw materials in a supply chain.

A scope 3 supply chain lens is sufficient for many sustainability goals, such as labor conditions or energy efficiency of crop production. However, this short paper introduces scope 4 in order to quantify and improve impacts on the whole farms, whole landscapes from which raw materials are sourced, or whole commodity systems. Scope 4 encompasses all of the enterprises on farms in a watershed, and so is necessary to address water stewardship or biodiversity. Scope 4 also encompasses all of the sources of farm livelihood.

**The Idea:** Sustainable sourcing assurance programs focus on specific raw materials and don't address all key risks across regions and commodity systems. Therefore, when you come up against needs to address issues like water shortage or chronic poverty:

1. Don't go-it-alone or you risk leaving money and influence on the table.
2. Use local expertise and find someone to help build relationships and ownership among the local players.
3. Convene as influential and diverse a leadership group as you can.
4. Set clear goals and ways to measure progress.
5. Unleash innovation among all the organizations that can contribute to the goals, without needing to agree on everything.
6. Support a bridging organization to manage the initiative and ensure communication.

Scope 4 is the missing piece for making progress on some of the most intractable supply chain challenges.

## Origin of the “scope” framework

In calculating greenhouse gas emissions, the GHG Protocol Corporate Standard classifies a company’s GHG emissions into three “scopes.”<sup>1</sup> Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

For purposes of corporate sustainability strategy, it’s helpful to use this framing not only for greenhouse gas emissions but also for other issues. For example, scope 1 water and other natural resources are exploited on-site. Scope 2 water and other resources are embedded in purchases for manufacturing and operations. Scope 3 natural resource use includes the whole supply chain.

Scope 4 extends the analysis beyond the supply chain to the sourcing regions for raw products. Although companies can ensure that their own manufacturing plants and agricultural suppliers use natural resources with optimum efficiency, the quantity and quality of those resources may change independently of any supply chain. The long-term resilience of water supplies or forests, for example, can be evaluated and



<sup>1</sup> See <http://www.ghgprotocol.org> from the World Resources Institute and the World Business Council for Sustainable Development.

ensured only with a scope 4 perspective. Similarly, the well-being of workers and farmers is best addressed at the scale of communities and regions; again, these represent scope 4 issues.

## Where and when Scope 4 applies

Improvements by specific farmers of their individual performance don't always add up to the health of a watershed or the well-being of farm communities. Preventing deforestation, for example, requires agreements throughout the forest zone. Fundamentally improving the livelihoods and resilience of small-scale producers involves multiple crops and markets, not just a single cash crop.

The implications for sustainable sourcing are profound:

1. A sustainable supply of raw materials requires resilience of water, soil, and biodiversity.
2. A license to do business requires social well-being for families and communities.
3. Neither a reliable supply nor a good reputation in sourcing regions can be fully addressed with a supply chain lens. In fact, supply chains with divergent codes and audits can get in the way of efficient progress with multiple customers and complex rotations, as well as in situations where food security and livelihoods require multi-sector investments.

Scope 4 strategies lead to coordination among multiple buyers as well as with government, NGOs, and a diversity of local producers and land-users.

In 2010, when Steve Peterson at General Mills decided to pilot sustainable wheat in the Snake River Basin of Idaho, he discovered that he needed to engage with wheat farmers about their whole rotation, which included not only wheat for General Mills but also potatoes, sugar beets, and sometimes barley. This engagement logically extended to companies that purchase the other products. Steve also turned to The Nature Conservancy, which has hydrologic expertise on the ground, and to the federal and state agencies engaged in water issues in the region. Ultimately, the General Mills initiative is designed to help generate water and soil stewardship throughout the region, so that all the players will be able to make a credible claim about sustainable production in the Snake River Basin.



Similarly, a few years ago, the Kellogg Corporation sponsored the use of a sustainability tool with farmers growing corn for Corn Flakes. The team accumulated a lot of data but found scant evidence of positive change. Kellogg then turned to The Nature Conservancy for ideas about how to target actions to reduce pollution of the Mississippi River watershed from agriculture. Unilever also got engaged in the conversation about landscape-scale impacts in Iowa when the company identified water quality as the most important public issue in a supply chain with soybean farmers supplying an ADM mill that supplies a Hellman's Mayonnaise plant.

Kellogg, Unilever, and other companies can't improve water quality across a landscape by themselves and need the support of many other players, including federal and state government agencies. Many of these agencies have been attempting solutions for decades without the added motivation of market demand. Together, companies, environmental nonprofits, and government agencies have a chance to address the sustainability of the agricultural system across the Corn Belt. Scope 4 extends the focus from specific fields and mills to what really matters to the public—the health of the shared ecosystem.

This sort of extension from scope 3 to scope 4 is also a logical perspective to take with social issues. Companies that purchase coffee and cocoa, for example, sometimes want to know that small farmers in their supply chain will eventually rise out of poverty. Keurig Green Mountain (formerly Green Mountain Coffee Roasters) made an early commitment to purchasing Fair Trade certified coffee for this reason. Several years later, they decided to ask a simple question: Were small farmers in their supply chain able to overcome poverty and hunger? Keurig hired the International Center for Tropical Agriculture (CIAT) to interview farmers and cooperative leaders. The researchers discovered that these farm families still had to endure “lean months” without sufficient food. This discovery led Keurig to consider investments in the supply chain beyond coffee production, working with a broader range of NGOs on food security. These programs support diversified production and sources of income, and develop markets for those new products. Keurig Green Mountain became a powerful voice advocating for attention to the “lean months” across the specialty industry, which has resulted in a multi-company initiative known as the Coalition for Coffee Communities.

Similarly, in western Ghana, Rainforest Alliance (RA) designed a landscape initiative with Olam International. With local community members and agencies of the Ghanaian government, RA introduced climate-smart agriculture practices across the Juabeso-Bia district. These practices were chosen to improve the capacities of farmers to mitigate and adapt to climate change while simultaneously increasing productivity (15 to 50% increases) and reducing business risk along the cocoa supply chain. The project fostered the diversification of livelihood opportunities and restored ecosystems within cocoa agroforests and other degraded land-use systems,

while increasing cocoa production and diminishing pressures to further encroach on surrounding forestlands.

On the other hand, not every situation requires Scope 4.

Solutions at scope 4 are needed only:

- where landscape-level resources such as a forest, water source, or biodiversity habitat necessitates collective and coordinated action;
- where addressing farming systems is critical to aligning standards and buyers who otherwise would tend to be single-crop focused;
- where the livelihoods of vulnerable small-scale producers need attention not only to a specific value chain but also to a diversified income strategy as well as investments in health care, education, and transportation;
- where market-driven supply chain programs reach only the frontrunners in a region (“the leading edge of the bell curve”), while the sustainability problems are caused by the businesses operating at the fringe of the economy. For example, much of the deforestation in West Africa and the Brazilian Amazon is driven by informal smallholder operations. Supply chain approaches are effective in spreading innovation, promoting continuous improvement, and excluding bad practice from the supply chain. Scope 4 is about addressing those bad practices across a whole region.

One of the most important reasons for food businesses to collaborate on landscape-scale initiatives is to use their collective influence in partnerships with government. Market drivers are insufficient to influence or support local actors who are the least innovative and the most economically marginal. Government is also necessary to regulate the “bad actors,” large or small.



Working at scope 4 does not replace the need for progress in operations and supply chains. It complements those strategies with collaboration at the sourcing region level.

## Implementation of Scope 4 Strategies

The Chief Sustainability Officer at one of the largest global food brands recently told us, “We’re all working where we’re working with the priorities we have. Our company is very open to collaboration, but we are not reaching out ourselves to create these collaborations. Any collaboration will depend upon a group with enough coordination capacity to make it happen.”<sup>2</sup>

It is not surprising that food and beverage companies look to other organizations to do the organizing. Scope 4 initiatives require *bridging organizations* and *system leaders* to convene and facilitate diverse stakeholders, design collective action, and manage complex projects.<sup>3</sup> Every project in every “place” encounters entrenched interests that must be bridged. All players must find value in participation. Individual goals must overlap with collective goals such as clean water, healthy soil, and prosperity for rural communities.

Three bottlenecks to successful scope 4 initiatives are likely to occur:

- lack of financial resources to fund the organizing function that crosses over between public good and commercial benefit;
- insufficient technical, strategic, and leadership capabilities within a coordinating organization;
- the lack of a business case and incentives for addressing issues faced by the less innovative and more financially stressed players in the system.

These bottlenecks are solvable. Industry leaders, philanthropic organizations, and governments can jointly support the professional development and staffing of place-based, network-building organizations. Food and beverage brands can be important catalysts where they have material interest in the reliable supply of raw materials.

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<sup>2</sup> Personal conversation with Hal Hamilton

<sup>3</sup> See [The Dawn of System Leadership](#) by Senge, Hamilton and Kania, *Stanford Social Innovation Review*, Winter 2015.

Not every company needs to take the lead everywhere on every issue. One advantage of collaboration among large companies is that leadership can be distributed among different source regions. General Mills is leading in the Snake River Basin; others can partner with them but will not need to lead. Unilever is leading in Iowa soy production. SAB Miller is leading for cane sugar in South Africa. Nestle is leading in coffee regions of Vietnam, and Keurig Green Mountain is leading in many Central American highland watersheds.

These initiatives can benefit all players and get to the root causes of problems. They're not simple, however. Among the frontiers of this work are the following:

- verification across landscapes, using spatial measurement technologies, crowd sourcing already existing data, for example from precision agriculture applications;
- organizing lean and efficient [collective impact](#) initiatives that deliver both quick wins and systemic change; and
- catalyzing [system leadership](#) within a landscape or sector.

#### **Scope 4: a problem or a solution?**

One could view this sort of commitment to regional well-being as a philanthropic undertaking, and this view would be accurate if the commitment were to end with grants for schools, health clinics, or watershed preservation. If companies use their influence to engage all the key players in order to create change that scales and lasts, then they accomplish much more. Companies will have created long-term shared value for their business and for the people and places touched by the business. Getting to scale is never merely philanthropic but instead requires a commercial value proposition. Scope 4 strategies will be effective and lasting if they are driven by business needs for a secure supply and a license to do business.

Sometimes the reputational gain (a license to do business) does not have a short-term financial return. For example, the oil palm industry has had to learn to tackle deforestation across large landscapes. Some of this deforestation is unrelated to palm oil production but rather caused by illegal logging. Government enforcement is the logical solution, but companies have had to invest their own time and influence to create positive momentum in



the public sector. These investments are irrelevant to production but nevertheless essential both to the health of the planet and to public perceptions of the sustainability of palm oil.

Working at the scope 4 level is an opportunity for companies to lead—and to participate where others are leading—in developing strategies for long-term landscape-level change. It is not easy. Working with multiple companies and in multiple sectors with diverse interests takes time. Often, new process infrastructure is required to set up the on-going governance and management. While not as efficient as the focused work within company-specific supply chains, scope 4 strategies are essential for achieving sustainability outcomes where scattered farm-by-farm, crop-by-crop improvements are insufficient.

Companies can be leaders if they are brave enough to think long-term, leverage their own supply chain programs, align with others in the industry, influence the resource flow from public agencies, and thereby catalyze transformative change.

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*This DRAFT paper was prepared by Hal Hamilton, with substantive suggestions from Jan Kees Vis of Unilever, Tensie Whelan of Rainforest Alliance, Colleen Popkin of Keurig Green Mountain, Lucian Peppenlenbos of IDH, Duncan Pollard of Nestle, Diane Holdorf of Kellogg, and the whole Sustainable Food Lab staff team. We expect a re-write after the Sustainable Food Lab Leadership Summit in the Netherlands the week of June 8.*