

Sheffi on Sustainability: Green Grows Up

Beyond Supply Chain Kevin O'Marah May 11, 2018

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MIT Professor Yossi Sheffi has just published, along with Edgar Blanco of Amazon, the definitive book on sustainability in business. For supply chain enthusiasts like me the topic is endlessly complex and compelling, but arguably too big to pin down systematically. This new book, [Balancing Green](#), does it. It is deep and technically credible, but also readable and loaded with familiar names and stories. Most importantly, it tackles the question of sustainability without a preconceived agenda. **Maturity and a Balanced Perspective**

I spoke at the 29th annual POMS (Production & Operations Management Society) conference in Houston last week and was privileged to hear Dr. Sheffi's keynote address: "When to Embrace Sustainability in Business (and When Not To)." I expected the kind of presentation I myself have often given, describing how sustainability can pay in terms of material or energy cost savings, risk mitigation and supply assurance, or even incremental revenue and growth. Instead, what I heard was something more nuanced which said that companies need to think about sustainability as a balancing act.

Professor Yossi Sheffi, Massachusetts Institute of Technology



Photo courtesy of Kevin O'Marah

Many of the stories that flesh out Sheffi's book, including a 2010 Greenpeace campaign targeting Nestlé's use of palm oil in KitKat bars and a 2012 Friends of the Earth attack on tin in Apple and Samsung electronics products, are anything but balanced. They arise from a justifiable sense of outrage at the way upstream supply chain impacts cause harm in nature. The goal is raising awareness and forcing action through shame.

The overriding business issue in cases like these is how to stay out of trouble. Brand protection, regulatory compliance and "license to operate" worries were the starting point for many early moves into sustainability by big businesses. Once there, many discover that cost savings, quality control and even lifecycle profit gains can be found in initiatives like [circular economy](#) or [sustainable water management](#).

The problem is that heartwarming proof points are not enough. Durable sustainability depends on finding and forever refining a healthy balance between economic and environmental objectives.

The Butterfly Effect and Sustainable Supply Chains

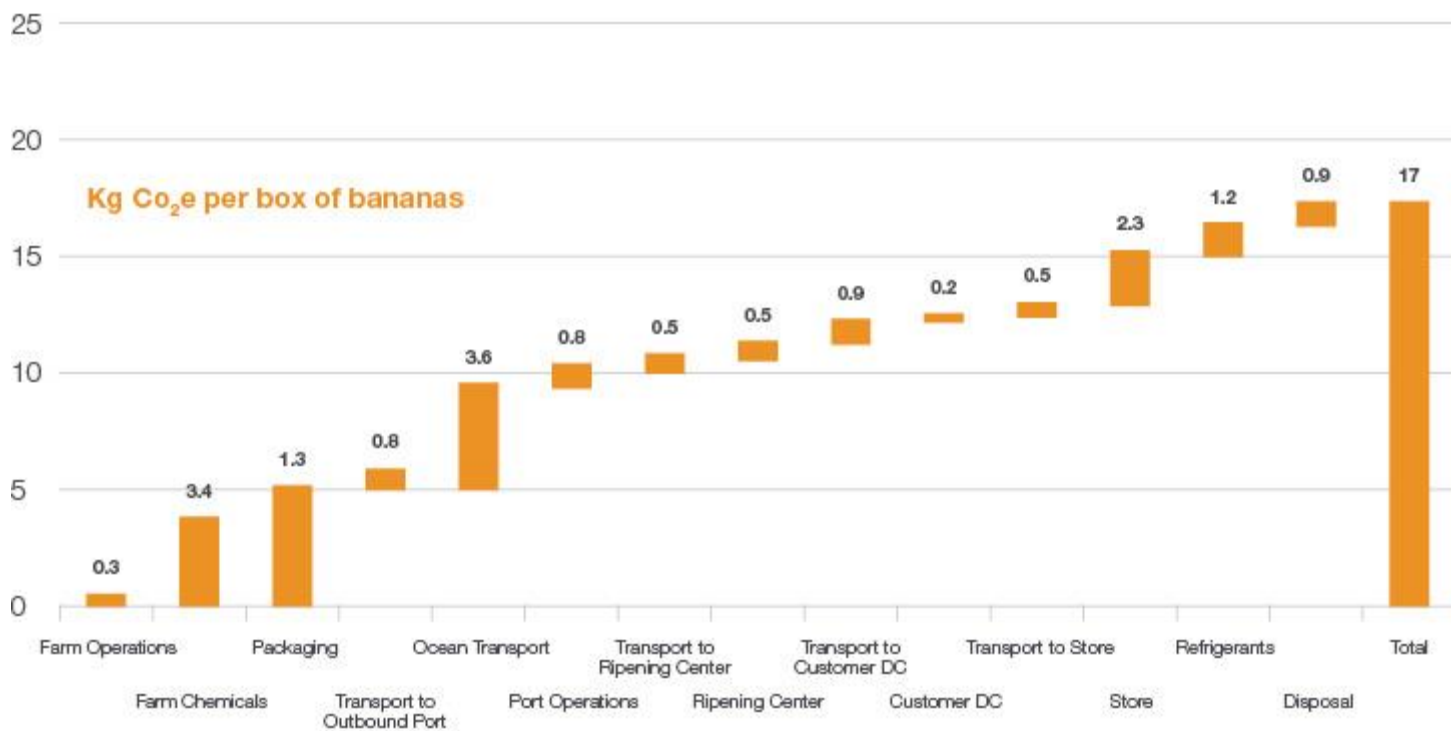
Interconnectedness, which underpins the notion of a [butterfly effect](#), is fundamental to understanding supply chains. Little changes along the way ripple out to huge impacts later. Sustainability experiences this in spades since ecosystems are connected on many levels and across time. The two

are naturally intertwined in delivering what we all need to survive including, food, shelter and medicine.

Truly committed environmentalists sometimes find themselves paralyzed in an analytical do-loop trying to do the least harm possible while still needing to have lunch and stay warm. The trick is to trace it all back and account for impacts like carbon emissions so that responsible choices can be made with certainty.

Sheffi and Blanco do this with bananas. It seems simple since the bill of materials includes only one part with essentially no packaging at all. And yet, the reality is massively complex and highly dependent on variables like where the consumer lives and where the bananas are grown.

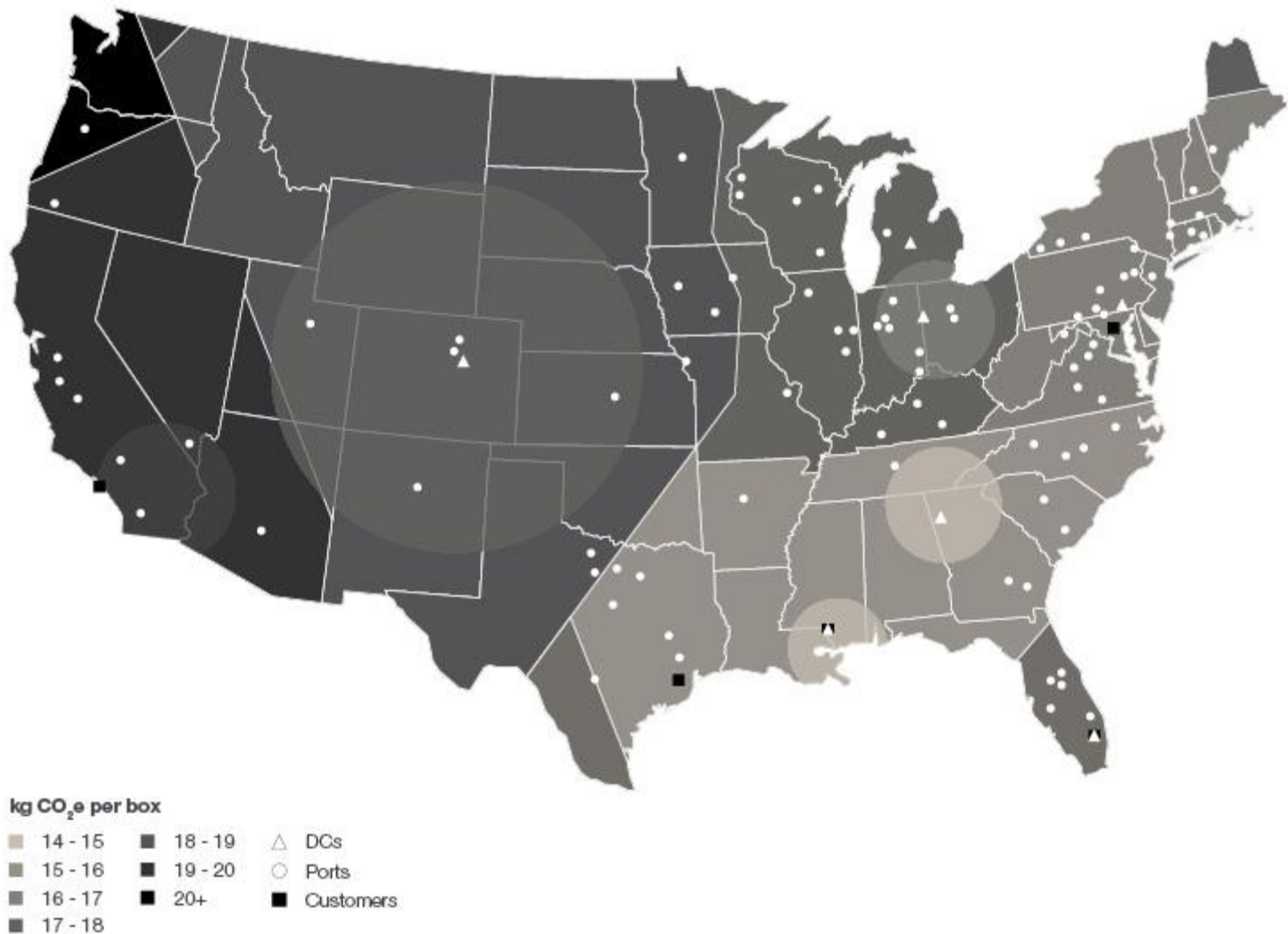
Carbon Footprint Breakdown of a Box of Bananas Sold in North America



Source: A. Craig, "Measuring Supply Chain Carbon Efficiency: A Carbon Label Framework", Diss., Massachusetts Institute of Technology, 2012

Carbon Footprint Breakdown of a Box of Bananas Sold in North America

By location, Kg CO₂ per box



Source: A. Craig, "Measuring Supply Chain Carbon Efficiency: A Carbon Label Framework", Diss., Massachusetts Institute of Technology, 2012

The big takeaway is that business, and in particular supply chain leaders, should apply systematic impact analysis to their operations so that decisions can be made on more sophisticated grounds than simply staying out of trouble.

People vs. People

The most memorable idea in Dr. Sheffi's presentation and in the book is that sustainability has too often been miscast as a "profits vs. planet" struggle. This slogan rings true for many western world activists who see the problem in terms of winners and losers, but it misses a huge piece of the puzzle.

Economic development, including jobs as well as investments in infrastructure, technology and human capital is for many (especially poor) people a more urgent concern than climate change. This is not to say that one is obviously more important than the other, nor that business has any fiduciary duty to care about either.

It is simply the reality that sustainability is a complex issue which pits some people against other people, rather than evil western business against a noble, innocent emerging world. Sheffi and Blanco have tackled this question more deeply and fairly than anyone I've seen.

Sustainability is here to stay.