The Sustainability Consortium: A Global Initiative to Improve Product Sustainability

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Campbell Soup Company
Abundant environmental, economical and social challenges create an imperative to address supply chain sustainability

**Deforestation**
- Worldwide, 1.6 billion people rely on forest products for all or part of their livelihoods.
- The net loss of the world’s forests is estimated at 7.3 million hectares (18 million acres) per year.

**Water**
- 70% of Earth’s surface is covered by water, but less than 1% is available for human use.
- Over 1.6 billion people are facing water shortages.

**Worker Health & Safety**
- Workplaces claim more than 2.3 million deaths per year—350,000 are fatal accidents and close to 2 million are work-related diseases.
- The economic burden of poor occupational safety and health practices is around 4 per cent of global GDP/yr.

**Waste**
- Food loss/waste associated with approximately:
  - 173 billion cubic meters of water
  - 198 million hectares of cropland used per year.
  - 28 million tons of fertilizer

As a sustainability leader, you are responsible for making key decisions concerning your organization’s supply chain sustainability.

Sources: World Resources Institute and Food and Agriculture Organization of the United Nations; Forestry Department Food and Agriculture Organization of the United Nations; EPA; ILO; and OECD
... because the real challenge of product sustainability is to cover everything

How can we embed sustainability in:

• How we make products?
• The way we do business?
• How consumers shop?

• Consumers want sustainable products, but are not willing to sacrifice
• Vast variety of products, impacts and lifecycle stages creates huge complexity
• Cumbersome and inconsistent surveying/scoring of manufacturers and suppliers increases costs
Measurement and reporting systems are crucial to progress in product sustainability but there are still challenges.

Today
- Science is enabling an understanding of social and environmental impacts and benefits.
- Various corporate and social initiatives launched in attempt to address product sustainability.
- Global regulations are emerging with unpredictable metrics.

Challenges include
- Lack of a harmonized measurement and reporting approach:
  - Complexity driven by the vast variety of products.
  - No holistic view of the value chain.
  - No capability to credibly differentiate products based on sustainability.
  - Need for consistency and transparency in measurement and reporting.
About The Sustainability Consortium (TSC)

Enabling the consumer goods industry to provide more sustainable products

- A multi-stakeholder non-profit organization that translates scientific information into business practice
- Mission: to design and implement credible, transparent and scalable, science-based measurement and reporting systems accessible for all producers, retailers, and users of consumer products
- A global organization, with offices in the United States, Europe and China
- >100 Members and 1000s of users worldwide
TSC Members

Members as of September 2015  www.sustainabilityconsortium.org/members
Uniquely multi-faceted in function, process, and impact

Recognized as superior due to its comprehensive nature and cross-sector approach, the Sustainability Consortium Sustainability Index was ranked as a top ten world changing idea by Scientific American Magazine.

TSC works in multiple:
- Impact areas
- Sectors
- Supply chain stages
- Geographies
- Stakeholders
TSC Has Covered 117 Product Categories, Representing ~80% Of Sustainability Impacts In All of Consumer Goods

<table>
<thead>
<tr>
<th>Cross Sector</th>
<th>Clothing, Footwear &amp; Textiles 8 categories, including:</th>
<th>Electronics 10 categories, including:</th>
<th>Food, Beverage &amp; Agriculture 48 categories, including:</th>
<th>General Merchandise 21 categories, including:</th>
<th>Home &amp; Personal Care 13 categories, including:</th>
<th>Paper, Pulp &amp; Forestry 10 categories, including:</th>
<th>Toys 5 categories, including:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging</td>
<td>Cotton Polyester Blend Textiles</td>
<td>Computers</td>
<td>Frozen Convenience Meals</td>
<td>Metal and Plastic Products</td>
<td>Diapers</td>
<td>Books and Magazines</td>
<td>Board Games</td>
</tr>
<tr>
<td>Transportation</td>
<td>Nylon Textiles</td>
<td>Mobile Devices</td>
<td>Packaged Cereals</td>
<td>Paint</td>
<td>Laundry Detergent</td>
<td>Copy Paper</td>
<td>Metal Toys</td>
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<tr>
<td></td>
<td>Rayon Textiles</td>
<td>Printer Ink</td>
<td>Soda and Sport Drinks</td>
<td>Small Appliances</td>
<td>Pharmaceutical Drugs</td>
<td>Dimensional Lumber</td>
<td>Plush Toys</td>
</tr>
</tbody>
</table>
TSC has covered 45 products in the Food, Beverage, and Ag Sector Working Group

<table>
<thead>
<tr>
<th>Apples</th>
<th>Bananas</th>
<th>Beans, Lentils, and Peas</th>
<th>Beef</th>
<th>Beer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berries</td>
<td>Bread</td>
<td>Chicken</td>
<td>Chocolate</td>
<td>Citrus</td>
</tr>
<tr>
<td>Cocoa</td>
<td>Coffee</td>
<td>Corn Syrup</td>
<td>Cucumbers</td>
<td>Dairy</td>
</tr>
<tr>
<td>Dry Pet Food</td>
<td>Eggs</td>
<td>Farmed Fish</td>
<td>Farmed Shellfish</td>
<td>Frozen Convenience Meals</td>
</tr>
<tr>
<td>Grains</td>
<td>Jams and Jellies</td>
<td>Juice</td>
<td>Leafy Vegetables (Lettuce)</td>
<td>Non-Dairy Products</td>
</tr>
<tr>
<td>Nuts</td>
<td>Packaged Cereals</td>
<td>Pasta</td>
<td>Pork</td>
<td>Potatoes</td>
</tr>
<tr>
<td>Prepared Salads</td>
<td>Processed Berries</td>
<td>Processed Citrus</td>
<td>Seed Oils</td>
<td>Soda and Sports Drinks</td>
</tr>
<tr>
<td>Soup</td>
<td>Spirits and Liquors</td>
<td>Stone Fruit</td>
<td>Sugar</td>
<td>Table Grapes</td>
</tr>
<tr>
<td>Tea (Non-Herbal)</td>
<td>Tomatoes</td>
<td>Wet Pet Food</td>
<td>Wild-Caught Fish</td>
<td>Wine</td>
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</table>
TSC Research Database | What’s Inside?

Enabling practical, consistent, scientifically-based measurement and reporting

Scientifically Identified **Hotspots** – Processes and activities in a product life cycle that may have significant environmental or social impacts.

Scientifically Identified **Improvement Opportunities** – Ways to reduce the impacts of hotspots

Multi-stakeholder Developed **Key Performance Indicators** – Questions that measure performance and progress on hotspots

**TSC Research Database:** One of the world’s largest collection of scientific evidence on environmental and social hotspots and improvement opportunities within a product’s life cycle.
TSC uses life-cycle science to produce category-level tools that further facilitate decision-making for product sustainability.

- **Implementation Services**: To facilitate implementation and utilization of the Toolkits, TSC offers trainings and tutorials, with the goal of driving more sustainable consumer products.

- **TSC Commodity Mapping**: To identify probable sourcing regions.

- **TSC Supply Network mapping**: To provide clarity for supply network stages and relationships.

- **TSC Guidelines for Responsible Electronics Management**: Developing a robust electronics management program within a company.

- **TSC Animal Welfare Programs Map**: References all animal welfare programs related to beef, poultry, farmed fish, and pork.

- **TSC Seafood Sustainability Principles**: Provide guidance for evaluating whether a seafood sustainability program has been developed and is being managed in a credible way.

**Principles and Guidance Tools**: TSC also offers industry-relevant principles and guidance tools that further facilitate decision-making for product sustainability:

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**Research Database**: One of the world's largest collections of scientific evidence on environmental and social hotspots and improvement opportunities within a product's life cycle.

**Product Sustainability Toolkits**: Science-based and stakeholder-informed, including input by companies, academics, civil society organizations, and government agencies. The objective of the Toolkits is to facilitate decision-making by retailers, manufacturers, and suppliers along the value chain, with an emphasis on impact and improving product sustainability.

- **117 TSC Product Sustainability Toolkits available!**

**Sustainability Insights**

- **Key Performance Indicators (KPIs)**

**Customized Analyses**

- **Guidance Tools**

**Implementation Services**

- **Implementation training, consulting, custom reports**

**Category Tools, Guidance Tools**

- **Category Sustainability Profile (CSP)**: A summary of the best available, credible, and actionable knowledge about the sustainability aspects related to a product category over its entire life. Each CSP represents the culmination of a significant amount of scientific research and expert opinion. This document also contains key performance indicators.

- **World Map**: Company probable wheat sourcing regions.

- **Northeast China Company Wheat Supply**

- **Washington and Idaho**

- **Western Europe**

- **Company Probable Wheat Sourcing Regions**

- **Northeast China Company Probable Wheat Sourcing Regions**

- **Company Probable Wheat Sourcing Regions**
How Does TSC Create a Product Sustainability Toolkit?

Science-based and stakeholder informed

Life Cycle Perspective

Toolkits reveal social and environmental hotspots from throughout the product category life cycle

Multi-Stakeholder Process

TSC members and invited participants are stakeholders from business, civil society, government, and academia who collaboratively develop the Product Sustainability Toolkits

1. Product Category Selection
2. Review of Scientific Sources
3. Lifecycle Hotspot Identification
4. Improvement Opportunity Identification
5. Evidence Evaluation
6. Key Performance Indicator Design
7. Stakeholder Reviews
8. Toolkit Publication and Use
9. Toolkits Updated
TSC Tools Have Alignment with Key Initiatives

Cross Sector

- Food, Beverage, and Agriculture
  - CDP
  - SAI

- Electronics
  - EICC
  - cfssi

- Home and Personal Care
  - The Consumer Goods FORUM
  - RSPO

- Textiles
  - Sustainable Apparel Coalition

- Toys
  - icti CARE

- Packaging
  - GLOBAL PACKAGING PROJECT

General Merchandise

- EICC

Paper, Pulp, and Forestry

- Environment Paper Assessment Tool
TSC metrics are used by buyers and suppliers to address product sustainability in a cost efficient way.

TSC provides hotspots, improvement opportunities, KPIs and Category Sustainability Profiles.

** Buyers**
Communicate efficiently and effectively with suppliers:
- Ask category-specific questions
- Track supplier performance using KPIs

** Suppliers**
Address product sustainability more effectively and efficiently:
- Use a single reporting tool across buyers
- Enhance product development
- Reduce spending on sustainability research and reporting
- Evaluate performance of their suppliers

**Improved product sustainability and cost efficiency**
Using our Tools: Enabling Supplier Data-Exchange

The SAP-TSC partnership helps companies exchange information efficiently and re-use what already exists.

- PSN already has approx 1,500 companies reporting against TSC KPIs
- Companies can share KPI responses with any other PSN user / retailer
- Retailers: Walmart most active, Ahold & Kroger piloting, 4 other retailer pilots commencing
Access to opportunities for smallholder farmers – On-farm: Operators of small-sized farms, especially women, face a number of challenges including access to agricultural inputs, services, and markets.

Energy consumption – On-farm: Fuel combustion and energy generated to power farm operations can cause climate change, deplete resources, and impact human health.

Fertilizer application – On-farm: Fertilizer use can cause soil and water quality impacts, and climate change.

Forced labor and child labor use – On-farm: Issues involved in forced and child labor use in nut farming may include no pay, long working hours, dangerous working conditions, and limited access to education.

Honey bee decline – On-farm: Decline in the honey bees available to pollinate crops can impact nut crop production.

Labor rights – On-farm: Farm workers are at risk of several labor rights issues such as unfair pay, discrimination, and sexual harassment and assault.

Pesticide application – On-farm: Pesticide use can impact biodiversity, soil and water quality, and human health.

Supply chain traceability: Due to the complexity of nuts supply chains, information about where the supply chain originates is limited, which is a challenge to improving issues.

Water use – On-farm: Using water for irrigation depletes freshwater resources and can lead to poor soil quality.

Worker health and safety – On-farm: Farm workers can develop serious health problems from exposure to the chemicals, noise, and dust and physical injury from other occupational hazards.

Energy consumption – Manufacturing: Energy generated for processing nuts can cause climate change, deplete resources, and impact human health.

Packaging disposal – Resource impacts: Low recovery of packaging material results in depletion of resources and environmental and social impacts from extracting raw materials.
### Example Key Performance Indicators in FBA product categories

**GREENHOUSE GAS EMISSIONS INTENSITY - ON-FARM**

<table>
<thead>
<tr>
<th>What was the greenhouse gas emissions intensity associated with the farming operations for your crop supply purchased in the last twelve months?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. We are unable to determine at this time.</td>
</tr>
<tr>
<td>B. Our greenhouse gas emissions intensity over the last twelve months was:</td>
</tr>
<tr>
<td>B1. ________ kg CO2e per metric tonne of crop harvested.</td>
</tr>
<tr>
<td>B2. ________% of our crop supply, by mass purchased in the last twelve months, is represented by the number reported above.</td>
</tr>
</tbody>
</table>

**IRRIGATION WATER USE INTENSITY - ON-FARM**

<table>
<thead>
<tr>
<th>What was the irrigation water use intensity associated with the farming operations for your crop supply purchased in the last twelve months?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. We are unable to determine at this time.</td>
</tr>
<tr>
<td>B. The following can be reported for our crop supply over the last twelve months:</td>
</tr>
<tr>
<td>B1. ________ cubic meters of irrigation water use per metric tonne of crop harvested.</td>
</tr>
<tr>
<td>B2. ________% of our crop supply, by mass purchased in the last twelve months, is represented by the number reported above.</td>
</tr>
</tbody>
</table>

**LABOR RIGHTS - ON-FARM**

<table>
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<tr>
<th>What are the outcomes of your risk assessments, conducted against a labor standard, that were performed on farming operations that produced your crop supply?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. We are unable to determine at this time.</td>
</tr>
<tr>
<td>B. The following percentages, by mass purchased, represent the outcomes of our risk assessment(s):</td>
</tr>
<tr>
<td>B1. ________% of our crop supply came from low risk countries with corrective actions taken for any known high risk sites.</td>
</tr>
<tr>
<td>B2. ________% of our crop supply came from high risk countries that have high risk sites for which we took corrective actions.</td>
</tr>
<tr>
<td>B3. ________% of our crop supply came from high risk countries, but an audit determined the site risk to be low.</td>
</tr>
</tbody>
</table>
Commodity Mapping

Dan Sonke of Campbell’s:

“It was helpful to get maps of the geographies of where our supply chains lie.

We use the data to educate the team on where things come from and the related sustainability implications.

We have corporate goals around water use reduction. We received the report from TSC on some of our top ingredients and the likelihood of irrigation use in that supply.

It is really useful to start to understand irrigation use in those supply chains and the status of the watershed where we are sourcing.”
The Sustainability Consortium® is jointly administered by Arizona State University and University of Arkansas with additional operations at Wageningen University and Nanjing University.