

Coffee

Key Performance Indicators

Version 03.06



About the Coffee Key Performance Indicators

This THESIS Performance Assessment covers roasted and unroasted coffee beans from plants of the genus *Coffea*. This includes, but is not limited to, ground coffee, whole bean coffee, instant coffee, and coffee pods. It does not include ready-to-drink coffee beverages.

The information you collect for these KPIs should cover your global production and not be specific to any region or buyer (e.g., retailer).

Remember to download the assessment documents to help you in completing the KPIs. Make sure to review the detailed guidance and resources for each KPI. Your work is saved automatically but not shared until you are ready.

Introduction

The Sustainability Insight System, THESIS, from The Sustainability Consortium (TSC) is a comprehensive and holistic solution for understanding environmental and social performance in consumer goods supply chains. These key performance indicators (KPIs) can be used to assess action, transparency, and continuous improvement on the material sustainability issues for brands, manufacturers, and producers.

TSC created this KPI set using its science-based, multi-stakeholder, and full life-cycle development process. TSC members and partners, including manufacturers, retailers, suppliers, service providers, NGOs, civil society organizations, governmental agencies, and academics, contributed valuable perspectives and expertise.

TSC is a global organization dedicated to improving the sustainability of consumer products that also offers a portfolio of services to help drive effective implementation. For more information please visit www.sustainabilityconsortium.org

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Key Performance Indicators

QUESTION	RESPONSE OPTION
<p>1. Crop Supply Mapping For what percentage of your crop supply can you identify the country, region, or farm of origin?</p>	<p>A. We are unable to determine at this time. B. We are able to report the following for our crop supply: B1. _____% of our crop supply, by mass, was not traced to the country, region, or farm of origin. B2. _____% of our crop supply, by mass, was traced to the country of origin. B3. _____% of our crop supply, by mass, was traced to the region of origin. B4. _____% of our crop supply, by mass, was traced to the farm of origin.</p>
<p>2. Sustainable Production Certification What percentage of your crop supply, by mass, was certified or third-party audited by the following certification or verification programs?</p>	<p>A. We are unable to determine at this time. B. The following percentages of our crop supply was certified or audited: B1. _____% of our crop supply was Rainforest Alliance-certified. B2. _____% of our crop supply was GLOBALG.A.P.-certified or SAI Platform Silver/Gold FSA-verified. B3. _____% of our crop supply was Fair Trade USA-certified. B4. _____% of our crop supply was Fairtrade International-certified. B5. _____% of our crop supply was Fair for Life-certified.</p>
<p>3. Access to Opportunities for Smallholder Farmers What percentage of your smallholder farmer-sourced crop supply, by mass, came from traders, intermediaries, or cooperatives that confirmed the following?</p>	<p>A. Not applicable. We do not source our supply from smallholder farmers. B. We are unable to determine at this time. C. We are able to report the following: C1. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to basic services. C2. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to agricultural services. C3. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from receive agricultural training. C4. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to financial services and markets. C5. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to risk management services.</p>
<p>4. Biodiversity Management - On-farm What percentage of your crop supply, by mass, came from farming operations that took the following measures to address biodiversity?</p>	<p>A. We are unable to determine at this time. B. We are able to report the following: B1. _____% of our crop supply, by mass, came from farming operations that have conducted an on-site biodiversity assessment. B2. _____% of our crop supply, by mass, came from farming operations that have implemented a site-specific biodiversity management plan based on findings from an on-site biodiversity assessment. B3. _____% of our crop supply, by mass, came from farming operations that can demonstrate improvements in biodiversity based on the implementation of a site-specific biodiversity management plan. B4. _____% of our crop supply, by mass, came from farming operations that participate in a landscape, supplyshed, or watershed biodiversity initiative.</p>





<p>5. Child Labor Use How did your organization prevent and mitigate child labor risks in growing operations that produced your crop supply?</p>	<p>A. We are unable to determine at this time. B. We are able to report the following for our crop supply: B1. _____% of our crop supply was produced by growing operations where all children below the age of 18 were not employed in hazardous work. B2. _____% of our crop supply was produced by growing operations where non-employed children did not have access to production, harvest, or other work areas. B3. _____% of our crop supply was produced by growing operations where all workers were of legal age of employment as established by applicable laws and regulations in the jurisdiction of employment. B4. _____% of our crop supply was produced by growing operations that had a clearly defined, consistently applied, and documented program or policy to comply with regulatory restrictions or requirements applicable for child labor below the age of 18.</p>
<p>6. Deforestation and Land Conversion - On-farm What percentage of your crop supply, by mass, has been determined to be grown on fields that are low risk for conversion to non-forest use, have had zero conversion of High Conservation Value (HCV) forests or High Carbon Stock (HCS) forests since 2010, had zero deforestation, or was grown on fields with zero conversion of HCV and HCS non-forest lands since 2010?</p>	<p>A. We are unable to determine at this time. B. We are able to report the following percentages for our crop supply: B1. _____% of our crop supply is grown on fields that have been determined to be low risk for conversion to non-forest use. B2. _____% of our crop supply has been determined to be grown on fields that have had zero conversion of HCV forests since 2010. B3. _____% of our crop supply has been determined to be grown on fields that have had zero conversion of HCS forests since 2010. B4. _____% of our crop supply is grown on fields with zero deforestation since 2010. B5. _____% of our crop supply is grown on fields with zero conversion of HCV and HCS non-forest lands since 2010.</p>
<p>7. Fertilizer Application - On-farm What was the nitrogen use intensity and phosphorus surplus associated with fertilizer application on the fields where your crops were produced?</p>	<p>A. We are unable to determine at this time. B. We are able to report the following for our crop supply: B1. _____ kg nitrogen per metric tonne of crop harvested. B2. _____% of our crop supply, by mass, is represented by the number reported in B1. B3. _____ kg phosphorus surplus per metric tonne of crop harvested. B4. _____% of our crop supply, by mass, is represented by the number reported in B3.</p>
<p>8. Greenhouse Gas Emissions Intensity - On-farm What was the greenhouse gas emissions intensity associated with the farming operations that produced your crop supply?</p>	<p>A. We are unable to determine at this time. B. We are able to report the following for our crop supply: B1. _____ kg CO₂e per metric tonne of crop harvested. B2. _____% of our crop supply, by mass, is represented by the number reported above.</p>
<p>9. Irrigation Water Use Intensity - On-farm What was the irrigation water use intensity associated with the farming operations that produced your crop supply?</p>	<p>A. We are unable to determine at this time. B. We are able to report the following for our crop supply: B1. _____ cubic meters of irrigation water use per metric tonne of crop harvested. B2. _____% of our crop supply, by mass, is represented by the number reported above.</p>



<p>10. Labor Rights - On-farm How did your organization manage labor rights risks in the operations that produced your crop supply?</p>	<p>A. We are unable to determine at this time.</p> <p>B. We are able to report the following: B1. _____% of our crop supply, by mass, was produced in operations that were covered by an internal policy that has quantitative time-bound goals related to child labor, discrimination, forced labor, and freedom of association and collective bargaining. B2. _____% of our crop supply, by mass, was produced in operations that were reviewed by a risk assessment which identifies high-risk areas for labor rights abuses. B3. _____% of our staff responsible for procurement activities have been trained on labor rights issues in the supply chain. B4. _____% of our staff responsible for procurement activities have been evaluated via performance metrics on labor rights improvements in the supply chain. B5. _____% of our crop supply, by mass, was produced in operations that were low risk, that were high risk but corrective actions were taken, or that were audited on child labor, discrimination, forced labor, and freedom of association and collective bargaining in the last three years.</p>
<p>11. Worker Health and Safety - On-farm How did your organization manage worker health and safety risks in the operations that produced your crop supply?</p>	<p>A. We are unable to determine at this time.</p> <p>B. We are able to report the following for our supply: B1. _____% of our crop supply, by mass, was produced in operations that have performed a risk assessment to identify high-risk areas for health and safety. B2. _____% of our crop supply, by mass, was produced in operations that train workers on health and safety procedures. B3. _____% of our crop supply, by mass, was produced in operations that implement a verifiable worker health and safety plan. B4. _____% of our crop supply, by mass, was produced in operations that have a worker health and safety performance monitoring system in place. B5. _____% of our crop supply, by mass, was produced in operations that were audited in the last three years on worker health and safety issues.</p>
<p>12. Yield - On-farm What was the average yield of your crop supply from farming operations?</p>	<p>A. We are unable to determine at this time.</p> <p>B. We are able to report the following for our crop supply: B1. _____ metric tonnes of crop supply harvested per hectare planted. B2. _____% of our crop supply, by mass, is represented by the number reported above.</p>
<p>13. Worker Health and Safety - Processing What was the injury and illness rate at the company-owned or contract processing facilities that produced your final product?</p>	<p>A. We are unable to determine at this time.</p> <p>B. Our injury and illness rate was: B1. _____. B2. _____% of our product, by mass, is represented by the number reported above.</p>
<p>14. Packaging Raw Material Sourcing What percentage of the sales packaging used for your final products, by mass, was post-consumer recycled material and sustainably-sourced renewable virgin material?</p>	<p>A. Not applicable. We do not use sales packaging for our product.</p> <p>B. We are unable to determine at this time.</p> <p>C. The sales packaging used for our final products was: C1. _____% post-consumer recycled material. C2. _____% sustainably-sourced renewable virgin material.</p>





15. Sustainable Packaging Design and Production

What percentage of the sales packaging for your final product was recyclable, was formally assessed for material and process efficiency and weight or volume optimization, had demonstrated quantified environmental impact reduction, and was labelled for recycling according to an established standard?

- A. Not applicable. We do not use sales packaging for our product.
- B. We are unable to determine at this time.
- C. We are able to report the following for the sales packaging used for our final products:
 - C1. _____ % of our packaging, by mass, was recyclable.
 - C2. _____ % of our packaging, by mass, has demonstrated progress on goals for material and process efficiency during packaging manufacturing.
 - C3. _____ % of our packaging, by mass, has demonstrated progress on goals for weight or volume optimization during packaging design.
 - C4. _____ % of our packaging, by mass, has a demonstrated quantified environmental impact reduction.
 - C5. _____ % of our packaging, by units sold in the US and Canada, was labeled with How2Recycle.
 - C6. _____ % of our packaging, by units sold in regions outside the US and Canada, was labeled with an established third-party recycling label.

16. Transportation to Retailers

What percentage of your final product was transported to downstream retail or distribution centers by logistics providers (carriers) that reported their annual greenhouse gas (GHG) emissions associated with transportation?

- A. We are unable to determine at this time.
- B. The following percentage of our product, by mass, was shipped to retail or distribution centers by carriers who reported their GHG emissions associated with transportation:
 - B1. _____ %.





Key Performance Indicators with Guidance

1. CROP SUPPLY MAPPING

Question

For what percentage of your crop supply can you identify the country, region, or farm of origin?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following for our crop supply:
 - B1. _____% of our crop supply, by mass, was not traced to the country, region, or farm of origin.
 - B2. _____% of our crop supply, by mass, was traced to the country of origin.
 - B3. _____% of our crop supply, by mass, was traced to the region of origin.
 - B4. _____% of our crop supply, by mass, was traced to the farm of origin.

Guidance

Calculation & Scope

This question measures your knowledge of the origins of your crop supply and does not affect your ability to use both primary and regional data in questions requiring farm-level metrics.

Calculate B1 as the mass of your crop supply that was not traced to the country, region, or farm of origin, divided by the total mass of your crop supply, then multiply by 100.

Calculate B2, B3, and B4 as the mass of your crop supply that was traced to the country, region, and farm of origin, respectively, divided by the total mass of your crop supply, then multiply by 100.

The percentages reported for B1, B2, B3, and B4 must be mutually exclusive and their sum must equal 100%. Any individual source of your crop supply can only be used once across the response options, and the highest level of specificity should be reported for crop supply that can be traced to more than one level of origin. For example, if you know the farm, region, and country of origin for 25% of your crop supply, report 25% in B4 (farm of origin). Then, if you know both the region and country of origin for 25% of your crop supply, report 25% in B3 (region of origin). Next, if you know only the country of origin for 30% of your crop supply, enter 30% in B2 (country of origin). Last, if you know neither the farm, region, or country or origin for the remaining 20% of your crop supply, report 20% in B1. Verify that the sum of the percentages you entered in B1-B4 does not exceed 100%: $20\% (B1) + 30\% (B2) + 25\% (B3) + 25\% (B4) = 100\%$.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

A country is defined as a nation-state recognized by the United Nations. A region is defined as a sub-country area such as an agricultural zone or region, eco-region, or geo-political boundary (e.g., state, county, department). Due to the variance in how "region" may be defined, respondents are encouraged to use a consistent interpretation from year to year when reporting data for this question. A farm is an area of land and its buildings that may be comprised of one or more locations that are managed together.

Procurement data, trade networks, or national or subnational product production data may help to identify the origin of your product supply.

If using the Cool Farm Tool to measure farm-level environmental impacts for any portion of your crop supply, you can enter that portion of your supply in B4. Additionally, the percent of your supply from GlobalG.A.P. certified farms can be included in your response for B4.

Certifications, Standards & Tools

Cool Farm Tool: This calculator is available globally and calculates greenhouse gas emissions associated with farms, processing facilities, and transportation for many agriculture and livestock products.





<http://www.coolfarmtool.org/CoolFarmTool>

GLOBALG.A.P.: GLOBALG.A.P. offers farm management certification for crops (fruits and vegetables, flowers and ornamentals, combinable crops, green coffee, and tea); livestock (cattle and sheep, dairy, calf and young beef, pigs, poultry, and turkey); aquaculture; chain of custody; plant propagation material; compound feed manufacturing; and livestock transport. The program also includes a risk assessment for worker health, safety, and welfare, as well as criteria for animal welfare and food safety.

https://www.globalgap.org/uk_en/

QS. Quality scheme for food: Certifications through the QS scheme allow for traceability from farm to store.

<https://www.q-s.de/>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.

<https://www.utzcertified.org/>

Hotspots Addressed

1. Supply chain traceability





2. SUSTAINABLE PRODUCTION CERTIFICATION

Question

What percentage of your crop supply, by mass, was certified or third-party audited by the following certification or verification programs?

Response Options

- A. We are unable to determine at this time.
- B. The following percentages of our crop supply was certified or audited:
 - B1. _____% of our crop supply was Rainforest Alliance-certified.
 - B2. _____% of our crop supply was GLOBALG.A.P.-certified or SAI Platform Silver/Gold FSA-verified.
 - B3. _____% of our crop supply was Fair Trade USA-certified.
 - B4. _____% of our crop supply was Fairtrade International-certified.
 - B5. _____% of our crop supply was Fair for Life-certified.

Guidance

Calculation & Scope

Calculate B1 as the mass of your crop supply that was Rainforest Alliance-certified, divided by the total mass of your crop supply, then multiple by 100.

Calculate B2 as the mass of your crop supply that was GLOBALG.A.P.-certified or SAI Platform Silver/Gold FSA-verified, divided by the total mass of your crop supply, then multiple by 100.

Calculate B3 as the mass of your crop supply that was Fair Trade USA-certified, divided by the total mass of your crop supply, then multiple by 100.

Calculate B4 as the mass of your crop supply that was Fairtrade International-certified, divided by the total mass of your crop supply, then multiple by 100.

Calculate B5 as the mass of your crop supply that was Fair for Life-certified, divided by the total mass of your crop supply, then multiple by 100.

The sum of B1, B2, B3, B4 and B5 can exceed 100%. If any supply has more than one certification, include it in the calculation of the applicable response options.

Certifications, Standards & Tools

Fair for Life Certification Program: The Fair Life program provides certification for fair trade and responsible supply chains. The goal of Fair for Life is to ensure social and economic benefits to socioeconomically disadvantaged agricultural producers and workers and to ensure that smallholder producers receive a fair share. <http://www.fairforlife.org/>

Fair Trade USA: Fair Trade USA provides several standards that address environmental stewardship, income sustainability, community, individual well-being and empowerment for producers. <https://www.fairtradecertified.org/business/standards>

Fairtrade International Certification: Fairtrade International provides several standards (e.g. for smallholders and workers), and a certification through FLOCERT. Fairtrade aims to improve the livelihoods of smallholders and workers amongst others via fair trade relationships. <https://www.fairtrade.net/about/certification>

GLOBALG.A.P.: GLOBALG.A.P. offers farm management certification for crops (fruits and vegetables, flowers and ornamentals, combinable crops, green coffee, and tea); livestock (cattle and sheep, dairy, calf and young beef, pigs, poultry, and turkey); aquaculture; chain of custody; plant propagation material; compound feed manufacturing; and livestock transport. The program also includes a risk assessment for worker health, safety, and welfare, as well as criteria for animal welfare and food safety. https://www.globalgap.org/uk_en/

Rainforest Alliance Sustainable Agriculture Standard: Rainforest Alliance has two certifications: farm and chain of custody. The standard encompasses all three pillars of sustainability—social, economic, and environmental. RA is currently developing a new certification program, following their 2018 merger with UTZ. Since 2018 RA has also become the sole owner and operator of the 2017 SAN Standard. <https://www.rainforest-alliance.org/business/solutions/certification/agriculture/>





SAI Platform - Farm Sustainability Assessment (SAI-FSA): The SAI Platform Farm Sustainability Assessment (SAI-FSA) is an easy-to-use tool that assesses farm environmental, social, and economic sustainability. The FSA is based on SAI Platform's Principles and Practices for sustainable agriculture and can be used by farmers as a benchmarking tool for comparing various certification schemes and proprietary codes.

<http://www.fsatool.com/>

Definitions

Third-party audit: An audit conducted by external, independent auditing organizations, such as those providing certification of conformity to a standard.

Verified: Having previously demonstrated, through a reputable assessor, the truth or accuracy of a claim.

Hotspots Addressed

1. Supply chain traceability





3. ACCESS TO OPPORTUNITIES FOR SMALLHOLDER FARMERS

Question

What percentage of your smallholder farmer-sourced crop supply, by mass, came from traders, intermediaries, or cooperatives that confirmed the following?

Response Options

- A. Not applicable. We do not source our supply from smallholder farmers.
- B. We are unable to determine at this time.
- C. We are able to report the following:
 - C1. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to basic services.
 - C2. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to agricultural services.
 - C3. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from receive agricultural training.
 - C4. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to financial services and markets.
 - C5. _____% of our smallholder farmer-sourced crop supply came from traders, intermediaries, or cooperatives that confirmed that the smallholders they sourced from have access to risk management services.

Guidance

Calculation & Scope

Calculate C1 as the mass of your smallholder farmer-sourced crop supply that came from traders, intermediaries (e.g., mills), or cooperatives that confirmed that the smallholders they sourced from have access to basic services, divided by the total mass of your smallholder farmer-sourced crop supply, then multiply by 100. Examples of basic services include, but are not limited to, clean drinking water, water for irrigation, quality education for smallholder farmers and their families, and health care. If any portion of your smallholder farmer-sourced crop supply is certified under Fairtrade International or Rainforest Alliance, you may include that portion of your supply in your response for C1.

Calculate C2 as the mass of your smallholder farmer-sourced crop supply that came from traders, intermediaries (e.g., mills), or cooperatives that confirmed that the smallholders they sourced from have access to agricultural services, divided by the total mass of your smallholder farmer-sourced crop supply, then multiply by 100. Examples of agricultural services include, but are not limited to, inputs (e.g., seeds and fertilizers), equipment (e.g., irrigation, tools, tractors, implements, and mobile phones), infrastructure (e.g., drying facilities and storage facilities), and extension services.

Calculate C3 as the mass of your smallholder farmer-sourced crop supply that came from traders, intermediaries (e.g., mills), or cooperatives that confirmed that the smallholders they sourced from receive agricultural training, divided by the total mass of your smallholder farmer-sourced crop supply, then multiply by 100. Agricultural training programs should provide smallholder farmers with information and knowledge on how to improve their farming practices, increase productivity, and improve the quality of their product. Trainings should be accessible for both male and female farmers and should be designed in such a way that farmers are able to directly implement the acquired knowledge. Agricultural training topics include, but are not limited to, pruning, weeding, shade management, soil conservation and management practices, water conservation, integrated pest management (IPM), fertilizer application, Good Agricultural Practices, and child labor awareness. If any portion of your smallholder farmer-sourced crop supply is certified under Fairtrade International, GlobalG.A.P., Rainforest Alliance or UTZ, or verified under SAI Platform Farm Sustainability Assessment (FSA), you may include that portion of your supply in your response for C3.





Calculate C4 as the mass of your smallholder farmer-sourced crop supply that came from traders, intermediaries (e.g., mills), or cooperatives that confirmed that the smallholders they sourced from have access to financial services and markets, divided by the total mass of your smallholder farmer-sourced crop supply, then multiply by 100. Examples of financial services include, but are not limited to, fair prices, credit, and loans. If any portion of your smallholder farmer-sourced crop supply is certified under Fairtrade International or the Fair for Life program, you may include that portion of your supply in your response for C4.

Calculate C5 as the mass of your smallholder farmer-sourced crop supply that came from traders, intermediaries (e.g., mills), or cooperatives that confirmed that the smallholders they source from have access to risk management services, divided by the total mass of your smallholder farmer-sourced crop supply, then multiply by 100. Risk management services should be designed to increase smallholder farmer resiliency and reduce smallholder vulnerability to external risks, such as large price fluctuations and crop failures. Examples of risk management services include, but are not limited to, diversification of income sources, long-term contracts and a stable product demand, and insurance.

The services identified in C1-C5 can be provided as part of a certification program or through external partnerships.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

Certifications, Standards & Tools

C.A.F.E. Practices: The Coffee and Farmer Equity (C.A.F.E.) Practices represent a standard by which coffee suppliers can be evaluated against economic, environmental, and social criteria.

<http://globalassets.starbucks.com/assets/4a67ce15e63b4ea18461ff65a540feb3.pdf>

Fair for Life Certification Program: The Fair Life program provides certification for fair trade and responsible supply chains. The goal of Fair for Life is to ensure social and economic benefits to socioeconomically disadvantaged agricultural producers and workers and to ensure that smallholder producers receive a fair share.

<http://www.fairforlife.org/>

Fair Trade USA: Fair Trade USA provides several standards that address environmental stewardship, income sustainability, community, individual well-being and empowerment for producers.

<https://www.fairtradecertified.org/business/standards>

Fairtrade International Certification: Fairtrade International provides several standards (e.g. for smallholders and workers), and a certification through FLOCERT. Fairtrade aims to improve the livelihoods of smallholders and workers amongst others via fair trade relationships.

<https://www.fairtrade.net/about/certification>

GLOBALG.A.P.: GLOBALG.A.P. offers farm management certification for crops (fruits and vegetables, flowers and ornamentals, combinable crops, green coffee, and tea); livestock (cattle and sheep, dairy, calf and young beef, pigs, poultry, and turkey); aquaculture; chain of custody; plant propagation material; compound feed manufacturing; and livestock transport. The program also includes a risk assessment for worker health, safety, and welfare, as well as criteria for animal welfare and food safety.

https://www.globalgap.org/uk_en/

ProTerra Certification: The ProTerra Certification aims to measure good agricultural practices, the protection of high conservation value areas, biodiversity, and worker and community rights. Social responsibility and environmental sustainability are the focus of the principles and guidance included in the certification.

<https://www.proterrafoundation.org/news/the-new-proterra-certification-standard-version-4-0-is-out-3/>

Rainforest Alliance Sustainable Agriculture Standard: Rainforest Alliance has two certifications: farm and chain of custody. The standard encompasses all three pillars of sustainability—social, economic, and environmental. RA is currently developing a new certification program, following their 2018 merger with UTZ. Since 2018 RA has also become the sole owner and operator of the 2017 SAN Standard.

<https://www.rainforest-alliance.org/business/solutions/certification/agriculture/>

SAI Platform - Farm Sustainability Assessment (SAI-FSA): The SAI Platform Farm Sustainability Assessment (SAI-FSA) is an easy-to-use tool that assesses farm environmental, social, and economic sustainability. The FSA





is based on SAI Platform's Principles and Practices for sustainable agriculture and can be used by farmers as a benchmarking tool for comparing various certification schemes and proprietary codes.

<http://www.fsatool.com/>

Sedex Members Ethical Trade Audit: Sedex Members Ethical Trade Audit is an auditing system that aligns with Ethical Trading Initiative's Base Code as well International Labour Organization Conventions. It has been developed to provide a public auditing methodology and format for companies to use to assess compliance.

<https://www.sedex.com/our-services/smeta-audit/>

THESIS Help Center Video: Access to Opportunities for Smallholder Farmers KPI: Short video tutorial on the Access to Opportunities for Smallholder Farmers KPI. Use case-sensitive password 'thesis' when prompted.

<https://vimeo.com/529538191>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.

<https://www.utzcertified.org/>

Background Information

GIZ: Growing Business with Smallholders: The German Federal Ministry for Economic Cooperation and Development has created a document that provides guidance and steps for engaging and doing business with smallholder farmers.

https://www.endeva.org/wp-content/uploads/2014/11/Guide-Growing_Business_with_Smallholders_large-2.pdf

Oxfam: Think Big Go Small: Oxfam has produced a document outlining potential benefits from industry-smallholder interactions, and examples of successful implementation.

<http://www.oxfam.org/en/policy/think-big-go-small>

Sustainable Food Lab - Smallholders: The Sustainable Food Lab helps organizations become more sustainable by providing them with practical tools and advice. Their white paper, Enabling Smallholder Farmers to Improve Their Incomes, written in 2017 in collaboration with Business Fights Poverty, contains advice on how to improve the economic benefits of trade for smallholder farmers and their families.

<http://sustainablefoodlab.org/wp-content/uploads/2017/09/BFP-Improving-Incomes-WEB.pdf>

Definitions

Smallholder farms: Farms managed and operated by a family and predominantly reliant on family labor, where seasonal workers work alongside family members in peak seasons (e.g., harvest). The size of smallholder farms ranges generally from two hectares (approximately 5 acres) or less in size up to 50 hectares (approximately 124 acres), depending on the crop type and geographic region of production.

Hotspots Addressed

2. Access to opportunities for smallholder farmers - On-farm





4. BIODIVERSITY MANAGEMENT - ON-FARM

Question

What percentage of your crop supply, by mass, came from farming operations that took the following measures to address biodiversity?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following:
 - B1. _____% of our crop supply, by mass, came from farming operations that have conducted an on-site biodiversity assessment.
 - B2. _____% of our crop supply, by mass, came from farming operations that have implemented a site-specific biodiversity management plan based on findings from an on-site biodiversity assessment.
 - B3. _____% of our crop supply, by mass, came from farming operations that can demonstrate improvements in biodiversity based on the implementation of a site-specific biodiversity management plan.
 - B4. _____% of our crop supply, by mass, came from farming operations that participate in a landscape, supplyshed, or watershed biodiversity initiative.

Guidance

Calculation & Scope

This question is focused on assessing, measuring, and improving biodiversity at the entire site (i.e., land and associated buildings) at which agricultural production occurs for a single farming or growing operation. For suppliers that produce in controlled environment agriculture, including protected agriculture, hydroponic agriculture, and indoor vertical farming, the question addresses the impact of biodiversity associated with the physical footprint of the production structures. The diversity of plants and/or animals contained in the production structures themselves is not within the scope of the question.

Calculate B1 as the mass of your crop supply that came from farms that have conducted an on-site biodiversity assessment, divided by the total mass of your crop supply, then multiply by 100. Biodiversity topics to consider in the assessment include but are not limited to: habitat protection and restoration for sensitive species such as pollinators, birds, bats, and native species; crop rotation/intercropping; conservation buffers; cover crops; and invasive species management. For suppliers growing product in controlled environments, biodiversity topics to consider include, but are not limited to: habitat and restoration for sensitive species; invasive species management; diversity of plants and animals outside of the production structures; and whether any nesting ground or migratory paths are disrupted by the presence of the production structures.

The tools listed in Certifications, Standards, and Tools below can be used to conduct an on-farm biodiversity assessment. If you are not using these tools, the Stewardship Index for Specialty Crops Habitat and Biodiversity Metric, listed in the Background Information, provides step-by-step instructions that may be useful for conducting an assessment.

Calculate B2 as the mass of your crop supply that came from farms that have implemented a verifiable, site-specific biodiversity management plan based on findings from an on-site biodiversity assessment, divided by the total mass of your crop supply, then multiply by 100. In addition to addressing the relevant biodiversity topics listed above, biodiversity management plans should demonstrate awareness of the potential presence of threatened and endangered species. Endangered species are listed on the International Union for Conservation of Nature Red List (see Background Information for more information).

Calculate B3 as the mass of your crop supply that came from farms that can demonstrate improvements in biodiversity based on the implementation of a site-specific biodiversity management plan, divided by the total mass of your crop supply, then multiply by 100. Improvements can be measured using the farm-level sustainability calculators listed under Certifications, Standards, and Tools. Additional tools or programs may be applicable.

Calculate B4 as the mass of your crop supply that came from farms that participate in a landscape, supplyshed, or watershed biodiversity initiative, divided by the total mass of your crop supply, then multiply by 100. To be considered in your calculation for B4, the biodiversity initiative should be a collaborative effort among farmers and other landscape users to conserve, enhance, and/or restore regional natural resources and wildlife, including native, endangered, and threatened species.





Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

Certifications, Standards & Tools

Cool Farm Tool: This calculator is available globally and calculates greenhouse gas emissions associated with farms, processing facilities, and transportation for many agriculture and livestock products.
<http://www.coolfarmtool.org/CoolFarmTool>

THESIS Help Center Video: Biodiversity Management - Growing Operations KPI: Short video tutorial on the Biodiversity Management - Growing Operations KPI. Use case-sensitive password 'thesis' when prompted.
<https://vimeo.com/529540641>

Background Information

Conservation International Biodiversity Hotspots: Conservation International's criteria for biodiversity hotspots include areas where there are at least 1,500 vascular plants as endemics and the ecosystem contains only 30% or less of its original natural vegetation. Currently, 35 areas around the world are classified as biodiversity hotspots.
<https://www.conservation.org/priorities/biodiversity-hotspots>

Convention on Biological Diversity - Invasive Species Guidance: This website provides resources and guidance on invasive species, their distribution pathways, and prevention and eradication measures.
<https://www.cbd.int/invasive/tools.shtml>

Fairtrade International Certification: Fairtrade International provides several standards (e.g. for smallholders and workers), and a certification through FLOCERT. Fairtrade aims to improve the livelihoods of smallholders and workers amongst others via fair trade relationships.
<https://www.fairtrade.net/about/certification>

FAO Biodiversity for Food and Agriculture: This document describes the multifunctional role of biodiversity in food security, sustainable livelihoods, ecosystem resilience, climate change adaptation, nutrition, and the biological processes necessary for sustainable agricultural production.
<http://www.fao.org/3/a-i1980e.pdf>

FAO Biodiversity: Micro-organisms and Invertebrates: Describes the "hidden" biodiversity of microbes and invertebrates in agricultural systems.
<http://www.fao.org/cgrfa/topics/microorganisms-and-invertebrates/en/>

FAO Biodiversity: Soil Biodiversity: Describes the role of soil biodiversity in maintaining critical ecosystem functions.
<http://www.fao.org/soils-portal/soil-biodiversity/en/>

International Union for Conservation of Nature Red List: The IUCN Red List is a comprehensive list of threatened plant and animal species. The list provides a rating of plant and animal species that are facing a high risk of global extinction.
<http://www.iucnredlist.org/>

Planning for Biodiversity Management: This document includes information to help landowners survey and assess the biodiversity characteristics of their land and provides guidance for developing a biodiversity management plan.
<https://www.environment.nsw.gov.au/resources/nature/PlanningBiodiversityManagementWorkshop.pdf>

Rainforest Alliance Sustainable Agriculture Standard: Rainforest Alliance has two certifications: farm and chain of custody. The standard encompasses all three pillars of sustainability—social, economic, and environmental. RA is currently developing a new certification program, following their 2018 merger with UTZ. Since 2018 RA has also become the sole owner and operator of the 2017 SAN Standard.
<https://www.rainforest-alliance.org/business/solutions/certification/agriculture/>

SAI Platform: Sustainable Performance Assessment (SAI-SPA): The SAI Platform provides fact sheets and guidelines for sustainable agriculture assessment including metrics.
<https://saiplatform.org/our-work/>

Stewardship Index for Specialty Crops (SISC): SISC provides guidance for calculating irrigation water use, energy use, nitrogen use, phosphorus surplus, and soil organic matter on U.S. specialty crop farms.





<https://www.stewardshipindex.org/>

Xerces Society Pollinator Conservation Program: The Xerces Society's Pollinator Conservation Program is the largest pollinator conservation program in the world. The program provides technical assistance to farmers, gardeners, land managers, and others for the creation and restoration of pollinator habitat.

<http://www.xerces.org/pollinator-conservation/>

Definitions

Biodiversity: The diversity of plant and animal species on the planet which includes both number of species and abundance within a species. The rarity of species such as endemic or threatened and endangered status plays a role in biodiversity assessment and management.

Controlled environment agriculture: A combination of engineering, plant science, and computer managed greenhouse control technologies used to optimize plant growing systems, plant quality, and production efficiency.

Farming operation: An area of land and its buildings, comprised of one or more locations managed together that is used for growing crops that are delivered for further processing or as ingredients to other final products.

Hydroponic agriculture: A production method where the crops are grown in a nutrient solution rather than in soil.

Indoor vertical farming: The practice of growing crops stacked one above another in a closed and controlled environment.

Management plan: An annually updated document that farmers can demonstrate on-site. The management plan should summarize concrete goals and a plan how to achieve these goals.

Protected agriculture: Use of technology to modify the natural environment (e.g., temperature, rainfall, humidity, wind, etc.) that surrounds a crop to harvest higher yields, of better quality, during an extended season.

Supplied: A group of agricultural producers, including the land on which they grow or raise food, feed or fiber, within a specified geographic region, that are within a given company's supply chain.

Verifiable: Having the ability to demonstrate, through a reputable assessor, the truth or accuracy of a claim.

Hotspots Addressed

7. Land transformation - On-farm

8. Pollinator stress - On-farm



5. CHILD LABOR USE

Question

How did your organization prevent and mitigate child labor risks in growing operations that produced your crop supply?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following for our crop supply:
 - B1. _____% of our crop supply was produced by growing operations where all children below the age of 18 were not employed in hazardous work.
 - B2. _____% of our crop supply was produced by growing operations where non-employed children did not have access to production, harvest, or other work areas.
 - B3. _____% of our crop supply was produced by growing operations where all workers were of legal age of employment as established by applicable laws and regulations in the jurisdiction of employment.
 - B4. _____% of our crop supply was produced by growing operations that had a clearly defined, consistently applied, and documented program or policy to comply with regulatory restrictions or requirements applicable for child labor below the age of 18.

Guidance

Calculation & Scope

Calculate B1 as the mass of your crop supply that came from growing operations where all children below the age of 18 were not employed in hazardous work, divided by the total mass of your crop supply, then multiply by 100. Hazardous work is defined as work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children (Article 3(d) of the Worst Forms of Child Labour Convention 182). Hazardous work includes work that is abusive, work underground, underwater, at dangerous heights or in confined spaces, work with dangerous machinery and tools, work with heavy loads, work involving hazardous substances and environments, work for long hours, work at night, work that interferes with schooling, or work in which the child is unreasonably restricted from movement outside the premises. All forms of slavery or practices similar to slavery such as the sale and trafficking of children, debt bondage and serfdom, and forced or compulsory labor are strictly prohibited.

Calculate B2 as the mass of your crop supply that came from growing operations where non-employed children did not have access to production, harvest, or other work areas, divided by the total mass of your crop supply, then multiply by 100. This question does not include supervised tours or community programs where non-employed children have access to production, harvest, or other work areas.

Calculate B3 as the mass of your crop supply that came from growing operations where all workers were of legal age of employment as established by applicable laws and regulations in the jurisdiction of employment, divided by the total mass of your crop supply, then multiply by 100. In the absence of applicable laws and regulations in the jurisdiction of employment to establish a minimum age for admission to employment, workers must be at least 15 years old, in accordance with Article 2(3) of the ILO Minimum Age Convention 138.

Calculate B4 as the mass of your crop supply that came from growing operations that complied with regulatory restrictions or requirements applicable for child labor below the age of 18, divided by the total mass of your crop supply, then multiply by 100. Programs to comply with regulatory restrictions or requirements applicable for those under the age of 18 may include a risk assessment of the workplace.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.





Certifications, Standards & Tools

C.A.F.E. Practices: The Coffee and Farmer Equity (C.A.F.E.) Practices represent a standard by which coffee suppliers can be evaluated against economic, environmental, and social criteria.

<http://globalassets.starbucks.com/assets/4a67ce15e63b4ea18461ff65a540feb3.pdf>

Fair for Life Certification Program: The Fair Life program provides certification for fair trade and responsible supply chains. The goal of Fair for Life is to ensure social and economic benefits to socioeconomically disadvantaged agricultural producers and workers and to ensure that smallholder producers receive a fair share.

<http://www.fairforlife.org/>

Fair Trade USA: Fair Trade USA provides several standards that address environmental stewardship, income sustainability, community, individual well-being and empowerment for producers.

<https://www.fairtradecertified.org/business/standards>

Fairtrade International Certification: Fairtrade International provides several standards (e.g. for smallholders and workers), and a certification through FLOCERT. Fairtrade aims to improve the livelihoods of smallholders and workers amongst others via fair trade relationships.

<https://www.fairtrade.net/about/certification>

SAN Sustainable Agriculture Framework: The Sustainable Agriculture Network (SAN) Sustainable Agriculture Framework is a modular, outcome-based tool that focuses on sustainability as a central part of agricultural management. The flexible framework is designed to address challenges and desired outcomes specific to local contexts and covers ten environmental, social, and economic impact areas.

<https://www.sustainableagriculture.eco/sustainable-agriculture-framework/>

THESIS Help Center Video: Child Labor Use - Growing Operations KPI: Short video tutorial on the Child Labor Use - Growing Operations KPI. Use case-sensitive password 'thesis' when prompted.

<https://vimeo.com/531017255>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.

<https://www.utzcertified.org/>

Background Information

Amfori BSCI Code of Conduct: This global business association for open and sustainable trade, empowers members worldwide by monitoring and improving social performance in their supply chains. It offers tools to carry out human rights due diligence – identifying and mitigating any risks in supply chains and supporting remedial action.

<https://www.amfori.org/sites/default/files/amfori%20BSCI%20Brochure-compressed.pdf>

Amfori Country Risk Classification: This list classifies countries' risk of social injustice in an effort to assist companies in determining high and low risk for their sourcing and operations.

<http://duediligence.amfori.org/CountryRiskClassification>

ILO-IOE Child Labour Guidance Tool For Business: The Child Labour Guidance Tool is a resource companies can use to meet the due diligence requirements detailed in the UNGPs, as they pertain to child labour. This Guidance Tool supports businesses to understand, assess, develop, engage, communicate, monitor, remediate, review, and report on child labor.

<https://www.ilo.org/ipeinfo/product/download.do?type=document&id=27555>

SA8000® Standard: Social Accountability International (SAI) is a global non-governmental organization that aims to advance human rights at work via the SA8000® Standard. SA 8000 measures social performance in eight areas that are relevant for workplaces in factories and organizations worldwide.

<https://sa-intl.org/programs/sa8000/>

Sedex Members Ethical Trade Audit: Sedex Members Ethical Trade Audit is an auditing system that aligns with Ethical Trading Initiative's Base Code as well International Labour Organization Conventions. It has been developed to provide a public auditing methodology and format for companies to use to assess compliance.

<https://www.sedex.com/our-services/smets-audit/>





United Nations Global Compact Human Rights and Business Dilemmas Forum: United Nations Global Compact Human Rights and Business Dilemmas Forum present an introduction to, analysis of, and business recommendations for minimizing social sustainability risks in the supply chain.

<https://www.unglobalcompact.org/library/9>

Definitions

Child: Every human being below the age of 18 years, unless majority is attained earlier under the law applicable to the child (Convention on the Rights of the Child – CRC, Article 1).

Child labor: Working children under the minimum legal age to work with or without accompaniment by a guardian.

Growing operation: An area of land and its buildings (including greenhouses), comprised of one or more locations managed together, that is used for growing crops delivered fresh to market or to processors.

Hazardous work: Work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or moral of children (Article 3(d) of the Worst Forms of Child Labour Convention 182). Hazardous work activities include work that is abusive, work underground, underwater, at dangerous heights or in confined spaces, work with dangerous machinery and tools, work with heavy loads, work involving hazardous substances and environments, work for long hours, work at night, work that interferes with schooling, or work in which the worker is unreasonably restricted from movement outside the premises.

Worst forms of child labor: Labor that negatively affects a child's health, safety, morals, or reasonable ability to receive an education. This includes forced labor, prostitution or pornography, labor for illicit activities, and hazardous work. Hazardous work activities include work that is abusive, work underground, underwater, at dangerous heights or in confined spaces, work with dangerous machinery and tools, work with heavy loads, work involving hazardous substances and environments, work for long hours, work at night, or work in which the worker is unreasonably restricted from movement outside the premises.

Hotspots Addressed

3. Child labor use - On-farm





6. DEFORESTATION AND LAND CONVERSION - ON-FARM

Question

What percentage of your crop supply, by mass, has been determined to be grown on fields that are low risk for conversion to non-forest use, have had zero conversion of High Conservation Value (HCV) forests or High Carbon Stock (HCS) forests since 2010, had zero deforestation, or was grown on fields with zero conversion of HCV and HCS non-forest lands since 2010?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following percentages for our crop supply:
 - B1. _____% of our crop supply is grown on fields that have been determined to be low risk for conversion to non-forest use.
 - B2. _____% of our crop supply has been determined to be grown on fields that have had zero conversion of HCV forests since 2010.
 - B3. _____% of our crop supply has been determined to be grown on fields that have had zero conversion of HCS forests since 2010.
 - B4. _____% of our crop supply is grown on fields with zero deforestation since 2010.
 - B5. _____% of our crop supply is grown on fields with zero conversion of HCV and HCS non-forest lands since 2010.

Guidance

Calculation & Scope

Calculate B1 as the mass of your crop supply that was grown on fields that have been determined to be low-risk for the conversion of forests to non-forest use, divided by the total mass of your crop supply from all fields, then multiply by 100. A field can be considered low risk for conversion to non-forest use when one of the following is true: The field is located in a jurisdiction that is assessed to be low risk by a risk classification analysis; the field is located in a jurisdiction that is assessed to be high risk by a risk classification analysis but corrective actions are taken where needed; or the site risk was determined to be low by an on-site audit. In B1 you may include your crop supply that has been certified by Rainforest Alliance, Fair Trade USA, Fairtrade International, and Fair For Life, or SAI Platform Silver FSA-verified.

Calculate B2 as the mass of your crop supply that was grown on fields that have had zero conversion of HCV forests since January 1, 2010, divided by the total mass of your crop supply from all fields, then multiply by 100. In B2 you may include your crop supply that has been certified by Rainforest Alliance.

Calculate B3 as the mass of your crop supply that was grown on fields that have had zero conversion of HCS forests since January 1, 2010, divided by the total mass of your crop supply from all fields, then multiply by 100. In B3 you may include your crop supply that has been certified by Rainforest Alliance.

Calculate B4 as the mass of your crop supply that was grown on fields that have had zero deforestation since January 1, 2010 divided by the total mass of your crop supply from all fields, then multiply by 100. In B4 you may include your crop supply that has been certified by Rainforest Alliance.

Calculate B5 as the mass of your crop supply that was grown on fields with zero conversion of HCV and HCS non-forest lands since January 1, 2010 divided by the total mass of your crop supply from all fields, then multiply by 100. HCV and HCS non-forest lands include HCV and HCS non-forest native ecosystems and ecologically sensitive regions, including but not limited to grasslands and Gran Chaco region in South America.

Zero deforestation means that since January 1, 2010, no existing forest was converted to non-forest use for the production of the crop used in your products. Offsets or zero-net deforestation are not included in this definition. Land on which deforestation has occurred since 2010 may be considered to have zero deforestation if restored to its previous state as determined by tree cover, species composition, stored carbon, and all other relevant factors. The absence of deforestation must be confirmed using monitoring of the specific land tracts where the crop originated, such as remote sensing, audits, or other direct observations.

The cut-off date of January 1, 2010 after which forest conversion is prohibited is chosen to ensure a common range of periods (not very recent or long standing cut-off dates) that most methodologies and sustainability initiatives establish and apply for forest, HCV, HCS, and deforestation.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.





The maximum possible response for each response option is 100%. However, multiple response options may be applicable to the same portion of your crop supply. For example, supply included in the calculation of B2, B3, and/or B4 could also be included in the calculation of B1 if the stated conditions are also met.

Certifications, Standards & Tools

C.A.F.E. Practices: The Coffee and Farmer Equity (C.A.F.E.) Practices represent a standard by which coffee suppliers can be evaluated against economic, environmental, and social criteria.

<http://globalassets.starbucks.com/assets/4a67ce15e63b4ea18461ff65a540feb3.pdf>

Fair for Life Certification Program: The Fair Life program provides certification for fair trade and responsible supply chains. The goal of Fair for Life is to ensure social and economic benefits to socioeconomically disadvantaged agricultural producers and workers and to ensure that smallholder producers receive a fair share.

<http://www.fairforlife.org/>

Fair Trade USA: Fair Trade USA provides several standards that address environmental stewardship, income sustainability, community, individual well-being and empowerment for producers.

<https://www.fairtradecertified.org/business/standards>

Fairtrade International Certification: Fairtrade International provides several standards (e.g. for smallholders and workers), and a certification through FLOCERT. Fairtrade aims to improve the livelihoods of smallholders and workers amongst others via fair trade relationships.

<https://www.fairtrade.net/about/certification>

Rainforest Alliance Sustainable Agriculture Standard: Rainforest Alliance has two certifications: farm and chain of custody. The standard encompasses all three pillars of sustainability—social, economic, and environmental. RA is currently developing a new certification program, following their 2018 merger with UTZ. Since 2018 RA has also become the sole owner and operator of the 2017 SAN Standard.

<https://www.rainforest-alliance.org/business/solutions/certification/agriculture/>

SAI Platform - Farm Sustainability Assessment (SAI-FSA): The SAI Platform Farm Sustainability Assessment (SAI-FSA) is an easy-to-use tool that assesses farm environmental, social, and economic sustainability. The FSA is based on SAI Platform's Principles and Practices for sustainable agriculture and can be used by farmers as a benchmarking tool for comparing various certification schemes and proprietary codes.

<http://www.fsatool.com/>

The HCS Approach Toolkit: This High Carbon Stock Approach Toolkit takes practitioners through the steps in identifying HCS forest, from initial stratification of the vegetation using satellite images and field plots, through a decision tree process to assess the conservation value of the HCS forest patches in the landscape and ensure communities' rights and livelihoods are respected, to making the final conservation and land use map.

<http://highcarbonstock.org/the-hcs-approach-toolkit/>

THESIS Help Center Video: Deforestation and Land Conversion - On-farm KPI: Short video tutorial on the Deforestation and Land Conversion - On-farm KPI. Use case-sensitive password 'thesis' when prompted.

<https://vimeo.com/531017287>

Background Information

Greenpeace High Carbon Stock Approach: This website provides information about how to identify High Carbon Stock forests.

<https://www.greenpeace.org/archive-international/en/campaigns/forests/solutions/HCS-Approach/>

High Carbon Stock Approach: This website provides a standardized methodology for identifying natural, high carbon stock forest areas.

<http://highcarbonstock.org>

High Conservation Value Resource Network: This resource provides common guidance for how to identify, manage, and monitor High Conservation Value forest areas.

<https://hcvnetwork.org/>

Jurisdictional and Nested REDD+ (JNR): This website describes a pathway for existing and new projects to be integrated or 'nested' within broader jurisdictional REDD+ programs in order to quantify carbon benefits for individual conservation projects.

<https://verra.org/project/jurisdictional-and-nested-redd-framework/>





WWF High Conservation Value Forests: This website provides information describing the underlying concept of High Conservation Value forests.

<http://wwf.panda.org/?93560/High-Conservation-Value-Forests-The-concept-in-theory-and-practice>

Definitions

Cut-off dates: The point in time after which organizations cannot have engaged in unsustainable practices.

Deforestation: The direct human-induced conversion of forested land to non-forested land.

Ecologically sensitive regions: Include but are not limited to High Conservation Value Areas, Protected Areas, and World Wildlife Fund's Priority 200 Ecoregions.

Forest: An area of land that is dominantly covered by trees and that is established naturally or by management activities such as planting or seeding. It does not include land areas that are predominantly under agricultural or urban land use. It includes Primary forest and Secondary forest.

High Carbon Stock (HCS) forest: Forest areas with a significant amount of carbon stored within the vegetation and soil. Burning and clearing HCS forests releases stored carbon as greenhouse gas emissions. Different initiatives have set thresholds for identifying High Carbon Stock forests.

High Conservation Value (HCV) forest: Forested areas that support natural concentrations and distribution of species including significant species and ecosystems (e.g., endemic or endangered species, refuges), provide the basic services of nature in critical conditions (e.g., watershed protection, erosion control), and are fundamental to meeting the basic needs and traditional cultural identity of local communities.

Land conversion: The human-induced change of the prevailing physical and ecological conditions of an area of land to facilitate a new use or function. Examples include conversion of forests for pasture; conversion of native grasslands or other ecosystems for crop production, grazing, or other uses; conversion of farmland for urban development; and draining marshes or wetlands to create dry land.

Native ecosystems: Lands that have not been previously cultivated, cleared, drained or otherwise irrevocably altered that retain a dominant and characteristic native community of living organisms (as opposed to invasive or introduced species) which collectively function to provide unique value and services.

Non-forest: An area of land that is no longer dominated by trees.

Primary forest: A forest that has never been logged or cut and has developed following natural disturbances and under natural processes, regardless of its age.

Secondary forest: A forest that has been logged and has recovered naturally or artificially. It also includes degraded forest which is a secondary forest that has lost, through human activities, the structure, function, species composition or productivity normally associated with a natural forest type expected on that site.

Hotspots Addressed

7. Land transformation - On-farm





7. FERTILIZER APPLICATION - ON-FARM

Question

What was the nitrogen use intensity and phosphorus surplus associated with fertilizer application on the fields where your crops were produced?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following for our crop supply:
 - B1. _____ kg nitrogen per metric tonne of crop harvested.
 - B2. _____% of our crop supply, by mass, is represented by the number reported in B1.
 - B3. _____ kg phosphorus surplus per metric tonne of crop harvested.
 - B4. _____% of our crop supply, by mass, is represented by the number reported in B3.

Guidance

Calculation & Scope

Calculate B1 as the average of the most recent nitrogen (N) use intensities for the farms that produced your crop supply, weighted by the mass of crop supplied by each farm. For each farm, calculate N use intensity as the mass of N applied, divided by the mass of crop harvested. Include all N applied with organic and synthetic fertilizers, as well as N applied with irrigation water, from the end of the harvest of the previous crop through the harvest of the crop that produced your supply. Include N applied to a non-harvested cover crop grown between both harvests. Exclude N deposition from the atmosphere.

For conversion purposes, 1 lb = 0.454 kg, 1 short ton = 0.907 metric tonnes, and 1 cwt = 0.051 metric tonnes. To convert bushels from volume to weight, see the USDA Weights, Measures, and Conversion Factors for Agricultural Commodities and Their Products, listed in the Background Information.

Calculate B3 as the average of the most recent phosphorus (P) surpluses for the farms that produced your crop supply, weighted by the mass of crop supplied by each farm. For each farm, calculate P surplus as the mass of P applied minus the mass of P recommended, divided by the mass of crop harvested. Soil test results should be used to determine the amount of recommended P. Recommendations may be provided directly by soil test labs or by extension agents, certified crop consultants, or similar entities. Include all P applied with organic and synthetic fertilizers, from the end of the harvest of the previous crop through the harvest of the crop that produced your supply, and P applied to a non-harvested cover crop grown between both harvests. Data reported in phosphorus pentoxide (P₂O₅) should be converted to P as follows: 1 kg P₂O₅ = 0.436 kg P.

If primary farm data are unavailable for any of your supply, you may use a regional estimate to answer B1 and B3. Do not combine primary data and regional estimates. To answer B1 and B3 using regional estimates, you should only use estimates from a sub-country area such as an agricultural zone or region, eco-region, or geo-political boundary (e.g., state, county, department) where the crop is grown. A regional estimate must be based on a study that is representative of the production system of this crop supply, based on production data not older than 3 years before the harvest date of this supply, and published in a publicly available document.

Calculate B2 and B4 as the mass of your crop supply for which you were able to obtain primary data, divided by the total mass of your crop supply, then multiply by 100. If you have reported a regional estimate for B1 and B3, then report 0% for B2 and B4.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

To calculate N use intensity and P surplus, use one of the tools listed below or farm management software. If using the Cool Farm Tool, convert data reported as phosphorus pentoxide (P₂O₅) to P using the conversion factor listed above. Note that the Cool Farm Tool does not provide information about recommended P; this data will need to be obtained from other sources. THESIS Fertilizer Application KPI Calculation Tool can also assist in your N use intensity and P surplus calculations. See Certifications, Standards, and Tools below. If not using one of these tools, base your calculations on the "Nitrogen Use" metric and "Phosphorus Use" metric guidelines given by the Stewardship Index for Specialty Crops (SISC), listed in the Background Information.





Certifications, Standards & Tools

Cool Farm Tool: This calculator is available globally and calculates greenhouse gas emissions associated with farms, processing facilities, and transportation for many agriculture and livestock products.
<http://www.coolfarmtool.org/CoolFarmTool>

THESIS Help Center Video: Fertilizer Application - On-farm KPI: Short video tutorial on the Fertilizer Application - On-farm KPI. Use case-sensitive password 'thesis' when prompted.
<https://vimeo.com/529551750>

Background Information

GLOBALG.A.P.: GLOBALG.A.P. offers farm management certification for crops (fruits and vegetables, flowers and ornamentals, combinable crops, green coffee, and tea); livestock (cattle and sheep, dairy, calf and young beef, pigs, poultry, and turkey); aquaculture; chain of custody; plant propagation material; compound feed manufacturing; and livestock transport. The program also includes a risk assessment for worker health, safety, and welfare, as well as criteria for animal welfare and food safety.
https://www.globalgap.org/uk_en/

SAI Platform: Sustainable Performance Assessment (SAI-SPA): The SAI Platform provides fact sheets and guidelines for sustainable agriculture assessment including metrics.
<https://saiplatform.org/our-work/>

Stewardship Index for Specialty Crops (SISC): SISC provides guidance for calculating irrigation water use, energy use, nitrogen use, phosphorus surplus, and soil organic matter on U.S. specialty crop farms.
<https://www.stewardshipindex.org/>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.
<https://www.utzcertified.org/>

Weights, Measures, and Conversion Factors for Agricultural Commodities and Their Products: This publication provides information on agricultural commodity weights and measures.
<https://www.ers.usda.gov/publications/pub-details/?pubid=41881>

Definitions

Cover crops: A crop planted to improve or maintain soil, water and biodiversity quality, and to help control pests and disease of agricultural fields.

Fertilizer: Any material of natural or synthetic origin that is applied to soils or to plant tissues (usually leaves) to supply one or more plant nutrients essential to the growth of plants.

Organic fertilizers: Fertilizers derived from animal or vegetable matter. Examples include peat, animal waste (manure or other wastes), plant waste from agriculture, and sewage sludge.

Synthetic fertilizers: Fertilizers produced by chemical synthesis from inorganic starting materials.

Hotspots Addressed

5. Fertilizer application - On-farm





8. GREENHOUSE GAS EMISSIONS INTENSITY - ON-FARM

Question

What was the greenhouse gas emissions intensity associated with the farming operations that produced your crop supply?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following for our crop supply:
 - B1. _____ kg CO₂e per metric tonne of crop harvested.
 - B2. _____ % of our crop supply, by mass, is represented by the number reported above.

Guidance

Calculation & Scope

Calculate B1 as the average of the most recent greenhouse gas (GHG) emissions intensity estimates for the farms that produced your crop supply, weighted by the mass of crop supplied by each farm. For each farm, calculate GHG emissions intensity as the mass of all GHGs emitted, divided by the mass of crop harvested. Include the crop grown between the end of the harvest of the previous crop through the harvest of the crop that produced your supply.

For conversion purposes, 1 lb = 0.454 kg, 1 short ton = 0.907 metric tonnes, and 1 cwt = 0.051 metric tonnes. To convert bushels from volume to weight, see the USDA Weights, Measures, and Conversion Factors for Agricultural Commodities and Their Products, listed in the Background Information.

If primary farm data are unavailable for any of your supply, you may use a regional estimate to answer B1. Do not combine primary data and regional estimates. To answer B1 using regional estimates, you should only use estimates from a sub-country area such as an agricultural zone or region, eco-region, or geo-political boundary (e.g., state, county, department) where the crop is grown. A regional estimate must be based on a study that is representative of the production system of this crop supply, based on production data not older than 3 years before the harvest date of this supply, and published in a publicly available document.

Calculate B2 as the mass of your crop supply for which you were able to obtain primary data, divided by the total mass of your crop supply, then multiply by 100. If you have reported a regional estimate for B1, then report 0% for B2.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

To calculate GHG emissions intensity, use one of the tools listed in Certifications, Standards, and Tools below. If not using the tools listed here, base your calculations on the guidelines given in the SAI Platform Sustainable Performance Assessment or in PAS2050:2011, listed in the Background Information.

Certifications, Standards & Tools

Cool Farm Tool: This calculator is available globally and calculates greenhouse gas emissions associated with farms, processing facilities, and transportation for many agriculture and livestock products.

<http://www.coolfarmtool.org/CoolFarmTool>

Grow Asia Counter: This tool estimates how changes in management practices impact the greenhouse gas emissions associated with production of cocoa, coffee, tea, corn, rice, potatoes, and horticultural products in Cambodia, Indonesia, Myanmar, Philippines, and Vietnam.

<http://counter.growasia.org/>

THESIS Help Center Video: Greenhouse Gas Emissions Intensity - Growing Operations KPI: Short video tutorial on the Greenhouse Gas Emissions Intensity - Growing Operations KPI. Use case-sensitive password 'thesis' when prompted.

<https://vimeo.com/448646995>





Background Information

GLOBALG.A.P.: GLOBALG.A.P. offers farm management certification for crops (fruits and vegetables, flowers and ornamentals, combinable crops, green coffee, and tea); livestock (cattle and sheep, dairy, calf and young beef, pigs, poultry, and turkey); aquaculture; chain of custody; plant propagation material; compound feed manufacturing; and livestock transport. The program also includes a risk assessment for worker health, safety, and welfare, as well as criteria for animal welfare and food safety.

https://www.globalgap.org/uk_en/

PAS 2050:2011: According to BSI, "PAS 2050:2011 is a publicly available specification (PAS) providing a method for assessing the life cycle greenhouse gas (GHG) emissions of goods and services (jointly referred to as "products")."

<https://shop.bsigroup.com/Browse-By-Subject/Environmental-Management-and-Sustainability/PAS-2050/>

SAI Platform: Sustainable Performance Assessment (SAI-SPA): The SAI Platform provides fact sheets and guidelines for sustainable agriculture assessment including metrics.

<https://saipatform.org/our-work/>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.

<https://www.utzcertified.org/>

Weights, Measures, and Conversion Factors for Agricultural Commodities and Their Products: This publication provides information on agricultural commodity weights and measures.

<https://www.ers.usda.gov/publications/pub-details/?pubid=41881>

Definitions

CO₂e: Carbon dioxide equivalent; a metric that expresses the impact of a greenhouse gas in terms of the amount of carbon dioxide (CO₂) that has the same global warming potential.

Farming operation: An area of land and its buildings, comprised of one or more locations managed together that is used for growing crops that are delivered for further processing or as ingredients to other final products.

Greenhouse gas: Gases that contribute to the greenhouse effect by absorbing infrared radiation in the atmosphere, e.g., carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons.

Hotspots Addressed

4. Energy consumption - On-farm

5. Fertilizer application - On-farm





9. IRRIGATION WATER USE INTENSITY - ON-FARM

Question

What was the irrigation water use intensity associated with the farming operations that produced your crop supply?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following for our crop supply:
 - B1. _____ cubic meters of irrigation water use per metric tonne of crop harvested.
 - B2. _____% of our crop supply, by mass, is represented by the number reported above.

Guidance

Calculation & Scope

Calculate B1 as the average of the most recent irrigation water use intensity estimates for the farms that produced your crop supply, weighted by the mass of crop supplied by each farm. For each farm, calculate irrigation water use intensity as the volume of irrigation water applied, divided by the mass of crop harvested. Include the crop grown between the end of the harvest of the previous crop through the harvest of the crop that produced your supply. Methods of obtaining irrigation water use data include, but are not limited to, flow meters, measurements with rain gauges, estimates based on the effective precipitation rate of the sprinklers used, irrigation district reporting, pressurized pipes, or extrapolation from power records.

For conversion purposes, 1 U.S. acre-inch = 102.8 cubic meters or 10.3 hectare-mm, 1 gallon = 0.0038 cubic meters, 1 litre = 0.001 cubic meters, 1 kg = 0.001 metric tonnes, 1 short ton = 0.907 metric tonnes, and 1 cwt = 0.051 metric tonnes. To convert bushels from volume to weight, see the USDA Weights, Measures, and Conversion Factors for Agricultural Commodities and Their Products, listed in the Background Information.

If primary farm data are unavailable for any of your supply, you may use a regional estimate to answer B1. Do not combine primary data and regional estimates. To answer B1 using regional estimates, you should only use estimates from a sub-country area such as an agricultural zone or region, eco-region, or geo-political boundary (e.g., state, county, department) where the crop is grown. A regional estimate must be based on a study that is representative of the production system of this crop supply, based on production data not older than 3 years before the harvest date of this supply, and published in a publicly available document.

Calculate B2 as the mass of your crop supply for which you were able to obtain primary data, divided by the total mass of your crop supply, then multiply by 100. If you have reported a regional estimate for B1, then report 0% for B2.

If no irrigation water was used to produce any portion of your crop supply, enter "0" for B1 and 100% for B2.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

Irrigation water use intensity can be calculated directly from farm data or by one of the tools listed below. If using Field to Market's Fieldprint Platform, calculate your response to B1 using information from the Platform's "Water applied" data field. The conversion factors listed above will be necessary to complete your calculation. The Fieldprint Platform's Irrigation Water Use metric results should not be used directly to answer this question due to differences in calculation methodology. For a list of crops currently covered by Field to Market, refer to the description of Field to Market's Fieldprint Platform below. If using the Cool Farm Tool, report data from the "Blue water" results field only. Do not use data from the "Total water" or "Green water" results fields. If not using the tools listed here, base your calculations on the "Applied Water Use Efficiency" metric guidelines given by the Stewardship Index for Specialty Crops (SISC), listed in the Background Information.





Certifications, Standards & Tools

Cool Farm Tool: This calculator is available globally and calculates greenhouse gas emissions associated with farms, processing facilities, and transportation for many agriculture and livestock products.
<http://www.coolfarmtool.org/CoolFarmTool>

THESIS Help Center Video: Irrigation Water Use Intensity - On-farm KPI: Short video tutorial on the Irrigation Water Use Intensity - On-farm KPI. Use case-sensitive password 'thesis' when prompted.
<https://vimeo.com/531017121>

Background Information

GLOBALG.A.P.: GLOBALG.A.P. offers farm management certification for crops (fruits and vegetables, flowers and ornamentals, combinable crops, green coffee, and tea); livestock (cattle and sheep, dairy, calf and young beef, pigs, poultry, and turkey); aquaculture; chain of custody; plant propagation material; compound feed manufacturing; and livestock transport. The program also includes a risk assessment for worker health, safety, and welfare, as well as criteria for animal welfare and food safety.
https://www.globalgap.org/uk_en/

SAI Platform: Sustainable Performance Assessment (SAI-SPA): The SAI Platform provides fact sheets and guidelines for sustainable agriculture assessment including metrics.
<https://saiplatform.org/our-work/>

Stewardship Index for Specialty Crops (SISC): SISC provides guidance for calculating irrigation water use, energy use, nitrogen use, phosphorus surplus, and soil organic matter on U.S. specialty crop farms.
<https://www.stewardshipindex.org/>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.
<https://www.utzcertified.org/>

Water Footprint Network: Waterfootprint.org provides various tools, assessments, and information regarding water consumption accounting.
<https://waterfootprint.org/en/>

Weights, Measures, and Conversion Factors for Agricultural Commodities and Their Products: This publication provides information on agricultural commodity weights and measures.
<https://www.ers.usda.gov/publications/pub-details/?pubid=41881>

World Resources Institute (WRI) Aqueduct Measuring and Mapping Water Risk: WRI created the global water risk mapping tool, Aqueduct, which used 12 indicators to map where and how water risks and opportunities occur globally.
<https://www.wri.org/aqueduct>

Definitions

Farming operation: An area of land and its buildings, comprised of one or more locations managed together that is used for growing crops that are delivered for further processing or as ingredients to other final products.

Irrigation water use: Total withdrawals from municipal and private water providers, surface water, groundwater, or wells for purposes of crop irrigation. Collected rainwater is not included.

Hotspots Addressed

9. Water use - On-farm





10. LABOR RIGHTS - ON-FARM

Question

How did your organization manage labor rights risks in the operations that produced your crop supply?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following:
 - B1. _____% of our crop supply, by mass, was produced in operations that were covered by an internal policy that has quantitative time-bound goals related to child labor, discrimination, forced labor, and freedom of association and collective bargaining.
 - B2. _____% of our crop supply, by mass, was produced in operations that were reviewed by a risk assessment which identifies high-risk areas for labor rights abuses.
 - B3. _____% of our staff responsible for procurement activities have been trained on labor rights issues in the supply chain.
 - B4. _____% of our staff responsible for procurement activities have been evaluated via performance metrics on labor rights improvements in the supply chain.
 - B5. _____% of our crop supply, by mass, was produced in operations that were low risk, that were high risk but corrective actions were taken, or that were audited on child labor, discrimination, forced labor, and freedom of association and collective bargaining in the last three years.

Guidance

Calculation & Scope

Calculate B1 as the mass of your crop supply that is covered by an internal policy that has quantitative time-bound goals related to child labor, discrimination, forced labor, and freedom of association and collective bargaining, divided by the total mass of your crop supply, then multiply by 100. Where freedom of association and collective bargaining are restricted by law, employers can use other forms of non-union employee representation and relations to respect this aspect of workers' rights.

Calculate B2 as the mass of your crop supply that has been reviewed by a risk assessment which identifies high-risk areas for labor rights abuses, divided by the total mass of your crop supply, then multiply by 100.

To be included in B2, a risk assessment must have been conducted by second or third parties and must have been conducted at least once every three years using a standard based on internationally recognized principles. The risk assessments and standard must be verifiable and must address labor rights abuses such as discrimination on grounds of gender, age, ethnicity or disability, physical violence, sexual harassment and abuse, child labor, forced labor, and freedom of association and collective bargaining or any other range of behaviors and practices as outlined by internationally-recognized labor standards. The standards and websites listed in Background Information below may be helpful for conducting your risk assessment(s) and for understanding appropriate corrective actions which can inform your responses.

In addition, to determine if an operation is in a high-risk area for labor rights abuses, you may utilize a country risk analysis tool. The tool should measure the strength of a country's ability to govern and enforce laws, regulations, and internationally recognized principles. The country risk assessment may be a first party systematic risk assessment, or external risk analyses tools may be utilized. The AMFORI Countries' Risk Classification tool listed below may be used to inform your response. The country risk assessment can be complemented with risks associated with specific activities, regions, and suppliers.

Calculate B3 as the number of staff responsible for procurement activities that have been trained on labor rights issues in the supply chain, divided by the total number of staff responsible for procurement activities, then multiply by 100. Include both full-time and contracted employees. The training must be verifiable. Staff training should cover child labor, discrimination, forced labor, and freedom of association and collective bargaining, as outlined by internationally-recognized labor principles. Staff training should be renewed as appropriate to maintain competency and implementation of good practices for labor rights issues and to prevent training exhaustion. Additional staff training may be required to perform job duties.





Calculate B4 as the number staff responsible for procurement activities that have been evaluated via performance metrics on labor rights improvements in the supply chain, divided by the total staff responsible for procurement activities, then multiply by 100. Evaluation on labor rights should include, child labor, discrimination, forced labor, and freedom of association and collective bargaining, as outlined by internationally-recognized labor principles. Examples of improvements include decreased incidence of child labor, forced labor, or discrimination, or an increased worker participation in collective bargaining.

Calculate B5 as the mass of your crop supply that was produced in operations that were low risk, that were high risk but corrective actions were taken, or that were audited on child labor, discrimination, forced labor, and freedom of association and collective bargaining in the last three years, divided by the total mass of your crop supply, then multiply by 100. To be included in B5, audits must be verifiable and address child labor, discrimination, forced labor, and freedom of association and collective bargaining, as outlined by internationally-recognized labor principles. Examples include, but are not limited to, principles outlined by the United Nations Global Compact, the International Labour Organization Declaration on Fundamental Principles and Rights at Work. Where freedom of association & collective bargaining is restricted by law, employers can use other forms of non-union employee representation and relations to respect this aspect of workers' rights. Audits should be conducted by second or third parties at least once every three years, or more often depending on the requirements of the standard organization. See the Certifications, Standards & Tools for more information. Government regulations or parties in the supply chain may initiate these audits.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question. Audits must have been conducted in the 36 months prior to the end of the 12-month period.

Certifications, Standards & Tools

Amfori BSCI Code of Conduct: This global business association for open and sustainable trade, empowers members worldwide by monitoring and improving social performance in their supply chains. It offers tools to carry out human rights due diligence – identifying and mitigating any risks in supply chains and supporting remedial action.

<https://www.amfori.org/sites/default/files/amfori%20BSCI%20Brochure-compressed.pdf>

Amfori Country Risk Classification: This list classifies countries' risk of social injustice in an effort to assist companies in determining high and low risk for their sourcing and operations.

<http://duediligence.amfori.org/CountryRiskClassification>

C.A.F.E. Practices: The Coffee and Farmer Equity (C.A.F.E.) Practices represent a standard by which coffee suppliers can be evaluated against economic, environmental, and social criteria.

<http://globalassets.starbucks.com/assets/4a67ce15e63b4ea18461ff65a540feb3.pdf>

Fair for Life Certification Program: The Fair Life program provides certification for fair trade and responsible supply chains. The goal of Fair for Life is to ensure social and economic benefits to socioeconomically disadvantaged agricultural producers and workers and to ensure that smallholder producers receive a fair share.

<http://www.fairforlife.org/>

Fairtrade International Certification: Fairtrade International provides several standards (e.g. for smallholders and workers), and a certification through FLOCERT. Fairtrade aims to improve the livelihoods of smallholders and workers amongst others via fair trade relationships.

<https://www.fairtrade.net/about/certification>

Rainforest Alliance Sustainable Agriculture Standard: Rainforest Alliance has two certifications: farm and chain of custody. The standard encompasses all three pillars of sustainability—social, economic, and environmental. RA is currently developing a new certification program, following their 2018 merger with UTZ. Since 2018 RA has also become the sole owner and operator of the 2017 SAN Standard.

<https://www.rainforest-alliance.org/business/solutions/certification/agriculture/>

SA8000® Standard: Social Accountability International (SAI) is a global non-governmental organization that aims to advance human rights at work via the SA8000® Standard. SA 8000 measures social performance in eight areas that are relevant for workplaces in factories and organizations worldwide.

<https://sa-intl.org/programs/sa8000/>





Sedex Members Ethical Trade Audit: Sedex Members Ethical Trade Audit is an auditing system that aligns with Ethical Trading Initiative's Base Code as well International Labour Organization Conventions. It has been developed to provide a public auditing methodology and format for companies to use to assess compliance.

<https://www.sedex.com/our-services/smeta-audit/>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.

<https://www.utzcertified.org/>

Background Information

CSR Europe. Blueprint for Embedding Human Rights in Key Company Functions: The purpose of this blueprint is to provide practical support to CSR and human resource managers on how to embed human rights in the company with the aim to reduce risks for the company.

<https://humanrights.wbcds.org/project/blueprint-for-embedding-human-rights-in-key-company-functions/>

GlobalG.A.P. Risk Assessment on Social Practice (GRASP): GRASP is an add-on module for GLOBALG.A.P. developed to assess social practices on the farm, addressing specific aspects of workers' health, safety and welfare, and labor rights.

https://www.globalgap.org/uk_en/for-producers/globalg.a.p.-add-on/grasp/

International Labour Organization Declaration on Fundamental Principles and Rights at Work: This declaration outlines the universal rights of all workers regardless of citizenship status, gender, or the local level of economic development.

<http://www.ilo.org/declaration/lang-en/index.htm>

International Labour Organization defines Gender Equality/Discrimination: Every worker has the right to be treated fairly and to have access to equal opportunities regardless of their gender, sexual orientation, age, marital status, and religious and political beliefs. In addition, each worker should be free to decide where to work, and when to terminate the working relationship. To facilitate equality, it is important that a variety of workers are actively involved in decision making. This can be stimulated through workers organizations, unions, workers surveys, hotlines, and employers organizations.

<http://www.ilo.org/global/topics/dw4sd/themes/gender-equality/lang-en/index.htm>

ISO 26000 Social Responsibility: ISO 26000 is not a certification tool, but it offers guidance about social responsibility to all sorts of organizations regardless of their activity, size or location.

<https://www.iso.org/iso-26000-social-responsibility.html>

Social Accountability International Guidance Document for Social Accountability 8000: According to Social Accountability International, "this guidance document provides various tools and information for users of the Social Accountability 8000 standard, including definitions, background information, and examples."

<https://sa-intl.org/wp-content/uploads/2020/02/SA8000-2014-Guidance-Document.pdf>

United Nations Global Compact Human Rights and Business Dilemmas Forum: United Nations Global Compact Human Rights and Business Dilemmas Forum present an introduction to, analysis of, and business recommendations for minimizing social sustainability risks in the supply chain.

<https://www.unglobalcompact.org/library/9>

United Nations Global Compact Self-Assessment Tool on Human Rights: This tool can be used by organizations to assess human rights performance against international standards, conventions and agreements. It also provides suggestions for continuous improvement.

<https://globalcompactselfassessment.org/humanrights>





Definitions

Collective bargaining: According to the ILO this is a key means through which employers and their organizations and trade unions can establish fair wages and working conditions and ensure equal opportunities between women and men.

Corrective actions: Prompt actions taken to eliminate the causes of a problem, thus preventing their recurrence.

Discrimination: Discrimination is defined under ILO Convention No. 111 as any distinction, exclusion or preference made on the basis of race, color, sex, religion, political opinion, national extraction or social origin (among other characteristics), “which has the effect of nullifying or impairing equality of opportunity and treatment in employment or occupation”.

First party audit: A first party audit is conducted by the organization itself for management review and other internal purposes and may form the basis for an organization’s declaration of conformity.

First party systematic risk assessment: A first party systematic risk assessment is conducted by the organization itself for management review and other internal purposes and may form the basis for an organization’s declaration of conformity.

Forced labor: Any task or service performed by a person against their will or under threat of negative consequence. Forced labor includes debt bondage, human trafficking, withholding of wages or identity papers, threats of violence, unreasonable restriction of movement, and exploitation of marginalized workers.

Freedom of association: The right of workers to join or form trade union or other worker organizations of their choosing/or refrain from doing so/and could bargain collectively without fear of retaliation or repercussion as long as it not contrary to local law.

Freedom of collective bargaining: The right to negotiate the conditions of employment as a group rather than individually without fear of repercussions.

Internationally-recognized labor principles: Internationally-recognized labor principles include the United Nations Global Compact and International Labour Organization Declaration on Fundamental Principles and Rights at Work or equivalent.

Labor rights: The universal rights of workers, regardless of race, gender, nationality, or other distinguishing characteristic. These include protection from the worst forms of child labor, forced labor, and discrimination, as well as freedom of association and collective bargaining as outlined by the United Nations Global Compact or the International Labour Organization Declaration on Fundamental Principles and Rights at Work.

Risk assessment: A systematic process to evaluate potential risks within an operation, system, or supply chain. It can include an on-site audit by a second party or third party or a country risk classification analysis that judges the site risk due to prevailing conditions, controls, or other mitigating factors.

Second-party audit: An audit conducted by a party having an interest in the organization, such as customers, or by another entity on their behalf.

Staff responsible for procurement activities: All both full-time and contracted employees responsible for attaining raw materials, parts, components, products and services at a facility that are being evaluated via KPIs on labor rights improvements in the supply chain.

Third-party audit: An audit conducted by external, independent auditing organizations, such as those providing certification of conformity to a standard.

Verifiable: Having the ability to demonstrate, through a reputable assessor, the truth or accuracy of a claim.

Worst forms of child labor: Labor that negatively affects a child’s health, safety, morals, or reasonable ability to receive an education. This includes forced labor, prostitution or pornography, labor for illicit activities, and hazardous work. Hazardous work activities include work that is abusive, work underground, underwater, at dangerous heights or in confined spaces, work with dangerous machinery and tools, work with heavy loads, work involving hazardous substances and environments, work for long hours, work at night, or work in which the worker is unreasonably restricted from movement outside the premises.

Hotspots Addressed

6. Labor rights – On-farm





11. WORKER HEALTH AND SAFETY – ON-FARM

Question

How did your organization manage worker health and safety risks in the operations that produced your crop supply?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following for our supply:
 - B1. _____% of our crop supply, by mass, was produced in operations that have performed a risk assessment to identify high-risk areas for health and safety.
 - B2. _____% of our crop supply, by mass, was produced in operations that train workers on health and safety procedures.
 - B3. _____% of our crop supply, by mass, was produced in operations that implement a verifiable worker health and safety plan.
 - B4. _____% of our crop supply, by mass, was produced in operations that have a worker health and safety performance monitoring system in place.
 - B5. _____% of our crop supply, by mass, was produced in operations that were audited in the last three years on worker health and safety issues.

Guidance

Calculation & Scope

To be included in B1-B5, risk assessments, training programs, safety plans, performance monitoring systems, and audits must be verifiable and address health and safety issues such as worker injury and worker exposure to harmful elements. The assessments and audits must be conducted by second or third parties. The risk assessment must be conducted once per year while the audit must have been conducted at least once every three years, both using a standard based on internationally-recognized principles such as International Labour Organization Occupational Safety and Health Conventions (e.g., No. 155). The standards and websites listed in Background Information below may be helpful for conducting your risk assessment(s) and for understanding appropriate corrective actions, which can inform your responses. See the Certifications, Standards & Tools for examples of initiatives that meet these requirements.

Calculate B1 as the mass of your crop supply that came from operations that have performed a risk assessment to identify high risk areas for health and safety, divided by the total mass of your crop supply, then multiply by 100.

To determine if an operation is high risk for health and safety, you may utilize a country risk analysis tool. The tool should measure the strength of a country's ability to govern and enforce laws, regulations, and internationally recognized principles. The country risk assessment may be a first party systematic review assessment, or external risk analyses tools may be utilized. It must be conducted at least once per year. The country risk assessment can be complemented with risks associated with specific activities, regions, and suppliers.

Calculate B2 as the mass of your crop supply that came from operations that train workers on health and safety procedures, divided by the total mass of your crop supply, then multiply by 100. To be included in B2, the training on health and safety procedures must be available in the language of the employee, including migratory and seasonal workers, and must be renewed as appropriate to maintain competency and implementation of good practices for workers on health and safety procedures and to prevent training exhaustion. Additional worker training may be required to perform job duties. On-site audits, where necessary, should be conducted by second or third parties and must be conducted at least once every three years using a standard based on internationally-recognized principles.

Calculate B3 as the mass of your crop supply that came from operations that implement a verifiable worker health and safety plan, divided by the total mass of your crop supply, then multiply by 100. To be included in B3, a worker health and safety plan must be verifiable and must be available in the language of the employee, including migratory and seasonal workers, and be prominently displayed in the workplace where employees normally report. The plan should include best practices specific to ergonomics; repetitive motions; chemical and particulate exposure; appropriate use of personal protective equipment (PPE); and proper use of tools, machinery, and the handling of animals (if applicable). On-site audits, where necessary, should be conducted by second or third parties and must be conducted at least once every three years using a standard based on internationally-recognized principles.





Calculate B4 as the mass of your crop supply that came from operations that have a worker health and safety performance monitoring system in place, divided by the total mass of your crop supply, then multiply by 100. To be included in B4, a worker health and safety performance monitoring system should include metrics on issues including, but not limited to, incidence of worker injuries and prevalence of diseases. On-site audits, where necessary, should be conducted by second or third parties and must be conducted at least once every three years using a standard based on internationally-recognized principles.

Calculate B5 as the mass of your crop supply that came from operations that were audited in the last three years on worker health and safety issues, divided by the total mass of your crop supply, then multiply by 100. Audits should be conducted by second or third parties at least once every three years, or more often depending on the requirements of the standard organization. See the Certifications, Standards & Tools for more information. Government regulations or parties in the supply chain may initiate these audits.

To be included in B5, the audits must be verifiable and address preventive measures, freely provided personal protective equipment, identification of worker health and safety hazards and effects on the exposed people, statistics and reasons behind injuries, design of work area, processes, installations, machinery/work equipment, operating processes and work organization, as outlined by internationally-recognized labor principles. Examples include, but are not limited to, principles outlined by the United Nations Global Compact, the International Labour Organization Standards on Occupational Health and Safety.

Certifications, Standards & Tools

Amfori Country Risk Classification: This list classifies countries' risk of social injustice in an effort to assist companies in determining high and low risk for their sourcing and operations.

<http://duediligence.amfori.org/CountryRiskClassification>

C.A.F.E. Practices: The Coffee and Farmer Equity (C.A.F.E.) Practices represent a standard by which coffee suppliers can be evaluated against economic, environmental, and social criteria.

<http://globalassets.starbucks.com/assets/4a67ce15e63b4ea18461ff65a540feb3.pdf>

Fairtrade International Certification: Fairtrade International provides several standards (e.g. for smallholders and workers), and a certification through FLOCERT. Fairtrade aims to improve the livelihoods of smallholders and workers amongst others via fair trade relationships.

<https://www.fairtrade.net/about/certification>

GlobalG.A.P. Risk Assessment on Social Practice (GRASP): GRASP is an add-on module for GLOBALG.A.P. developed to assess social practices on the farm, addressing specific aspects of workers' health, safety and welfare, and labor rights.

https://www.globalgap.org/uk_en/for-producers/globalg.a.p.-add-on/grasp/

Rainforest Alliance Sustainable Agriculture Standard: Rainforest Alliance has two certifications: farm and chain of custody. The standard encompasses all three pillars of sustainability—social, economic, and environmental. RA is currently developing a new certification program, following their 2018 merger with UTZ. Since 2018 RA has also become the sole owner and operator of the 2017 SAN Standard.

<https://www.rainforest-alliance.org/business/solutions/certification/agriculture/>

Recommended Practices for Safety and Health Programs: Defines and enforces standards for the safe and healthful working conditions for working men and women. OSHA also provides training, outreach education, and assistance. The OSHA tools can be used for self-evaluations, to compare elements and actions of different health and safety standards, to track implemented actions, identify remaining weaknesses, and strategies for continued improvement.

<https://www.osha.gov/shpguidelines/explore-tools.html>

SA8000® Standard: Social Accountability International (SAI) is a global non-governmental organization that aims to advance human rights at work via the SA8000® Standard. SA 8000 measures social performance in eight areas that are relevant for workplaces in factories and organizations worldwide.

<https://sa-intl.org/programs/sa8000/>

Sedex Members Ethical Trade Audit: Sedex Members Ethical Trade Audit is an auditing system that aligns with Ethical Trading Initiative's Base Code as well International Labour Organization Conventions. It has been developed to provide a public auditing methodology and format for companies to use to assess compliance.

<https://www.sedex.com/our-services/smeta-audit/>





THESIS Help Center Video: Worker Health and Safety – Growing Operations KPI: Short video tutorial on the Worker Health and Safety – Growing Operations KPI. Use case-sensitive password 'thesis' when prompted.
<https://vimeo.com/529546577>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.
<https://www.utzcertified.org/>

Background Information

ISO 26000 Social Responsibility: ISO 26000 is not a certification tool, but it offers guidance about social responsibility to all sorts of organizations regardless of their activity, size or location.
<https://www.iso.org/iso-26000-social-responsibility.html>

Social Accountability International Guidance Document for Social Accountability 8000: According to Social Accountability International, “this guidance document provides various tools and information for users of the Social Accountability 8000 standard, including definitions, background information, and examples.”
<https://sa-intl.org/wp-content/uploads/2020/02/SA8000-2014-Guidance-Document.pdf>

United Nations Global Compact Human Rights and Business Dilemmas Forum: United Nations Global Compact Human Rights and Business Dilemmas Forum present an introduction to, analysis of, and business recommendations for minimizing social sustainability risks in the supply chain.
<https://www.unglobalcompact.org/library/9>

Definitions

Corrective actions: Prompt actions taken to eliminate the causes of a problem, thus preventing their recurrence.

First party systematic risk assessment: A first party systematic risk assessment is conducted by the organization itself for management review and other internal purposes and may form the basis for an organization's declaration of conformity.

Risk assessment: A systematic process to evaluate potential risks within an operation, system, or supply chain. It can include an on-site audit by a second party or third party or a country risk classification analysis that judges the site risk due to prevailing conditions, controls, or other mitigating factors.

Second-party audit: An audit conducted by a party having an interest in the organization, such as customers, or by another entity on their behalf.

Third-party audit: An audit conducted by external, independent auditing organizations, such as those providing certification of conformity to a standard.

Verifiable: Having the ability to demonstrate, through a reputable assessor, the truth or accuracy of a claim.

Worker exposure to harmful elements: Contact with potentially harmful chemical, physical, or biological elements that occurs as a result of one's job-related activities. Examples include chronic interaction with chemicals, dusts, radiation, environmental elements, allergens, noise, and vibrations.

Worker health and safety: Worker health and safety consists of worker injury and worker exposure to harmful elements. Please see the corresponding terms.

Worker injury: Physical damage to an individual due to a single act that causes immediate damage or repetitive acts that cause damage over time. Examples of causes of injury include repetitive motions, non-ergonomic motions, damage from use of tools and machinery, falls, and burns.

Hotspots Addressed

10. Worker health and safety – On-farm



12. YIELD – ON-FARM

Question

What was the average yield of your crop supply from farming operations?

Response Options

- A. We are unable to determine at this time.
- B. We are able to report the following for our crop supply:
 - B1. _____ metric tonnes of crop supply harvested per hectare planted.
 - B2. _____% of our crop supply, by mass, is represented by the number reported above.

Guidance

Calculation & Scope

Calculate B1 as the average of the most recent yield estimates from the farms that produced your crop supply, weighted by the mass of crop supplied by each farm. For each farm, calculate yield as the mass of crop harvested, divided by the hectares planted. If your current yield estimates are recorded as area planted per mass of crop harvested, take the inverse of each farm's metric and then calculate the average to report B1.

If primary farm data are unavailable for any of your supply, you may use a regional estimate to answer B1. Do not combine primary data and regional estimates. To answer B1 using regional estimates, you should only use estimates from a sub-country area such as an agricultural zone or region, eco-region, or geo-political boundary (e.g., state, county, department) where the crop is grown. A regional estimate must be based on a study that is representative of the production system of this crop supply, based on production data not older than 3 years before the harvest date of this supply, and published in a publicly available document.

Calculate B2 as the mass of your crop supply for which you were able to obtain primary data, divided by the total mass of your crop supply, then multiply by 100. If you have reported a regional estimate for B1, then report 0% for B2.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

Certifications, Standards & Tools

THESIS Help Center Video: Yield – On-farm KPI: Short video tutorial on the Yield – On-farm KPI. Use case-sensitive password 'thesis' when prompted.
<https://vimeo.com/529542196>

Background Information

Stewardship Index for Specialty Crops (SISC): SISC provides guidance for calculating irrigation water use, energy use, nitrogen use, phosphorus surplus, and soil organic matter on U.S. specialty crop farms.
<https://www.stewardshipindex.org/>

UTZ Certified: UTZ Certified is a sustainable farming program for coffee, cocoa, tea, and hazelnut farms and businesses. The UTZ program focuses on sustainable farming techniques, safe working conditions, environmental protection, and elimination of child labor. UTZ-certified farms must meet strict requirements and are subject to monitoring by third parties. In 2018 UTZ merged with Rainforest Alliance.
<https://www.utzcertified.org/>

Definitions

Farming operation: An area of land and its buildings, comprised of one or more locations managed together that is used for growing crops that are delivered for further processing or as ingredients to other final products.

Hotspots Addressed

- 4. Energy consumption – On-farm
- 7. Land transformation – On-farm





13. WORKER HEALTH AND SAFETY – PROCESSING

Question

What was the injury and illness rate at the company-owned or contract processing facilities that produced your final product?

Response Options

- A. We are unable to determine at this time.
- B. Our injury and illness rate was:
 - B1. _____.
 - B2. _____% of our product, by mass, is represented by the number reported above.

Guidance

Calculation & Scope

This question aligns with the United States Occupational Safety and Health Administration (OSHA) Injury and Illness rate. This rate can be normalized for global applicability.

Calculate B1 by multiplying the number of recordable injuries and illnesses by 200,000. Divide this number by the total employee hours worked to produce your final product. Include all employees at a facility that participate in the production of the final product. This includes both full-time and contracted employees. If multiple facilities manufacture the final product, the injury and illness rate will need to be adjusted using a weighted average based on each facility's percentage of total production.

THESIS General Guidance document also provides instruction for calculating the weighted average. See Background Information for more information. THESIS Worker Health and Safety KPI Calculation Tool can also assist with your illness and injury rate calculations, including weighted averages. Additional resources include the Incidence Rate Calculator and Comparison Tool (an online calculator that will compute your injury and illness rate) and OSHA Forms for Recording Work-Related Injuries and Illnesses.

Calculate B2 as the mass of your final product for which you were able to obtain data, divided by the total mass of your final product, then multiply by 100.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.

Certifications, Standards & Tools

Incidence Rate Calculator and Comparison Tool: This tool calculates the injury and illness incidence rate for employers.

<https://data.bls.gov/iirc/>

OSHA Forms for Recording Work-Related Injuries and Illnesses: This webpage contains information on how to record workplace injuries and illnesses and provides the worksheets needed to correctly do so.

<https://www.osha.gov/recordkeeping/forms>

Background Information

How to Compute a Firm's Incidence Rate for Safety Management: This website from the U.S. Bureau of Labor Statistics provides in-depth guidance on computing injury and illness numbers.

<https://www.bls.gov/iif/osheval.htm>

SA8000® Standard: Social Accountability International (SAI) is a global non-governmental organization that aims to advance human rights at work via the SA8000® Standard. SA 8000 measures social performance in eight areas that are relevant for workplaces in factories and organizations worldwide.

<https://sa-intl.org/programs/sa8000/>

TSC General Guidance for Key Performance Indicators: The General Guidance Document for Key Performance Indicators (KPI) provides essential guidance to complement the specific guidance provided for each KPI. TSC recommends reading this document before you begin your first questionnaire and revisiting it as often as necessary for clarification and additional information.

<https://www.sustainabilityconsortium.org/tsc-downloads/general-guidance-document/>





Definitions

Company-owned or contract manufacturing facilities: Facilities responsible for manufacturing and assembly of final products, whether these facilities are internal or external to the respondent's organization.

Worker exposure to harmful elements: Contact with potentially harmful chemical, physical, or biological elements that occurs as a result of one's job-related activities. Examples include chronic interaction with chemicals, dusts, radiation, environmental elements, allergens, noise, and vibrations.

Worker health and safety: Worker health and safety consists of worker injury and worker exposure to harmful elements. Please see the corresponding terms.

Worker injury: Physical damage to an individual due to a single act that causes immediate damage or repetitive acts that cause damage over time. Examples of causes of injury include repetitive motions, non-ergonomic motions, damage from use of tools and machinery, falls, and burns.

Hotspots Addressed

11. Worker health and safety – Processing



14. PACKAGING RAW MATERIAL SOURCING

Question

What percentage of the sales packaging used for your final products, by mass, was post-consumer recycled material and sustainably-sourced renewable virgin material?

Response Options

- A. Not applicable. We do not use sales packaging for our product.
- B. We are unable to determine at this time.
- C. The sales packaging used for our final products was:
 - C1. _____% post-consumer recycled material.
 - C2. _____% sustainably-sourced renewable virgin material.

Guidance

Calculation & Scope

The scope of this question is the product category's sales packaging, which is defined as packaging that leaves a store with the consumer. Include the transportation-related packaging for product that is shipped directly to an end consumer.

Calculate C1 as the mass of post-consumer recycled material in the sales packaging of your final products, divided by the total mass of sales packaging used for your final products, then multiply by 100. This excludes pre-consumer recycled materials.

Calculate C2 as the mass of sustainably-sourced renewable virgin material in the sales packaging of your final products, divided by the total mass of sales packaging used for your final products, then multiply by 100. To be included in C2, the material must be third-party verified (e.g. for paper-based packaging FSC, SFI, PEFC would be examples of certifications for verification).

If data on packaging materials specific to these final products is not available, you may use more aggregated internal data to calculate C1 and C2 (e.g., company-level data for sales packaging of similar products).

The sum of C1 and C2 cannot be greater than 100%.

Please refer to THESIS KPI set for Packaging for more detailed packaging indicators.

Certifications, Standards & Tools

Global Protocol on Packaging Sustainability: The Global Protocol on Packaging Sustainability provides metrics and a framework for businesses on the relative sustainability of packaging.

<https://www.theconsumergoodsforum.com/wp-content/uploads/2017/11/CGF-Global-Protocol-on-Packaging.pdf>

ISO 18604:2013: ISO 18604:2013 (Packaging and the environment – Material recycling) provides measurement standards for determining how recyclable a particular product is.

<https://www.iso.org/standard/55872.html>

THESIS Help Center Video: Packaging Raw Material Sourcing KPI: Short video tutorial on the Packaging Raw Material Sourcing KPI. Use case-sensitive password 'thesis' when prompted.

<https://vimeo.com/531017161>

Background Information

Circulytics – Measuring circularity: The Ellen MacArthur Foundation's Circulytics assesses a company's overall circularity. The tool is designed to support a company's evolution to a circular economy by informing strategy development and decision making, and identifying opportunities to align with circular economy principles including: designing out waste, keeping materials and products in use, and generating environmental benefits.

<https://www.ellenmacarthurfoundation.org/resources/apply/circulytics-measuring-circularity>

FTC Green Guide's Recyclability Definition: In the United States, the Federal Trade Commission defines when a product or packaging can be claimed recyclable. Please refer these guidelines when determining recyclability.

<https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-issues-revised-green-guides/greenguides.pdf>





Global Protocol on Packaging Sustainability 2.0: The Global Protocol for Packaging Sustainability (GPPS 2.0) is a common set of indicators and metrics for business regarding sustainable packaging. The Consumer Goods Forum condensed the "Sustainable Packaging Indicators and Metrics Framework", developed by GreenBlue's Sustainable Packaging Coalition, into GPPS 2.0.

<https://www.theconsumergoodsforum.com/wp-content/uploads/2017/11/CGF-Global-Protocol-on-Packaging.pdf>

How2Recycle Certification: The How2Recycle Label provides guidance to consumers on how to recycle packaging for consumable goods. The label is intended to be used on all types of packaging and to provide instruction regarding how and where various raw materials can be recycled.

<http://www.how2recycle.info/>

Definitions

Post-consumer recycled material: "Material generated by households or by commercial, industrial, and institutional facilities in their role as end-users of the product that can no longer be used for its intended purpose. This includes returns of materials from the distribution chain." (ISO 14021:2016 - Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling))

Pre-consumer recycled material: "Material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it." (ISO 14021:2016 - Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling))

Renewable material: "Material that is composed of biomass from a living source and that can be continually replenished. To be defined as renewable, virgin materials shall come from sources which are replenished at a rate equal to or greater than the rate of depletion." (FTC Green Guides:2012)

Sales packaging: "Packaging that leaves a store with the consumer". (Global Protocol on Packaging Sustainability 2.0:2011)

Sustainably-sourced material: Material for which it can be demonstrated through second- or third-party verification that the virgin raw material has been harvested or produced legally and in a way that minimizes damage to the environment, workers, and communities. Materials such as paper can be included in this definition if the source of the packaging content comes from sustainably-managed forests with no deforestation.

Hotspots Addressed

12. Energy consumption - Packaging production



15. SUSTAINABLE PACKAGING DESIGN AND PRODUCTION

Question

What percentage of the sales packaging for your final product was recyclable, was formally assessed for material and process efficiency and weight or volume optimization, had demonstrated quantified environmental impact reduction, and was labelled for recycling according to an established standard?

Response Options

- A. Not applicable. We do not use sales packaging for our product.
- B. We are unable to determine at this time.
- C. We are able to report the following for the sales packaging used for our final products:
 - C1. _____ % of our packaging, by mass, was recyclable.
 - C2. _____ % of our packaging, by mass, has demonstrated progress on goals for material and process efficiency during packaging manufacturing.
 - C3. _____ % of our packaging, by mass, has demonstrated progress on goals for weight or volume optimization during packaging design.
 - C4. _____ % of our packaging, by mass, has a demonstrated quantified environmental impact reduction.
 - C5. _____ % of our packaging, by units sold in the US and Canada, was labeled with How2Recycle.
 - C6. _____ % of our packaging, by units sold in regions outside the US and Canada, was labeled with an established third-party recycling label.

Guidance

Calculation & Scope

Calculate C1 as the mass of sales packaging used for your final product that was recyclable, divided by the total mass of sales packaging used for your final product, then multiply by 100.

Calculate C2 as the mass of sales packaging used for your final product that has demonstrated progress on goals for material and process efficiency during packaging manufacturing, divided by the total mass of sales packaging used for your final product, then multiply by 100.

Calculate C3 as the mass of sales packaging used for your final product that has demonstrated progress on goals for weight or volume optimization during packaging design, divided by the total mass of sales packaging used for your final product, then multiply by 100.

Goals must be quantitative and time-bound and progress must be reported publicly. Public reporting may include voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.

Calculate C4 as the mass of sales packaging used for your final product that has demonstrated quantified environmental impact reductions, divided by the total mass sales packaging used for your final product, then multiply by 100. Include sales packaging with demonstrated impact reductions since the inception of the product or since purchase of the brand, if post-inception.

Methods for demonstrating quantified environmental impact reduction include, but are not limited to, life cycle impact assessment, or assessment against ISO Standard 18602:2013 (Packaging and the environment -- Optimization of the packaging system), or EN 13428:2004 (Packaging: Requirements specific to manufacturing and composition - Prevention by source reduction).

Calculate C5 as the number of units sold in the US and Canada that had sales packaging labeled with How2Recycle divided by the total number of units sold in the US and Canada that had sales packaging, then multiply by 100.

Calculate C6 as the number of units sold in regions outside the US and Canada that had sales packaging labeled according to an established third-party standard divided by the total number of units sold in regions outside the US and Canada that had sales packaging, then multiply by 100. Third party standards include those listed in the Certifications, Standards & Tools section of this KPI. Only include regions outside the US and Canada that are covered by the referenced third-party standards in your calculations.

Perform these calculations using data from a 12-month period that ended within 12 months of the date you respond to this question.





Certifications, Standards & Tools

Australasian Recycling Label (ARL): Used in Australia and New Zealand, the ARL details how best to label packaging for recycling to assist consumers in recycling correctly.
<https://recyclingnearyou.com.au/arl/>

Ecoembes Recycling Symbols: Used in Spain, the Ecoembes recycling symbols provide information to consumers for the recycling of packaging up to six different colors: blue for paper and cardboard, yellow for plastics and cans, green for glass, orange for organic materials, red for hazardous waste, and grey for everything else.
<https://www.ecoembes.com/en/home>

EN 13428: Prevention by packaging source reduction: European standard 13428:2004 outlines a method for evaluating if packaging material weight and/or volume have been sufficiently minimized while also taking into consideration other packaging performance parameters. The standard also includes recommended methodology for identifying heavy metals and dangerous substances in packaging formats.
http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/packaging/index_en.htm

European Certification of Plastics Recycling (EUCertPlast): The EuCertPlast Certification is a European wide certification program for companies that recycle post-consumer plastic waste.
<https://www.eucertplast.eu/>

How2Recycle Certification: The How2Recycle Label provides guidance to consumers on how to recycle packaging for consumable goods. The label is intended to be used on all types of packaging and to provide instruction regarding how and where various raw materials can be recycled.
<http://www.how2recycle.info/>

ISO 18602:2013: ISO 18602 provides criteria for optimization of packaging systems. It outlines a procedure for reduction of packaging material weight or volume while taking into consideration packaging function. It also provides assessment methodology for substances hazardous to the environment and heavy metals.
<https://www.iso.org/standard/55870.html>

Japanese Recycling Symbols: Used in Japan, Japanese recycling symbols tell in a glance to consumers what is recyclable and what is not recyclable, and assist consumers in recycling correctly.
<https://www.jcptra.or.jp/Portals/0/resource/eng/JCPRAdocuments202012.pdf>

Le Guide du TRI (Citeo Sorting Guide): Used in France, the Citeo Sorting Guide provides information to companies about which product components should be recycled and which should be disposed.
https://bo.citeo.com/sites/default/files/2019-07/20190617_Guide_Info-tri_Citeo_EN.pdf

On-Pack Recycling Label: Used in the UK, the On-Pack Recycling Label details how best to label packaging for recycling to assist consumers in recycling correctly.
<http://www.oprl.org.uk/>

The Association of Postconsumer Plastic Recyclers (APR): The APR is an international national trade association representing the plastics recycling industry.
<https://plasticsrecycling.org/about>

The Triman: Used in France, the Triman is a recycling symbol in e-commerce that sells and ships to France.
<https://www.msl.io/uploads/downloads/Triman-Users-handbook-english-V21.pdf>

Woolworths Recycling Labels: Used in South Africa, the Woolworths Recycling Labels detail how best to label packaging for recycling to assist consumers in recycling correctly.
https://www.woolworths.co.za/content/howto/good-business-journey/how-to-read-our-recycling-labels/_/A-cmp201960





Background Information

Circulytics – Measuring circularity: The Ellen Macarthur Foundation's Circulytics assesses a company's overall circularity. The tool is designed to support a company's evolution to a circular economy by informing strategy development and decision making, and identifying opportunities to align with circular economy principles including: designing out waste, keeping materials and products in use, and generating environmental benefits.

<https://www.ellenmacarthurfoundation.org/resources/apply/circulytics-measuring-circularity>

FTC Green Guide's Recyclability Definition: In the United States, the Federal Trade Commission defines when a product or packaging can be claimed recyclable. Please refer these guidelines when determining recyclability.

<https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-issues-revised-green-guides/greenguides.pdf>

Recycle Now: Recycle Now is the national recycling effort in England. The website contains examples of recycling labels that may be used on packaging and how to interpret them.

<http://www.recyclenow.com/recycle/packaging-symbols-explained>

Walmart Sustainable Packaging Playbook: Walmart provides an overview of sustainable packaging best practices for suppliers interested in improving and innovating packaging.

<https://www.walmartsustainabilityhub.com/climate/project-gigaton/packaging>

Definitions

Goals: Goals should be specific, measurable, achievable, relevant, and time-bound.

Material and process efficiency: Material efficiency is the ratio between the material input and the benefits derived. Resource conservation (source reduction) of material inputs and/or improving the functionality of the packaging can positively impact material efficiency. Process efficiency is the ratio between the time spent on production steps to the output. Opportunities to improve material and process efficiency include process improvement, product redesign, and technology changes to packaging equipment. It should be noted that continual source reduction has benefits, but there are trade-offs that must be assessed.

Sales packaging: "Packaging that leaves a store with the consumer". (Global Protocol on Packaging Sustainability 2.0:2011)

Third-party audit: An audit conducted by external, independent auditing organizations, such as those providing certification of conformity to a standard.

Weight or volume optimization: "Process for the achievement of a minimum adequate weight or volume (source reduction) for meeting the necessary requirements of primary or secondary or transport packaging, when performance and user/consumer acceptability remain unchanged or adequate, thereby reducing the impact on the environment." (ISO 18601:2013 - Packaging and the environment--General requirements for the use of ISO standards in the field of packaging and the environment)

Hotspots Addressed

12. Energy consumption - Packaging production





16. TRANSPORTATION TO RETAILERS

Question

What percentage of your final product was transported to downstream retail or distribution centers by logistics providers (carriers) that reported their annual greenhouse gas (GHG) emissions associated with transportation?

Response Options

- A. We are unable to determine at this time.
- B. The following percentage of our product, by mass, was shipped to retail or distribution centers by carriers who reported their GHG emissions associated with transportation:
B1. _____%.

Guidance

Calculation & Scope

Include shipments of your product from final manufacturing facilities to downstream retailers or distributors. Include both company-owned and contracted fleet. Exclude data for return trips. If retailers are responsible for the transportation of some or all of your final product, the retailer may hold the information necessary to calculate your response. It may be made available in a public report or by request.

Calculate B1 as the mass of product transported by carriers that reported emissions, divided by total mass of product transported, then multiply by 100.

Reporting can occur through public disclosure or private disclosure from the supplier to your organization directly or through another party.

Perform this calculation using data from a 12-month period that ended within 12 months of the date you respond to this question.

If a supplier completed the CDP Climate Change 2020 Questionnaire, you may count that as compliance with this question. Examples of other compliant standards are provided in the Certifications, Standards, & Tools section below.

Certifications, Standards & Tools

CDP Climate Change Questionnaire: The CDP Climate Change Questionnaire provides questions that assess a company's greenhouse gas emissions, goals, and management. The report provided by CDP provides the overview of the results from companies responding to the request.

<https://www.cdp.net/en/guidance/guidance-for-companies>

Clean Shipping Index: According to their website, "Clean Shipping Index is a tool for cargo owners to select clean ships and quality ship operators" to minimize environmental footprint and identify areas for environmental improvement.

<https://www.cleanshippingindex.com/>

Clean Cargo: The Clean Cargo Working group is a business initiative created by BSR to collaboratively address the environmental impacts of shipping and transportation.

<https://www.clean-cargo.org/data-methods>

Ecotransit: EcotransIT World calculates and quantifies environmental impacts of different carriers across the world in terms of direct energy usage and emissions during the operation of vehicles during the transport of products.

<http://www.ecotransit.org/>

EN 16258:2012: The European Committee for Standardization's EN 16258:2012 standard deals with the methodology for calculation and reporting of energy consumption and greenhouse gas (GHG) emissions of freight and passenger transport services.

<https://shop.bsigroup.com/ProductDetail/?pid=00000000030241098>

IATA CO2 Emissions Measurement Methodology: This document includes a methodology for measuring CO2 emissions from air cargo.

<https://www.iata.org/en/programs/cargo/sustainability/carbon-footprint/>

THESIS Help Center Video: Transportation to Retailers KPI: Short video tutorial on the Transportation to Retailers KPI. Use case-sensitive password 'thesis' when prompted.





<https://vimeo.com/529545735>

United States Environmental Protection Agency (EPA): Transportation and Air Quality: SmartWay: This program provides information about how to improve fuel efficiency in trucking. Carriers can use the SmartWay carbon emission calculator to track and publicly report emissions associated with their trucking operations.
<https://www.epa.gov/smartway>

Background Information

Greenhouse Gas Protocol: Calculation Tools: This site provides a list of sector toolsets developed by GHG Protocol, third-party databases, and other tools based on the GHG Protocol standards that can be used to calculate greenhouse gas inventories for use in emissions calculations.
<https://ghgprotocol.org/calculation-tools>

Definitions

CO₂e: Carbon dioxide equivalent; a metric that expresses the impact of a greenhouse gas in terms of the amount of carbon dioxide (CO₂) that has the same global warming potential.

Greenhouse gas: Gases that contribute to the greenhouse effect by absorbing infrared radiation in the atmosphere, e.g., carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons.

Hotspots Addressed

13. Fuel combustion - Distribution






Category Sustainability Profile

Hotspots

Hotspots are activities in a product's life cycle that have a documented environmental or social impact. TSC evaluates the quality and quantity of the scientific sources of evidence for each hotspot according to a defined decision tree before they are included in the CSP. Items marked with an asterisk (*) are *additional issues* that have not achieved the same level of evidence as a hotspot. For more information on the methodology TSC uses to identify hotspots visit: <http://www.sustainabilityconsortium.org/toolkit-methodology>

 AGRICULTURE AND LIVESTOCK	
<p>1. Supply chain traceability Due to the complexity of supply chains, information about where the supply chain originates is limited. This makes it more difficult for companies to manage environmental and social impacts.</p> <p>Related Improvement Opportunities</p> <p><i>10. Map the geographic origins of agricultural supply chains</i></p> <p>KPIs</p> <p><i>1. Crop Supply Mapping</i> <i>2. Sustainable Production Certification</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Maloni & Brown, 2006 ▪ Roth, Tsay, Pullman, & Gray, 2008 ▪ Wagner & Bode, 2008
<p>2. Access to opportunities for smallholder farmers - On-farm Smallholder farmers face a number of challenges that impact their ability to maintain farming operations. These challenges include access to agricultural inputs, banking services, farming information, and markets. Female smallholders are at an increased risk of facing these challenges.</p> <p>Related Improvement Opportunities</p> <p><i>2. Encourage producer cooperative groups</i> <i>3. Encourage the use of mobile phones to provide information and services to smallholder farmers</i> <i>11. Partner with civil society organizations to link smallholder farmers to suppliers and buyers</i></p> <p>KPIs</p> <p><i>3. Access to Opportunities for Smallholder Farmers</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Bijman, Ton, & Meijerink, 2007 ▪ Eakin, Tucker, & Castellanos, 2006 ▪ Ezumah & Di Domenico, 1995 ▪ Foltz, 2004 ▪ IFAD, 2010 ▪ International Fund for Agricultural Development, 2013 ▪ Kelly, Adesina, & Gordon, 2003 ▪ Maertens & Swinnen, 2012 ▪ Markelova & Mwangi, 2010 ▪ Markelova, Meinen-Dick, Hellin, & Dohrn, 2009 ▪ Ogunlela & Mukhtar, 2009 ▪ Oxfam International, 2002 ▪ Shiferaw, Hellin & Muricho, 2011 ▪ Ton, 2008 ▪ Verhart & Pyburn, 2010
<p>3. Child labor use - On-farm School-age children may be working on coffee plantations for little or no pay, and may be losing opportunities for an education, leading to lifelong poverty. The United States Department of Labor has identified child labor in the production of coffee in several countries.</p> <p>Related Improvement Opportunities</p> <p><i>21. Develop a child labor and forced labor social compliance program</i> <i>24. Implement programs, practices, and technologies to prevent and end the worst forms of child labor</i> <i>25. Utilize a child labor monitoring system (CLM)</i></p> <p>KPIs</p> <p><i>5. Child Labor Use</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Baradaran & Barclay, 2011 ▪ Edmonds, 2007 ▪ Edmonds & Pavcnik, 2005 ▪ U.S. Department of Labor Bureau of International Labor Affairs, 2012 ▪ United States Department of Labor, 2012b ▪ Verite, 2012b





<p>4. Energy consumption - On-farm Energy use on-farm may include equipment, irrigation pumps, and machine use and contributes to greenhouse gas and acidifying emissions, and non-renewable resource depletion.</p> <p>Related Improvement Opportunities</p> <p><i>4. Implement energy conservation practices for farm vehicle operation</i> <i>7. Implement precision agriculture technologies</i></p> <p>KPIs</p> <p><i>8. Greenhouse Gas Emissions Intensity - On-farm</i> <i>12. Yield - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Humbert, Loerincik, Rossi, Margni, & Jolliet, 2009 ▪ Quantis Suisse, 2011
<p>5. Fertilizer application - On-farm Applied fertilizers, both synthetic and organic, release greenhouse gas, smog-forming, ozone-depleting and acidifying emissions and contribute to water quality impacts. Eutrophication is caused by nutrients in surface water runoff, and groundwater contamination occurs due to leaching of nitrate. Also, heavy metals in fertilizers contribute to soil, water, and human toxicity.</p> <p>Related Improvement Opportunities</p> <p><i>6. Implement intercropping</i> <i>7. Implement precision agriculture technologies</i> <i>14. Use biostimulants</i></p> <p>KPIs</p> <p><i>7. Fertilizer Application - On-farm</i> <i>8. Greenhouse Gas Emissions Intensity - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ PCF, 2008 ▪ Quantis Suisse, 2011
<p>6. Labor rights - On-farm* Workers are at risk of several labor rights challenges. These challenges include unfair pay, discrimination, challenges to join unions and collectively bargain, long working hours, and dangerous working conditions. Women and migrants are at an increased risk of facing these challenges.</p> <p>Related Improvement Opportunities</p> <p><i>1. Develop compensation policies and supplier guidance that consider the cost of living in the area of employment for farm laborers</i> <i>20. Allow workers to join unions or non-union employee representation (NER) programs</i> <i>23. Implement labor management and equality monitoring programs</i></p> <p>KPIs</p> <p><i>10. Labor Rights - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Bacon, 2005 ▪ Slob, 2006 ▪ U.S. Department of Labor, 2013 ▪ Verite, 2012b
<p>7. Land transformation - On-farm* Land transformation for agriculture leads to climate change from greenhouse gas emissions and to biodiversity loss from land clearing and habitat conversion.</p> <p>Related Improvement Opportunities</p> <p><i>5. Implement integrated open canopy coffee production</i> <i>13. Restore and reuse previously cleared land for agriculture</i></p> <p>KPIs</p> <p><i>4. Biodiversity Management - On-farm</i> <i>6. Deforestation and Land Conversion - On-farm</i> <i>12. Yield - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Chavez Arce et al., 2009 ▪ Hylander, Nemomissa, Delrue, & Enkosa, 2013 ▪ Jensen & Dicks, 2012



8. Pollinator stress - On-farm

Certain global pollinator populations, including honey bees, other managed bees, and wild bees, are experiencing increased health and population challenges. The causes are a complex and diverse mix of factors, including parasites (e.g., Varroa, tracheal, and Tropilaelaps mites); viral, bacterial, and fungal pathogens; predators (e.g., small hive beetles, birds, and predatory insects); exposure to crop and bee protection products (e.g., pesticides and miticides); habitat loss, lack of nesting sites, and poor-quality forage; and queen issues (e.g., poor mating and pathogens). These stressors can have acute, direct effects on pollinator health or can cause chronic weakening of pollinator immune systems that can lead to population decline.

Related Improvement Opportunities

- 9. *Maintain natural habitat around the farm*
- 12. *Plant pollinator habitat on marginal land*

KPIs

- 4. *Biodiversity Management - On-farm*

References

- Kopec et al., 2017
- Mullin et al., 2016
- Sanchez-Bayo & Goka, 2014

9. Water use - On-farm*

Irrigation water usage can lead to freshwater depletion, as well as to biodiversity and ecosystem losses from altered aquatic habitats and soil conditions. Irrigation also facilitates run-off, leaching, and soil salinization when it is not properly managed.

Related Improvement Opportunities

- 22. *Evaluate the sustainability of water use in the context of local community and environmental water requirements*

KPIs

- 9. *Irrigation Water Use Intensity - On-farm*

References

- Humbert, Loerincik, Rossi, Margni, & Jolliet, 2009
- Quantis Suisse, 2011

10. Worker health and safety - On-farm*

Workers are at risk of several health and safety challenges associated with farm work. These challenges include injuries associated with tools and machinery, repetitive motions, as well as exposure to chemicals and dusts that may have adverse effects on their health.

Related Improvement Opportunities

- 8. *Implement worker health and safety programs on-farm*

KPIs

- 11. *Worker Health and Safety - On-farm*

References

- Benzaken Koosed, 2010
- McCurdy & Carroll, 2000





MANUFACTURING AND ASSEMBLY

11. Worker health and safety - Processing*

Workers are at risk of several health and safety challenges associated with manufacturing occupations. These challenges include injuries associated with tools and machinery, repetitive motions, falls, and burns. Manufacturing workers are also at risk of exposure to loud noises, airborne particulates, and chemicals, which can have adverse effects on their health.

Related Improvement Opportunities

15. Require appropriate use of personal protective equipment (PPE) at food and beverage processing/manufacturing

16. Set measurable goals and objectives for minimizing work-related health and safety risks at food and beverage processing

KPIs

13. Worker Health and Safety - Processing

References

- Sakwari, Braveit, Mamuya, & Moen, 2011
- Zuskin, Skuric, Kanceljak, & Saric, 1988

PACKAGING

12. Energy consumption - Packaging production

Energy consumption for extracting and processing the raw materials that make up the packaging and for fabricating the packaging releases greenhouse gases and toxic emissions and contributes to fossil fuel resource depletion.

Related Improvement Opportunities

17. Packaging design improvement

18. Packaging reduction

KPIs

14. Packaging Raw Material Sourcing

15. Sustainable Packaging Design and Production

References

- Quantis Suisse, 2011

DISTRIBUTION

13. Fuel combustion - Distribution

Fuel combustion for distribution of product from manufacturing to retail releases greenhouse gases.

Related Improvement Opportunities

19. Use software to optimize truck route design

26. Use pooled logistics during distribution

KPIs

16. Transportation to Retailers

References


- Salinas, 2008
- Salomone, 2003





Improvement Opportunities

Improvement opportunities are practices that address one or more environmental or social hotspots and are actionable by brand manufacturers or their suppliers. TSC evaluates the quality of the evidence supporting each improvement opportunity according to a defined decision tree before including it in the CSP. For more information on the methodology TSC uses to identify hotspots visit: <http://www.sustainabilityconsortium.org/toolkit-methodology>

 AGRICULTURE AND LIVESTOCK	
<p>1. Develop compensation policies and supplier guidance that consider the cost of living in the area of employment for farm laborers</p> <p>Compensation policies may consider the expenses needed to provide for the basic level of consumption, as well as other costs of living. There are many models for determining a fair compensation for workers. Prominent models include living wage and family wage, which take into account many variables for the cost of living. Monitor actual wages against the chosen model.</p> <p>Related Hotspots</p> <p><i>6. Labor rights - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> Ethical Trading Initiative, 2008 International Labour Organization, 2011
<p>2. Encourage producer cooperative groups</p> <p>The issue of working capital to members needs to be resolved by the group willing to engage in collective marketing. Development of cooperation in access to working capital is crucial and logically related to the emergence of many of the new producer organizations in developing countries that effectively provide market access to smallholder farmers, inclusive to poorer strata of the population.</p> <p>Related Hotspots</p> <p><i>2. Access to opportunities for smallholder farmers - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> Ton, 2008
<p>3. Encourage the use of mobile phones to provide information and services to smallholder farmers</p> <p>Mobile phones are widely used throughout the developing world and have the capability of providing banking services as well as important information for farming including input costs, commodity prices, weather patterns, and best management practices.</p> <p>Related Hotspots</p> <p><i>2. Access to opportunities for smallholder farmers - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> Agri-fin Mobile, 2013 Torero, 2013
<p>4. Implement energy conservation practices for farm vehicle operation</p> <p>There are many practices that can help to conserve energy used by farm vehicles. Some practices include minimizing field passes by performing multiple operations at a time, maintaining proper ballast, using a tractor size that is suitable for each operation, shifting tractors to a higher gear and throttling down during field operations, minimizing driving tractors on the road, upgrading to more efficient models, minimizing idling, reducing excess weight on vehicles, and refraining from using quick start engines.</p> <p>Related Hotspots</p> <p><i>4. Energy consumption - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> California Farm Bureau Federation, 2014 NCAT, 2007
<p>5. Implement integrated open canopy coffee production</p> <p>Integrated open canopy (IOC) coffee farming employs a land sparing technique to cultivation where an equal area of forest area is conserved when operating a coffee plantation.</p> <p>Related Hotspots</p> <p><i>7. Land transformation - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> Chandler et al., 2013 Chavez Arce et al., 2009





<p>6. Implement intercropping Intercropping is the practice of planting two or more crops together. Crops may be alternated in rows or interspersed. Intercropping can reduce crop protection chemical and nutrient requirements because it improves biodiversity and soil fertility. It has also been shown to reduce soil erosion due to improved water infiltration and retention.</p> <p>Related Hotspots <i>5. Fertilizer application - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Iowa State University Extension, 1999 ▪ Machado, 2009 ▪ USDA NRCS, 2011
<p>7. Implement precision agriculture technologies Precision agriculture technologies can use field data, remote sensing, and global positioning systems (GPS) to control the variable rate and precise placement of fertilizers and crop protection chemicals. Precision agriculture can reduce on-farm energy consumption as well as the negative environmental and human health impacts that can be associated with fertilizer and crop protection chemical application.</p> <p>Related Hotspots <i>4. Energy consumption - On-farm</i> <i>5. Fertilizer application - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Bongiovanni and Lowenberg-DeBoer, 2004 ▪ Pierce and Nowak, 1999 ▪ Zhang et al., 2002
<p>8. Implement worker health and safety programs on-farm Worker health and safety programs should address the appropriate ways to handle, use, and store pesticides and pesticide application equipment as well as educate workers about the risks associated with farm work and the practices that mitigate those risks. Practices should be specific to ergonomics, repetitive motions, chemical and particulate exposure, appropriate use of personal protective equipment (PPE), and proper use of tools and machinery.</p> <p>Related Hotspots <i>10. Worker health and safety - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ International Finance Corporation, 2012a ▪ Meyer & Radwin, 2007
<p>9. Maintain natural habitat around the farm Maintaining land around the farm as natural habitat (e.g., wetlands) increases biodiversity.</p> <p>Related Hotspots <i>8. Pollinator stress - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Polasky, S. et al., 2008
<p>10. Map the geographic origins of agricultural supply chains Knowing the geographic origins of agricultural supply chains can inform planning and policy for the sustainable management of social and environmental farm practices.</p> <p>Related Hotspots <i>1. Supply chain traceability</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Bryan, Barry & Marvanek, 2009 ▪ Maloni & Brown, 2006 ▪ Roth, Tsay, Pullman, & Gray, 2008 ▪ Scholten, Verdouw, Beulens, van der Vorst, & Santaclara, 2016 ▪ Wagner & Bode, 2008
<p>11. Partner with civil society organizations to link smallholder farmers to suppliers and buyers Participate in or lead partnerships with civil society organizations that engage smallholder farmers. Doing so may enhance smallholder farmers' expertise, capacity, and production techniques, as well as increase their access to markets, which can increase supply chain security.</p> <p>Related Hotspots <i>2. Access to opportunities for smallholder farmers - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Markelova & Mwangi, 2010 ▪ Njuki, Kruger, & Starr, 2013



<p>12. Plant pollinator habitat on marginal land Utilizing marginal land for pollinator habitat increases foraging opportunities and provides pollinators with high-quality nutritional resources.</p> <p>Related Hotspots <i>8. Pollinator stress - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> Spivak et al., 2017
<p>13. Restore and reuse previously cleared land for agriculture Restore degraded agricultural land to agriculture, which avoids clearing new land for farming and preserves habitat.</p> <p>Related Hotspots <i>7. Land transformation - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> Tilman et al., 2001
<p>14. Use biostimulants Plant biostimulants enhance nutrient uptake, nutrient efficiency, tolerance to abiotic stress, and plant health, which can result in crop yield increases that help to reduce land transformation for agriculture. Examples of biostimulants include: plant growth-promoting rhizobacteria, humic substances, protein hydrolysates, seaweed extracts, botanicals, biopolymers, beneficial fungi, and beneficial bacteria.</p> <p>Related Hotspots <i>5. Fertilizer application - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> du Jardin, 2015 Le Mire et al., 2016

MANUFACTURING AND ASSEMBLY

<p>15. Require appropriate use of personal protective equipment (PPE) at food and beverage processing/manufacturing Providing personal protective equipment (masks, gloves, protective clothing) may help to reduce exposure to hazardous chemicals, particulates, and noise where prevention interventions are ineffective. Providing slip-resistant footwear can reduce workplace injuries.</p> <p>Related Hotspots <i>11. Worker health and safety - Processing</i></p>	<p>References</p> <ul style="list-style-type: none"> Cohen, Connon, & Silverstein, 2003
<p>16. Set measurable goals and objectives for minimizing work-related health and safety risks at food and beverage processing Develop metrics and benchmarks, and set goals to reduce specific injuries and exposures in the workplace.</p> <p>Related Hotspots <i>11. Worker health and safety - Processing</i></p>	<p>References</p> <ul style="list-style-type: none"> Health and Safety Executive, 2005

PACKAGING

<p>17. Packaging design improvement For instant coffee, switch from glass jars to laminated pouch packaging systems.</p> <p>Related Hotspots <i>12. Energy consumption - Packaging production</i></p>	<p>References</p> <ul style="list-style-type: none"> Lockrey, 2012
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<p>18. Packaging reduction Manufacturers can reduce excess packaging for instant coffee, and can package product in optimal sizes to reduce material waste.</p> <p>Related Hotspots <i>12. Energy consumption - Packaging production</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Busser, Steiner, & Jungbluth, 2008
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DISTRIBUTION

<p>19. Use software to optimize truck route design Route optimization has been proven to reduce fuel usage and subsequent emissions.</p> <p>Related Hotspots <i>13. Fuel combustion - Distribution</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Scientific Logistics Institute, 2011 ▪ Xiao, Zhao, Kaku, and Xu, 2012
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IMPROVEMENT OPPORTUNITIES FOR MULTIPLE LIFE CYCLE STAGES

<p>20. Allow workers to join unions or non-union employee representation (NER) programs Non-union employee representation (NER) programs are methods for providing aspects of freedom of association and collective bargaining to workers that may not have access to unions. NERs are alternative approaches to union certifications for employee/employer relations. They involve the implementation of non-adversarial and democratic representation of supply chain actors. Examples of NERs include compulsory proportional representation (CPR) and statutory works councils.</p> <p>Related Hotspots <i>6. Labor rights - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Harcourt & Lam, 2007
<p>21. Develop a child labor and forced labor social compliance program A social compliance program is part of an organization's larger corporate responsibility program and is intended as a means of developing policies and practices based on widely-recognized standards with the goal of allowing for maximum adherence to codes of conduct. Social compliance programs have specific action steps that guide organizations from initial risk awareness to full compliance with policies.</p> <p>Related Hotspots <i>3. Child labor use - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ United States Department of Labor, 2013 ▪ United States Department of Labor, 2012a
<p>22. Evaluate the sustainability of water use in the context of local community and environmental water requirements When planning developments, water availability and appropriation must be evaluated in the context of the water resources used by the surrounding community and in the context of the capacity of the surrounding ecosystems.</p> <p>Related Hotspots <i>9. Water use - On-farm</i></p>	<p>References</p> <ul style="list-style-type: none"> ▪ Aldaya et al., 2012 ▪ Minnesota Environmental Quality Board, 2008



<p>23. Implement labor management and equality monitoring programs Employers should implement labor management and equality monitoring to prevent discrimination in their labor and hiring policies and procedures along the lines of race, color, gender, age, religion, social class, political tendencies, nationality, sexual orientation, or civil status.</p> <p>Related Hotspots 6. Labor rights - On-farm</p>	<p>References</p> <ul style="list-style-type: none"> ▪ Kearney and Hays, 2007 ▪ Locke et al., 2007
<p>24. Implement programs, practices, and technologies to prevent and end the worst forms of child labor Programs, practices, and technologies can be implemented to increase awareness of, and monitor for the worst forms of child labor in supply chains. Companies can also consider investing in local programs that increase access to education, as this has been shown to lead to a decrease in child labor.</p> <p>Related Hotspots 3. Child labor use - On-farm</p>	<p>References</p> <ul style="list-style-type: none"> ▪ Bureau of International Labor Affairs, 2011 ▪ Stop Child Labour, 2012 ▪ United States Department of Labor, 2013
<p>25. Utilize a child labor monitoring system (CLM) A child labor monitoring system will support companies' efforts to prevent and eliminate the worst forms of child labor that occur in the supply chain.</p> <p>Related Hotspots 3. Child labor use - On-farm</p>	<p>References</p> <ul style="list-style-type: none"> ▪ International Labour Organization, 2005a ▪ International Labour Organization, 2007 ▪ Stop Child Labour, 2012
<p>26. Use pooled logistics during distribution Using pooled logistics reduces the number of less than truckload (LTL) shipments, the distribution energy required per unit of product shipped, and allows for improved just-in-time (JIT) delivery of product, thereby reducing food waste during distribution and retail operations.</p> <p>Related Hotspots 13. Fuel combustion - Distribution</p>	<p>References</p> <ul style="list-style-type: none"> ▪ Humpl and Starkl, 2010 ▪ Wick, Klumpp, and Kandel, 2011



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Release Notes

*** 03.06.10, May 2021 ***

- In-text references and broken resource links (URLs) included in the KPI guidance were updated to the most recent available versions. Where no alternative resource was available, the item was substituted with a comparable resource or was removed.
- Added hotspots, improvement opportunities, and references for newly added KPI(s) or response options.

Child Labor Use KPI:

- Question: The question text was revised to ask beyond risk assessment.
- Response Options: The response options were revised to ask about hazardous work, access of non-employed children to work areas, compliance with legal age of employment, and program or policy to comply with regulatory restrictions or requirements applicable for child labor below the age of 18.
- Calculation & Scope: Added text to support the response options described above.
- Certifications, Standards & Tools: Certifications, standards and tools were added to support the new response options described above.

Deforestation and Land Conversion – On-farm KPI:

- Calculation & Scope: Added text to the guidance to include several certifications that may inform the response options.

Sustainable Packaging Design and Production KPI:

- Question: The question text was updated to reflect the changes below.
- Response Options: A response option for the percentage sales packaging labeled with How2Recycle in the US and Canada has been added.
- Response Options: A response option for the percentage of the sales packaging that was labeled for recycling according to an established standard outside the US and Canada has been added.
- Response Options: The existing response options for recyclability, demonstrated progress on goals for material and process efficiency and weight or volume optimization, and impact reduction were retained.
- Calculation & Scope: Text added to support the added response options above.
- Certifications, Standards & Tools: References to support the new response options above have been added.
- Definitions: "Third-party audit" was added.

New KPI added: Sustainable Production Certification

Biodiversity Management - Growing Operations KPI:

- Calculation & Scope: Added text to the guidance to address suppliers that are using protected agriculture, hydroponic agriculture, and indoor vertical farming.

03.05.10 May 2020

- In-text references and broken resource links (URLs) included in the KPI guidance were updated to the most recent available versions
- Ensured that all relevant of deforestation-related terms were linked to the deforestation KPI

03.04.10 June 2019

- Broken links referenced in the KPI guidance were corrected
- Access to Opportunities for Smallholder Farmers KPI: Modified the question, response options, and guidance to 1) broaden the scope of topics that are important to the development of smallholder farmers, 2) make a distinction between the various services that are important for smallholder livelihoods and development, and 3) expand the scope of actors that can assist in ensuring smallholders have access to services and trainings.
- Biodiversity Management KPI: Modified response option B4 to include supplysheds.
- Crop Supply Mapping KPI: Added clarifying guidance and an example scenario to help ensure that the percentages reported in B1-B4 are mutually exclusive and the sums do not exceed 100%.
- Deforestation and Land Conversion KPI: Added language to the guidance clarifying that conversion of HCV and HCS non-forest lands includes HCV and HCS non-forest native ecosystems. Modified definition of "land conversion" to include native ecosystems.
- Fertilizer Application KPI: Added the Cool Farm Tool to Standards, Certifications, and Tools. Revised guidance to provide clarity on how to use results from the Cool Farm Tool to respond to the KPI and included a reference to TSC's Fertilizer Application KPI Calculation Tool.
- Irrigation Water Use Intensity KPI: Provided instructions in the guidance for how to respond to B1 in situations where no irrigation water is used. Also added the Cool Farm Tool to Standards, Certifications, and Tools, along with guidance for how to use the tool to respond to B1.
- Labor Rights – On-farm KPI: Revised guidance and response options to address policies, risk assessment, training, evaluation, and audits for labor rights issues. KPI question; Certifications, Standards, and Tools; and Background Information were also revised.
- Worker Health and Safety – On-farm KPI: Revised guidance and response options to address a series of practices companies may enact to manage worker health and safety risks including risk assessment, training, and audits. KPI question; Certifications, Standards, and Tools; and Background Information were also revised.

03.03.10, June 2018





- Broken links referenced in the KPI guidance were corrected.
- KPI guidance language referencing CDP's Information Requests for Climate Change and Water were updated to reflect the 2018 versions.
- Crop Supply Mapping KPI: Response option language was changed for greater clarity. The meaning of the response options and the calculations required have not changed.
- Biodiversity Management KPI: New KPI to increase alignment with farm metrics platforms that address biodiversity (e.g., Cool Farm Tool, Field to Market Fieldprint Platform, and Stewardship Index for Specialty Crops). Linked to existing Land Transformation hotspot and new Pollinator stress hotspot.
- Pollinator Stress Hotspot: New hotspot to capture the relationship between recent trends in pollinator decline and crop production. Linked to Biodiversity Management KPI.

03.02.10, June 2017

Language referring to the "last twelve months" was removed from the question and/or response options text to avoid any confusion with the related statement in the "Calculation and Scope" of the Guidance. The following KPIs were affected:

- Access to Opportunities for Smallholder Farmers
- Crop Supply Mapping
- Fertilizer Application - On-farm
- Greenhouse Gas Emissions Intensity - On-farm
- Worker Health and Safety - Processing
- Irrigation Water Use Intensity - On-farm
- Yield - On-farm

Packaging Raw Material Sourcing KPI:

- Title: Changed from "Packaging Raw Material Sourcing and End-of-life"
- Response Options: A response option for recyclable content was moved to the Sustainable Packaging Design and Production KPI to improve the scorability and answerability of both KPIs. The remaining response options are defined to be mutually exclusive where the sum of the two percentages entered cannot be greater than 100%.
- Definitions: "Pre-consumer recycled content", "post-consumer recycled content", "sustainably sourced content", and "renewable content" were added or updated to improve interpretation.

Sustainable Packaging Design and Production:

- Question: The question text was updated to reflect the changes below.
- Response Options: A response option for the percentage of recyclable content was moved from the Packaging Raw Material Sourcing KPI to improve the scorability and answerability of both KPIs.
- Response Options: A qualitative response option was removed which stated: "We have established goals to address all of these factors and publicly report our progress towards those goals."
- Response Options: The above response option was replaced with two percentage response options for reporting "demonstrated progress on goals" for material and process efficiency as well as weight or volume optimization. The information required to respond to the KPI has not changed.
- Response Options: The existing response option for "quantifiable impact reduction" was retained.
- Definitions: "Material and process efficiency" and "weight or volume optimization" were updated.
- Definitions: "Resource conservation" was previously included as a separate factor and was included in the definition for material and process efficiency.

Transportation to Retailers:

- The question and response options were changed to address whether carriers report GHG emissions rather than what those aggregate emissions are.



Coffee

Category Sustainability Profile
References

TSC's Multi-stakeholder Process

The Sustainability Consortium (TSC) is a multi-stakeholder organization comprised of leading companies, non-profit organizations, and other members that represent broad perspectives on sustainability. To build a KPI set that can be deployed widely, TSC acknowledges that members have diverse points of view. As such, the attributes, activities, KPIs, and scoring used in this KPI set represent a composite perspective of the current market and are not necessarily the views, policies, or program of any single member of TSC.

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