Eye and Contact Lens Care
Key Performance Indicators

Version 01.02

THESIS
BY THE SUSTAINABILITY CONSORTIUM

About the Eye and Contact Lens Care Key Performance Indicators

This THESIS Performance Assessment covers formulated eye and contact lens care products. This includes, but is not limited to, contact lens solution, multi-purpose solution, and eye drops. It does not include contact lenses, lens cases, or glasses.
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

Contents

Key Performance Indicators

QUESTION	RESPONSE OPTION
1. Packaging – Design, policy, and goals What is your organization's approach to addressing the environmental impact of your products' sales packaging?	**A.** We have NOT made efforts beyond legal and regulatory compliance for our sales packaging. **B.** We, or our packaging supplier, assess material efficiency and weight or volume optimization on all new sales packaging designs. **C.** We have established goals to address contamination of recycling streams in our products' sales packaging. **D.** We have established goals to address material and process efficiency and weight or volume optimization in our products' sales packaging. **E.** We have established goals to address the environmental impact of our products' sales packaging. **F.** We publicly report our progress towards these goals.
2. Packaging – Sustainable Sourcing What percentage of the sales packaging used for this category, by mass, is postconsumer recycled, postindustrial recycled, or sustainably-sourced renewable material?	**A.** We do NOT incorporate PIR, PCR, or sustainably sourced renewable content into this category's sales packaging. **B.** We incorporate PIR, PCR, or sustainably sourced renewable content in this category's sales packaging. **C - G.** We are able to report the following percentages for this category: **C.** Wood/paper composition **C1.**_____% of this category's sales packaging is composed of wood or paper. **C2.**_____% of this category's wood or paper sales packaging is composed of PCR or PIR content. **C3.**_____% of this category's wood or paper sales packaging is composed of sustainably sourced renewable content. **D.** Plastic composition **D1.**_____% of this category's sales packaging is composed of plastic. **D2.**_____% of this category's plastic sales packaging is composed of PCR content. **D3.**_____% of this category's plastic sales packaging is composed of PIR content. **D4.**_____% of this category's plastic sales packaging is composed of sustainably sourced renewable content. **E.** Glass composition **E1.**_____% of this category's sales packaging is composed of glass. **E2.**_____% of this category's glass sales packaging is composed of PCR content. **E3.**_____% of this category's glass sales packaging is composed of PIR content. **F.** Metal composition **F1.**_____% of this category's sales packaging is composed of metal. **F2.**_____% of this category's metal sales packaging is composed of PCR content. **F3.**_____% of this category's metal sales packaging is composed of PIR content. **G.** Other material composition **G1.**_____% of this category's sales packaging is composed of other materials. **G2.**_____% of this category's other material sales packaging is composed of PCR content. **G3.**_____% of this category's other material sales packaging is composed of PIR content. **G4.**_____% of this category's other material sales packaging is composed of sustainably sourced renewable content.

3. Packaging – Recyclability - Improving collection and recovery Does your organization participate in an effort to improve collection and recovery rates (e.g., in-store collection, HPRC, Recycling Council, or Closed Loop Fund)?	**A.** We do NOT participate in an effort to improve collection and recovery rates. **B.** We participate in an effort to improve collection and recovery rates (e.g., in-store collection, HPRC, Recycling Council, or Closed Loop Fund).
4. Packaging – Recycle Labeling What percentage of the sales packaging for your final product was labeled 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 product: **C1.**_____% of our packaging, by units sold in the US and Canada, was labeled with How2Recycle. **C2.**_____% of our packaging, by units sold in regions outside the US and Canada, was labeled with an established third-party recycling label.
5. Packaging – Stewardship list chemical management How does your organization address the chemical safety of sales packaging for products in this category?	**A.** We do NOT go beyond legal and regulatory compliance regarding the incorporation of chemicals on the stewardship list in our sales packaging. **B.** We have assessed our sales packaging raw materials for the presence of chemicals on the stewardship list. **C.** We perform alternatives assessments that provide informed substitutions of the chemicals on the stewardship list in our sales packaging. **D.** We use, and can demonstrate that, the outputs of our alternatives assessments provide informed substitutions of the chemicals on the stewardship list in our sales packaging. **E.** We publicly disclose annually our progress resulting from alternatives assessment and informed substitution for the chemicals on the stewardship list in our sales packaging.
6. Animal testing How does your organization use animal testing to justify the safety of your products and their ingredients?	**A.** We perform animal testing on ingredients or products to justify safety. **B.** We use validated alternative methods that reduce, refine, or replace the use of animals when available and required to fulfill US regulatory requirements. **C.** Under NO conditions do we conduct, or require others to conduct on our behalf, animal testing in any region to obtain safety data for ingredients or final formulations for products sold in the United States. **D.** We participate in or contribute to a major research initiative dedicated to the continuous advancement and promotion of animal alternatives validation. **E.** We actively work to reduce regulatory requirements for animal testing in regions where they are required.
7. Formulation - Chemical selection Have you assessed your formulations for the presence of chemicals on the stewardship list?	**A.** We have NOT assessed our formulations for the presence of chemicals on the stewardship list. **B.** We have assessed our formulations for the presence of chemicals on the stewardship list. **C.**_____% of our products in this category, by number, have intentionally added formulation ingredients that are on the stewardship list. *If a chemical is listed with a specific exposure, for the purpose of this response option, the chemical should be included even if the specified exposure is NOT relevant to the consumer during product use.* **D.**_____% of our products in this category, by number, have intentionally added formulation ingredients that are on the stewardship list. *If a chemical is listed with a specific exposure that is NOT relevant to the consumer during product use, for the purpose of this response option, the chemical should NOT be included.*
8. Chemical footprint Does your organization measure its chemical footprint?	**A.** We do NOT measure our own chemical footprint and we are NOT engaged in a program to reduce the use of chemicals on the stewardship list. **B.** We measure our chemical footprint. **C.** We participate in the Chemical Footprint Project or another external program. **D.** We publicly disclose our chemical footprint.

9. Risk assessment and product safety How does your organization address the safety of your products using chemical risk assessment?	**A.** We do NOT address product safety beyond legal and regulatory compliance. **B.** We use best in class approaches according to SCCS guidance for human health risk assessment to screen all of our beauty and personal care ingredients and our final products, to ensure an acceptable margin of safety. **C.** We participate in on-going research to advance the science of product safety and risk assessment. **D.** We ensure adequate microbiological protection of our products. **E.** We have systems in place for postmarket safety surveillance. **F.** We disclose the following information on our website: **F1.** Details of our risk assessment methodologies. **F2.** Full risk assessments of our ingredients and final products. **F3.** Details of our postmarket safety surveillance strategy. **F4.** Results of our postmarket safety surveillance.
10. Ingredient disclosure to manufacturers What level of raw material disclosure does your organization require from suppliers?	**A.** We require that ONLY a safety data sheet accompany all purchased raw materials and ingredients. **B.** We require a list from our suppliers of all substances intentionally added to ingredients or raw materials. **C.** We ensure that our suppliers identify in the composition of all raw materials and ingredients any intentionally added chemicals on the stewardship list and incidental chemicals and known contaminants. **D.** We require from our suppliers that a list accompany all procured raw materials identifying all chemicals on the stewardship list that are reasonably expected to be present at 100 ppm, whether intentionally added or not, and we verify this information by internal testing methodologies or additional research. **E.** We require from our suppliers that a list accompany all procured raw materials identifying all chemicals on the stewardship list that are reasonably expected to be present at detectable levels, whether intentionally added or not, and we verify this information by internal testing methodologies or additional research.
11. Responsible sourcing How does your organization address responsible sourcing in your products' supply chains?	**A.** We do NOT have policies in place at this time to address responsible sourcing. **B.** We have stated environmental principles and we require all of our suppliers to commit and adhere to them. **C.** We use supply-chain environmental risk mapping to identify risks associated with our raw material or other component sourcing. **D.** We conduct audits of suppliers identified as high risk through supply-chain environmental risk mapping and we take corrective action where needed. **E.** We do NOT source from suppliers identified as high risk. **F.** We publicly disclose our policies.
12. Human rights – Supply chain How does your organization address human rights in your products' supply chains?	**A.** We do NOT have a human rights policy to assure the protection of human rights throughout our products' value chain. **B.** We have a human rights policy to assure the protection of human rights throughout our products' value chain. **C.** We have publicly communicated our human rights policy. **D.** We perform internal risk assessments and social compliance audits. **E.** We conduct third party audits of our suppliers at least once every 36 months. **F.** Selection of our third party audit locations includes previous human rights incidents. **G.** We have formal systems in place to ensure that any adverse findings are mitigated.

13. Palm Oil, Palm Kernel Oil, and Derivative Ingredient Sourcing What percentage of your palm oil and palm oil-derived ingredients is Certified Sustainable Palm Oil (CSPO) purchased through RSPO book and claim, mass balance, segregated, and identity preserved supply chain models?	**A.** Not applicable. We do not produce or use palm oil, palm kernel oil, or their associated chemically-derived ingredients in our products. **B.** We are unable to determine at this time. **C.** We are able to report the following for our palm oil ingredient supply: **C1.**_____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO book and claim. **C2.**_____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO mass balance. **C3.**_____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO segregated. **C4.**_____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO identity preserved.
14. Greenhouse gas – Supply chain What percentage of ingredients used in your final product, by total spend, was produced by suppliers that reported their annual Scope 1 and 2 greenhouse gas emissions?	**A.** We are unable to determine what percentage of our ingredients, by total spend, was produced by suppliers that reported their annual scope 1 and 2 greenhouse gas emissions in the last twelve months. **B.** _____% of our ingredients, by total spend, was produced by suppliers that reported scope 1 and 2 greenhouse gas emissions in the last twelve months. **C.** We have set goals to reduce our scope 3 greenhouse gas emissions. We track, and publicly disclose, our scope 3 emissions.
15. Greenhouse gas emissions – Manufacturing Does your organization report to CDP or what was the greenhouse gas emissions intensity associated with final manufacture of your product?	**A.** We do NOT report to CDP and we are NOT able to determine at this time the GHG emissions intensity in our company-owned or contract-manufacturing facilities. **B.** Our CDP Climate Change score for company-owned or contract-manufacturing facilities is: **B1.** Our CDP Climate Change score is A or A-. **B2.** Our CDP Climate Change score is B or B-. **B3.** Our CDP Climate Change score is C or C-. **B4.** Our CDP Climate Change score is D or D-. **B5.** Our CDP Climate Change score is F. **C.** We have measured our GHG intensity and are able to report the following: **C1.**_____kg CO2e emissions per tonne of product from our company-owned and contract-manufacturing facilities. **C2.**_____% of our product is represented by the number reported above.
16. Greenhouse gas – Reduction goal Has your organization set, tracked, or publicly disclosed a goal to reduce your greenhouse gas emissions from company-owned and contract manufacturing facilities?	**A.** We have NOT set, tracked, or publicly disclosed a goal to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products. **B.** We set, track, and publicly disclose an intensity-based goal(s) and results to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products. **C.** We set, track, and publicly disclose an absolute goal(s) and results to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products. **D.** We set, track, and publicly disclose an absolute science-based goal(s) and results to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products. **E.** We publicly disclose our greenhouse gas emissions.
17. Water use – Formulation raw material suppliers What percentage of the ingredients used in your final product, by total spend, was produced by suppliers that reported their annual water use?	**A.** We are unable to determine the percentage of our ingredients, by total spend, that was produced by suppliers that reported their annual water use. **B.** _____% of our ingredients, by total spend, was produced by suppliers that reported their annual water use in the last 12 months.

18. Water use – Manufacturing Does your organization report water use to CDP or what was the water use intensity in company-owned or contract manufacturing facilities that manufactured your final product in the last twelve months?	**A.** We do NOT report to CDP and we are NOT able to determine at this time the water use intensity in our company-owned or contract-manufacturing facilities. **B.** Our CDP Water score for company-owned or contract-manufacturing facilities is: **B1.** Our CDP Water score is A or A-. **B2.** Our CDP Water score is B or B-. **B3.** Our CDP Water score is C or C-. **B4.** Our CDP Water score is D or D-. **B5.** Our CDP Water score is F. **C.** We have measured our water use intensity and are able to report the following: **C1.**_____ liters of water per tonne of product. **C2.**_____% of our product is represented by the number reported above.
19. Water use – Reduction goal Has your organization set, tracked, or publicly disclosed a goal to reduce its water use intensity in company-owned and contract manufacturing facilities?	**A.** We do NOT have an intensity-based target or absolute goal to reduce our water use from company-owned and contract manufacturing facilities. **B.** We set, track, and publicly disclose our intensity-based goal(s) and results to reduce our water use in the company-owned and contract manufacturing facilities that produce our products. **C.** We set, track, and publicly disclose our absolute goal(s) and results to reduce our water use in the company-owned and contract manufacturing facilities that produce our products. **D.** We publicly disclose our water use.
20. Water use – Scarcity mapping How does your organization address water scarcity in regions that manufacture your products or their raw materials?	**A.** We have NO formal, documented program to reduce water use in our manufacturing or from our raw material suppliers and have conducted NO water scarcity mapping. **B.** We have conducted water scarcity mapping to identify our high risk manufacturing facilities that are in water scarce areas and have publicly disclosed our findings. **C.** We have conducted water scarcity mapping to identify our raw material production facilities in our supply chain that are in water scarce areas and we have publicly disclosed our findings. **D.** We have achieved our established goals from the last 48 months. **E.** We have conducted water scarcity mapping and have determined that our manufacturing facilities and raw material production facilities are not in water scarce areas.
21. Use phase – Messaging and design How does your organization engage consumers regarding energy reduction, water consumption, or product waste?	**A.** For products in this category, we have NOT conducted an on-pack, web-based, or media educational campaign in the last twelve months to inform consumers regarding the reduction of energy, water consumption, or product waste. **B.** For products in this category, we have conducted an on-pack, web-based, or media educational campaign in the last twelve months to inform consumers regarding the reduction of energy, water consumption, or product waste. **C .**For products in this category, we measure and track the reach of our communications through consumer surveys or other market research. **D.** For products in this category, we develop and market products that are designed to reduce energy, water consumption, or product waste during consumer use phase.

22. Biodegradability and environmental risk Does your organization evaluate the biodegradability and/or environmental risk of the ingredients used in your products?	**A.** We do NOT evaluate the biodegradability and/or environmental risk of the ingredients used in our products. **B.** We have a program in place to evaluate the environmental safety of our ingredients using risk assessment methodologies that consider environmental fate (including biodegradability), toxicity, and exposure for the relevant environmental compartments. **C.** We continuously work to develop new methods and drive the science regarding biodegradation testing in order to ensure that biodegradation is being assessed accurately in all relevant environmental compartments. **D.** _____% of our organic ingredients in this category, by number, have been evaluated for biodegradability using standardized test methods, or accepted in silico models where appropriate. **E.** _____% of our organic ingredients in this category, by number, achieve pass level criteria for Ready or Inherent biodegradability using standardized test methods, or accepted in silico models where appropriate. **F.** _____% of all of our products' ingredients in this category, by number, that were evaluated for environmental fate and environmental risk have been determined to be safe for the environment in our products' use scenarios.
23. Product Certifications What percentage of your product, by sales, has the following certifications?	**A.** We are unable to determine at this time. **B.** The following percentage of our product, by sales, was certified: **B1.** _____% of our product is Cradle to Cradle Certified™. **B2.** _____% of our product is EPA Safer Choice Certified. **B3.** _____% of our product is EWG VERIFIED™.

Key Performance Indicators with Guidance

1. PACKAGING – DESIGN, POLICY, AND GOALS

Question	Response Options	Points	Rules
What is your organization's approach to addressing the environmental impact of your products' sales packaging?	**A.** We have NOT made efforts beyond legal and regulatory compliance for our sales packaging.	0	OR B - E
	B. We, or our packaging supplier, assess material efficiency and weight or volume optimization on all new sales packaging designs.	1	Multi
	C. We have established goals to address contamination of recycling streams in our products' sales packaging.	1	Multi
	D. We have established goals to address material and process efficiency and weight or volume optimization in our products' sales packaging.	1	Multi
	E. We have established goals to address the environmental impact of our products' sales packaging.	1	Multi
	F. We publicly report our progress towards these goals.	1	IF C, D, OR E
	TOTAL POINTS AVAILABLE	**5**	

Guidance

Calculation & Scope

For this KPI, resources that can be used to establish goals and track progress on weight or volume optimization of packaging include, but are not limited to, assessment of packaging 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). Life cycle impact assessment can be used to establish goals and track progress on environmental impact reduction.

For E, methods for demonstrating quantified environmental impact reduction include, but are not limited to, life cycle impact assessment or assessment against ISO Standard 14040.

For B, an assessment of material efficiency and weight or volume optimization must have been made.

For D, goals must have been established based on these assessments.

Certifications, Standards & Tools

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

ISO 14040:2006: ISO 14040:2006 is the International Organization for Standardization's "Principles and Framework" document for conducting life cycle assessments.
https://www.iso.org/standard/37456.html

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

THESIS Help Center Video: Packaging – Design, policy, and goals KPI: Short video tutorial on the Packaging – Design, policy, and goals KPI. Use case-sensitive password 'thesis' when prompted.

	https://vimeo.com/520106433
Definitions	**Environmental impact:** Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services. (ISO definition) **Goals:** Goals should be specific, measurable, achievable, relevant, and time-bound. **Material and process efficiency - Home and Personal Care:** The practice of minimizing material use and waste in production processes. **Public disclosure - Home and Personal Care:** The act of making information available and readily accessible to consumers. **Sales packaging:** "Packaging that leaves a store with the consumer". (Global Protocol on Packaging Sustainability 2.0:2011)
Hotspots Addressed	***1.*** *Plastic use - Packaging production* ***8.*** *Energy consumption - Plastics manufacturing*

2. PACKAGING – SUSTAINABLE SOURCING

Question	Response Options	Points	Rules
What percentage of the sales packaging used for this category, by mass, is postconsumer recycled, postindustrial recycled, or sustainably-sourced renewable material?	**A.** We do NOT incorporate PIR, PCR, or sustainably sourced renewable content into this category's sales packaging.	0	OR B - G
	B. We incorporate PIR, PCR, or sustainably sourced renewable content in this category's sales packaging.	2	OR A
	C - G. We are able to report the following percentages for this category:		
	C. Wood/paper composition		Multi
	C1._____% of this category's sales packaging is composed of wood or paper.		
	C2._____% of this category's wood or paper sales packaging is composed of PCR or PIR content.		
	C3._____% of this category's wood or paper sales packaging is composed of sustainably sourced renewable content.		
	D. Plastic composition		Multi
	D1._____% of this category's sales packaging is composed of plastic.		
	D2._____% of this category's plastic sales packaging is composed of PCR content.		
	D3._____% of this category's plastic sales packaging is composed of PIR content.		
	D4._____% of this category's plastic sales packaging is composed of sustainably sourced renewable content.		
	E. Glass composition		Multi
	E1._____% of this category's sales packaging is composed of glass.		
	E2._____% of this category's glass sales packaging is composed of PCR content.		
	E3._____% of this category's glass sales packaging is composed of PIR content.		
	F. Metal composition		Multi
	F1._____% of this category's sales packaging is composed of metal.		
	F2._____% of this category's metal sales packaging is composed of PCR content.		
	F3._____% of this category's metal sales packaging is composed of PIR content.		
	G. Other material composition		Multi
	G1._____% of this category's sales packaging is composed of other materials.		
	G2._____% of this category's other material sales packaging is composed of PCR content.		
	G3._____% of this category's other material sales packaging is composed of PIR content.		
	G4._____% of this category's other material sales packaging is composed of sustainably sourced renewable content.		

Points for C - G: (Total PCR % + Total PIR % + Total sustainably sourced renewable %) x 8
TOTAL POINTS AVAILABLE 10

Guidance

Calculation & Scope

For this KPI, “category” is defined by the Performance Assessment name and description.

The total point value earned for C - G equals the total percentage of PCR, PIR, and sustainably sourced renewable content across all materials multiplied by 8. This value is calculated by:

% wood/paper composition × (% PCR or PIR content + % sustainably sourced renewable content)

+ % plastic composition × (% PCR content + % PIR content + % sustainably sourced renewable content)

+ % glass composition × (% PCR content + % PIR content)

+ % metal composition × (% PCR content + % PIR content)

+ % other materials composition × (% PCR content + % PIR content + % sustainably sourced renewable content)

For example, if the total percentage of PCR, PIR, or sustainably sourced renewable content across all materials is 25%, then the points earned for D - H would be 25% × 8 points available = 2 points earned.

Product sales packaging, which is defined as packaging that leaves a store with the consumer, is to be considered. For products that are shipped directly to an end consumer, include the transportation-related packaging.

Perform the calculations for this KPI in two steps:

Step 1. Enter the percentage composition, by mass, for each component type in this product category’s sales packaging:

- C1: Wood or paper
- D1: Plastic
- E1: Glass
- F1: Metal
- G1: Other materials

Step 2. Enter the percentage by mass for each material type in this product category’s sales packaging that is PCR, PIR, or sustainably sourced renewable content. For this step, be sure to enter the percentage of content based on each respective component type. Do not enter percentages based on the total mass of this product's category’s sales packaging.

- C2: Post-consumer or post-industrial recycled content
- D2, E2, F2, G2: Post-consumer recycled content
- D3, E3, F3, G3: Post-industrial recycled content
- C3, D4, G4: Sustainably sourced renewable content

For this KPI, post-consumer recycled content is defined by ISO 14021:2016 or the Global Protocol on Packaging Sustainability 2.0 and post-industrial (pre-consumer) recycled content is defined by ISO 14021:2016. Sustainably sourced renewable content is defined by the Global Protocol on Packaging Sustainability 2.0. Sustainable sourcing may be demonstrated by second or third party verification that the raw material has been harvested or produced legally and in a way that minimizes damage to the environment, workers, and communities.

Calculate C1, D1, E1, F1, and G1, as the mass of packaging composition for each component type in this product category’s sales packaging, divided by the total mass of this product category’s sales packaging, then multiply by 100.

For G1, "other materials" include, but are not limited to, textile packaging.

Calculate D2, E2, F2, and G2 as the mass of post-consumer recycled content for each component type in this product category's sales packaging, divided by the total mass of each respective component type in this product category's sales packaging, then multiply by 100.

For C2, sum the mass of post-consumer recycled and post-industrial recycled wood or paper content in this product category's sales packaging and divide this value by the total mass of wood or paper in this product category's sales packaging.

Calculate D3, E3, F3, and G3 as the mass of post-industrial recycled content for each component type in this product category's sales packaging, divided by the total mass of each respective component type in this product category's sales packaging, then multiply by 100.

Calculate C3, D4, and G4 as the mass of sustainably sourced renewable content for each component type in this product category's sales packaging, divided by the total mass of each respective component type in this product category's sales packaging, then multiply by 100.

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 14021:2016: ISO 14021:2016 (Environmental labels and declarations -- Self-declared environmental claims (Type II environmental labelling)) provides measurement standards for determining how recyclable a particular product is.
https://www.iso.org/standard/66652.html

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

Definitions

Post-consumer recycled (PCR) content: Materials obtained from a product that has been disposed of after its intended consumer use.

Post-industrial recycled (PIR) content: Materials obtained from a manufacturing process that has been disposed of after its intended use.

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

Sustainably sourced renewable content: Materials obtained from living biomass that is continually replenished at a rate equal to, or greater than, the rate of depletion.

Hotspots Addressed

1. *Plastic use - Packaging production*

8. *Energy consumption - Plastics manufacturing*

3. PACKAGING – RECYCLABILITY - IMPROVING COLLECTION AND RECOVERY

Question	Response Options	Points	Rules
Does your organization participate in an effort to improve collection and recovery rates (e.g., in-store collection, HPRC, Recycling Council, or Closed Loop Fund)?	**A.** We do NOT participate in an effort to improve collection and recovery rates.	0	OR B
	B. We participate in an effort to improve collection and recovery rates (e.g., in-store collection, HPRC, Recycling Council, or Closed Loop Fund).	5	OR A
	TOTAL POINTS AVAILABLE	**5**	

Guidance

Calculation & Scope

For B, efforts that improve collection and recovery include, but are not limited to, those that establish a means for in store collection for sales packaging, bring public attention to the development of recycling infrastructure, technologies, and actionable tools, or otherwise increase participation in recycling.

Examples of initiatives that improve collection and recovery rates include, but are not limited to, those in the Background Information section.

Background Information

Closed Loop Fund: The Closed Loop Fund aims to increase the recycling rate of packaging and products with timed commitments to eliminate GHG production, divert waste, and provide a replicable model maybe for additional investment.
https://www.closedlooppartners.com/funds/

Healthcare Plastics Recycling Council (HPRC): HPRC is a consortium of organizations throughout the value chain of the health care industry that are committed to enhancing the economics, efficiency, and quality of healthcare plastics. HPRC is actively engaged with the Circular Economy to achieve these goals.
https://www.hprc.org/

Hotspots Addressed

1. *Plastic use - Packaging production*

8. *Energy consumption - Plastics manufacturing*

4. PACKAGING – RECYCLE LABELING

Question	Response Options	Points	Rules
What percentage of the sales packaging for your final product was labeled for recycling according to an established standard?	**A.** Not applicable. We do not use sales packaging for our product.	-	OR B, OR C
	B. We are unable to determine at this time.	0.000	OR A, OR C
	C. We are able to report the following for the sales packaging used for our final product:		AND C1 AND C2
	C1. _____% of our packaging, by units sold in the US and Canada, was labeled with How2Recycle.	0 × (%)	Multi
	C2. _____% of our packaging, by units sold in regions outside the US and Canada, was labeled with an established third-party recycling label.	0 × (%)	Multi
	TOTAL POINTS AVAILABLE	**0**	

Guidance

Calculation & Scope

Calculate C1 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 C2 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

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/

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.jcpra.or.jp/Portals/0/resource/eng/JCPRAdocuments202012.pdf

Le Guide du TRI (Citeo Sorting Guide): sed 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

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

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

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.

Hotspots Addressed

***1.** Plastic use - Packaging production*

***3.** Feedstock consumption - Chemical production*

***8.** Energy consumption - Plastics manufacturing*

5. PACKAGING – STEWARDSHIP LIST CHEMICAL MANAGEMENT

Question	Response Options	Points	Rules
How does your organization address the chemical safety of sales packaging for products in this category?	**A.** We do NOT go beyond legal and regulatory compliance regarding the incorporation of chemicals on the stewardship list in our sales packaging.	0	OR B
	B. We have assessed our sales packaging raw materials for the presence of chemicals on the stewardship list.	2	OR A
	C. We perform alternatives assessments that provide informed substitutions of the chemicals on the stewardship list in our sales packaging.	1	IF B
	D. We use, and can demonstrate that, the outputs of our alternatives assessments provide informed substitutions of the chemicals on the stewardship list in our sales packaging.	1	IF B
	E. We publicly disclose annually our progress resulting from alternatives assessment and informed substitution for the chemicals on the stewardship list in our sales packaging.	1	IF B
	TOTAL POINTS AVAILABLE	**5**	

Guidance

Calculation & Scope

For this KPI, “category” is defined by the Performance Assessment name and description.

Sales packaging materials for final products are included in the scope of this KPI.

The stewardship list is comprised of the following lists which describe the conditions under which the identified chemicals can or cannot be used. If a chemical on a stewardship list is listed with a qualifying statement on production, exposure, or threshold, the statement should be considered for this KPI:

- CA EPA Prop 65 – Reproductive and Developmental Toxicants, Carcinogens
- EPA Toxics Release Inventory PBTs
- EU – Cosmetics Regulation Annex II
- EU – Priority Endocrine Disruptors (Categories 1, 2)
- EU REACH – Annex XVII CMRs (Appendices 1 - 6)
- IARC – Groups 1, 2A, 2B

These published lists have been referenced in public retailer chemical policies. Where a chemical is accompanied by a specific route of exposure on these published lists and the exposure route is relevant to the product during consumer use or foreseeable misuse, then the chemical is relevant to this KPI.

Resources that can be used to identify and perform alternatives assessments on chemicals from the stewardship list include, but are not limited to, those listed in the Certifications, Standards & Tools and Background Information sections.

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Certifications, Standards & Tools	**EPA - Safer Choice, Alternatives Assessments:** EPA developed the Safer Choice program in which companies can voluntarily participate by researching and reformulating their product to meet Safer Choice standards in order to earn the Safer Choice Label on their products. Safer Choice uses alternatives testing to encourage industry to move to safer alternatives, complement regulatory action by showing that safer and higher functioning alternatives are available, or point out the limitations to chemical substitution for a particular use. https://www.epa.gov/saferchoice/design-environment-alternatives-assessments **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 **GreenScreen for Safer Chemicals:** GreenScreen is a "Chemical Hazard Assessment" method that can be used to identify chemicals of high concern and determine safer alternatives. The tool was developed and is administered by Clean Production Action. A second tool, the GreenScreen List Translator, is a publicly available abbreviated version that screens and classifies chemicals based solely on their presence on authoritative hazard lists. https://www.greenscreenchemicals.org/
Background Information	**BizNGO Chemical Alternatives Assessment Protocol:** The BizNGO Chemical Alternatives Assessment Protocol is a "decision framework for substituting chemicals of concern to human health or the environment with safer alternatives." https://www.biznngo.org/alternatives-assessment/chemical-alternatives-assessment-protocol
Definitions	**Goals:** Goals should be specific, measurable, achievable, relevant, and time-bound. **Informed substitution:** Informed substitution implies that factors such as cost and performance, technical feasibility, life cycle impacts, economic and social accountability, and potential to result in lasting change have been taken into consideration to ensure that substitutes and the final product are safer based on their health and environmental profiles (Adapted from United States Environmental Protection Agency Design for Environment Program Alternative Assessment information). **Public disclosure - Home and Personal Care:** Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance. **Sales packaging:** "Packaging that leaves a store with the consumer". (Global Protocol on Packaging Sustainability 2.0:2011)
Hotspots Addressed	***14.** Packaging material chemical migration - Formulated products*

6. ANIMAL TESTING

Question	Response Options	Points	Rules
How does your organization use animal testing to justify the safety of your products and their ingredients?	**A.** We perform animal testing on ingredients or products to justify safety.	0	OR B - E
	B. We use validated alternative methods that reduce, refine, or replace the use of animals when available and required to fulfill US regulatory requirements.	2	OR C
	C. Under NO conditions do we conduct, or require others to conduct on our behalf, animal testing in any region to obtain safety data for ingredients or final formulations for products sold in the United States.	4	OR B
	D. We participate in or contribute to a major research initiative dedicated to the continuous advancement and promotion of animal alternatives validation.	4	Multi
	E. We actively work to reduce regulatory requirements for animal testing in regions where they are required.	4	Multi
	TOTAL POINTS AVAILABLE	**12**	

Guidance

Calculation & Scope

Because of the alignment with the Beauty and Personal Care Product Sustainability Rating System, this KPI has US-based scope. For retailers and brands using this KPI in other regions, different considerations would need to be made.

Manufacturers that are performing animal testing but not performing any of the activities associated with B - E should select response option A.

For A, a manufacturer, or their raw material suppliers, may perform animal testing or a manufacturer may be unable to verify that their suppliers do not perform animal testing on the raw materials they produce.

For B, animal testing can be performed using validated alternative methods which refine or replace the use of animals. In the US, alternative methods are validated by ICVAAM and accepted by regulatory agencies. The complete list of acceptable alternative methods for the US can be found using the National Toxicology Program (NTP) link in the Resources section.

For C, animal testing cannot be performed to obtain safety data for safety justification of products sold in the United States. Any data obtained from mandatory animal testing per regulatory requirements in regions outside of the United States cannot be used to substantiate ingredient or formulation safety for products sold in the United States.

For D and E, contributions to research initiatives and efforts to reduce regulatory requirements for animal testing include those outside of the United States.

For D, major research initiatives are government, university, or privately based programs that are dedicated to the replacement or refinement of animal testing by advancing non-animal alternative testing methods through effective development, validation, use, or communication. Examples of major research initiatives include, but are not limited to, those listed in the Background Information section.

Background Information	**Center for Alternatives to Animal Testing (CAAT), Johns Hopkins University Bloomberg School of Public Health:** This is a website that gathers internet-based information on alternatives and publishes ALTEX journal for alternatives research. https://caat.jhsph.edu/ **Centre for Documentation and Evaluation of Alternatives to Animal Experiments (AnimAlt-ZEBET):** The ZEBET database is part of the German Centre for the Protection of Laboratory Animals and is a valuable resource for industry, universities, and the public to access and understand information regarding animal testing alternatives. https://www.bfr.bund.de/en/zebet_database_on_alternatives_to_animal_experiments_on_the_internet__animalt_zebet_-1508.html **European Union Reference Laboratory for Alternatives to Animal Testing (EURL ECVAM):** EURL ECVAM is dedicated to the advancement of animal testing alternatives by promoting non-animal alternatives through scientific research, validation, and independent evaluation. ECVAM's ultimate goal is enhanced safety at multiple life cycle stages with decreased reliance on animal testing. https://ec.europa.eu/jrc/en/eurl/ecvam **Japanese Center for Validation of Alternative Methods (JaCVAM):** JaCVAM is an institute that is dedicated to the promotion of the reduction, refinement, and replacement of animal testing used to justify chemical safety in Japan. This mission is achieved in part through international collaboration. https://www.jacvam.jp/en/index.html **National Toxicology Program (NTP) Alternative Methods Accepted by US Agencies:** This website lists the testing methodologies that have been accepted or endorsed by US and EU regulation. https://ntp.niehs.nih.gov/whatwestudy/niceatm/accept-methods/index.html **The Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM):** ICCVAM is an interagency committee composed of representatives from 15 U.S. federal regulatory and research agencies that require, use, generate, or disseminate toxicological and safety testing information used to determine the safety or potential adverse health effects of chemicals and products to which workers and consumers may be exposed. https://ntp.niehs.nih.gov/whatwestudy/niceatm/iccvam/index.html
Definitions	**Validated alternative methods:** Testing methodologies that reduce, refine, or replace the use of animals and have been validated by ICVAAM in the United States and accepted by regulatory agencies for data collection.
Hotspots Addressed	***9.*** *Animal testing - Product manufacturing*

7. FORMULATION - CHEMICAL SELECTION

Question	Response Options	Points	Rules
Have you assessed your formulations for the presence of chemicals on the stewardship list?	**A.** We have NOT assessed our formulations for the presence of chemicals on the stewardship list.	0	OR B
	B. We have assessed our formulations for the presence of chemicals on the stewardship list.	3	OR A
	C._____% of our products in this category, by number, have intentionally added formulation ingredients that are on the stewardship list. *If a chemical is listed with a specific exposure, for the purpose of this response option, the chemical should be included even if the specified exposure is NOT relevant to the consumer during product use.*	6 × (1 - %)	IF B
	D._____% of our products in this category, by number, have intentionally added formulation ingredients that are on the stewardship list. *If a chemical is listed with a specific exposure that is NOT relevant to the consumer during product use, for the purpose of this response option, the chemical should NOT be included.*	6 × (1 - %)	IF B
	TOTAL POINTS AVAILABLE	**15**	

Guidance

Calculation & Scope

For this KPI, “category” is defined by the Performance Assessment name and description.

Intentionally added ingredients in final formulations are in scope for this KPI.

For this KPI, the threshold for intentionally added chemicals on the stewardship list is 100 ppm. Intentionally added chemicals on the stewardship list below this threshold are not to be considered.

For C, chemicals on the stewardship list are those chemicals on any of the six authoritative and scientific lists referenced below. Even when a list specifies a particular route of exposure, C measures the presence of chemicals on the stewardship list regardless of the route of exposure.

Calculate C as the number of products that you sell in this product category that contain any intentionally added formulation ingredients that are on the stewardship list, divided by the total number of products that your organization sells in this product category, then multiply by 100.

For D, chemicals on the stewardship list are those chemicals on any of the six authoritative and scientific lists referenced below. When a list specifies a particular route of exposure, D measures the presence of chemicals on the stewardship list when that route of route of exposure is relevant to consumers under conditions of instructed use or foreseeable misuse. Foreseeable misuse is limited to consumer misuse during a product’s intended application and does not include exposure from intentional misuse (e.g., ingestion of rinse-off skin products).

Calculate D as the number of products that you sell in this product category that contain any intentionally added formulation ingredients that are on the stewardship list where exposure is relevant, divided by the total number of products that your organization sells in this product category, then multiply by 100.

For D, examples of authoritative or scientific hazard classifications where a route of exposure has been specified include:

1. Ethyl alcohol in alcoholic beverages
2. Titanium dioxide (airborne, unbound particles of respirable size
3. Silica, crystalline (airborne particles of respirable size)
4. Carbon black (airborne, unbound particles of respirable size)

Example-1: Titanium dioxide

For C, ALL products containing titanium dioxide are to be included in the numerator of the calculation.

For D, for products containing titanium dioxide (unbound particles of respirable size), ONLY those products that can become airborne during instructed consumer use or foreseeable misuse are to be included in the numerator of the calculation.

Example-2: Ethyl alcohol

For C, ALL products containing ethyl alcohol are to be included in the numerator of the calculation.

For D, for products containing ethyl alcohol, ONLY those products that are ingested under conditions of instructed use or foreseeable misuse are to be included in the numerator of the calculation.

For product categories without intentionally added formulation ingredients that are on the stewardship list with or without a specified route of exposure, enter zero for C.

For product categories without intentionally added formulation ingredients that are on the stewardship list, enter zero for C and D.

The stewardship list is comprised of the following lists which describe the conditions under which the identified chemicals can or cannot be used. If a chemical on a stewardship list is listed with a qualifying statement on production, exposure, or threshold, the statement should be considered for this KPI.

- CA EPA Prop 65 – Reproductive and Developmental Toxicants, Carcinogens
- EPA Toxics Release Inventory PBTs
- EU – Cosmetics Regulation Annex II
- EU – Priority Endocrine Disruptors (Categories 1, 2)
- EU REACH – Annex XVII CMRs (Appendices 1 - 6)
- IARC – Groups 1, 2A, 2B

These published lists have been referenced in public retailer chemical policies.

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Certifications, Standards & Tools

EPA - Safer Choice: The EPA Safer Choice program (previously Design for the Environment) provides a voluntary standard for product designers who wish to choose ingredients based on established criteria. In this program, all ingredients are reviewed and must meet strict criteria for various impacts (e.g., human health and the environment, carcinogenicity, reproductive/developmental toxicity). Products meeting the standard are able to carry the Safer Choice label.
https://www.epa.gov/saferchoice

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS): GHS provides specific human and environmental health criteria along with physical hazard criteria for chemicals in industry. These criteria are used for hazard communication and labeling of chemicals.
https://www.osha.gov/dsg/hazcom/global.html

Definitions	**Contaminants:** Naturally occurring impurities present in procured raw materials that are unintentionally incorporated into final formulations where they provide no function. **Incidental chemicals:** Chemicals in raw materials present as a result of processing or for stabilization such as catalysts, solvents, residual monomers, reactive by-products, and raw material preservatives. **Intentionally added chemical:** A chemical that provides a function to the final formulation during consumer use or is present as a result of formulating a product for safe use by consumers (e.g., pH balancing by acids or bases). **Unintentionally added ingredient:** An ingredient that provides no function in a final formulation and is not present as a result of formulating a product for safe use by consumers (e.g., pH balancing by acids or bases).
Hotspots Addressed	***12.*** *Adverse health effects - Product application* ***15.*** *Wastewater generation - Product flush*

8. CHEMICAL FOOTPRINT

Question	Response Options	Points	Rules
Does your organization measure its chemical footprint?	**A.** We do NOT measure our own chemical footprint and we are NOT engaged in a program to reduce the use of chemicals on the stewardship list.	0	OR B, C
	B. We measure our chemical footprint.	6	Multi
	C. We participate in the Chemical Footprint Project or another external program.	5	Multi
	D. We publicly disclose our chemical footprint.	4	IF B, C
	TOTAL POINTS AVAILABLE	**15**	

Guidance

Calculation & Scope

The stewardship list is comprised of the following lists which describe the conditions under which the identified chemicals can or cannot be used. If a chemical on a stewardship list is listed with a qualifying statement on production, exposure, or threshold, the statement should be considered for this KPI.

- CA EPA Prop 65 – Reproductive and Developmental Toxicants, Carcinogens
- EPA Toxics Release Inventory PBTs
- EU – Cosmetics Regulation Annex II
- EU – Priority Endocrine Disruptors (Categories 1, 2)
- EU REACH – Annex XVII CMRs (Appendices 1 - 6)
- IARC – Groups 1, 2A, 2B

These published lists have been referenced in public retailer chemical policies.

Where a chemical is accompanied by a specific route of exposure on these published lists and the exposure route is relevant to the product during consumer use or foreseeable misuse, then the chemical is relevant to this KPI.

For B, the program may be internal to an organization but must measure the chemical footprint as defined by the Chemical Footprint Project (CFP).

For C, the external program must measure the chemical footprint of the organization and must be multi-stakeholder (include representatives from government and/or NGO as well as industry) with transparent methodology and include actors from across the supply chain (raw material suppliers, manufacturers, and retailers).

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Background Information	**Clean Production Action - Chemical Footprint Project:** The Chemical Footprint Project (CFP), an initiative of Clean Production Action (CPA), has developed a tool to track and benchmark corporate activities to include safer chemicals in consumer products. The CFP survey also covers chemical selection at the manufacturing and supply chain phases and tracks progress according to four major elements: Management Strategy, Chemical Inventory, Footprint Measurement, and Public disclosure and Verification. https://www.chemicalfootprint.org/
Definitions	**Chemical footprint:** Defined by the Chemical Footprint Project™ as the total mass of chemicals sold by a company, used in its manufacturing operations and by its suppliers, and contained in packaging that meet any of the following criteria: • Carcinogenic, mutagenic, or toxic to reproduction (CMR); • Persistent, bioaccumulative and toxic substance (PBT); • Any other chemical for which there is scientific evidence of probable serious effects to human health or the environment that give rise to an equivalent level of concern (for example, an endocrine disruptor or neurotoxicant); or • A chemical whose breakdown products result in a [chemical] that meets any of the above criteria. The Chemical Footprint Project™ provides other specific guidance that can be used to identify chemicals that meet these criteria. **Public disclosure - Home and Personal Care:** Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.
Hotspots Addressed	***12.*** *Adverse health effects - Product application* ***15.*** *Wastewater generation - Product flush*

9. RISK ASSESSMENT AND PRODUCT SAFETY

Question	Response Options	Points	Rules
How does your organization address the safety of your products using chemical risk assessment?	**A.** We do NOT address product safety beyond legal and regulatory compliance.	0	OR B - E
	B. We use best in class approaches according to SCCS guidance for human health risk assessment to screen all of our beauty and personal care ingredients and our final products, to ensure an acceptable margin of safety.	3	Multi
	C. We participate in on-going research to advance the science of product safety and risk assessment.	2	Multi
	D. We ensure adequate microbiological protection of our products.	3	Multi
	E. We have systems in place for postmarket safety surveillance.	3	Multi
	F. We disclose the following information on our website:		AND
	F1. Details of our risk assessment methodologies.	1	IF B
	F2. Full risk assessments of our ingredients and final products.	1	IF B
	F3. Details of our postmarket safety surveillance strategy.	1	IF E
	F4. Results of our postmarket safety surveillance.	1	IF E
	TOTAL POINTS AVAILABLE	**15**	

Guidance

Calculation & Scope

Final formulations, not packaging materials, are in scope for this KPI.

For B, ingredient risk assessments must consider the aggregate exposure to individual ingredients from all products that are sold by a manufacturer and arrive at an acceptable margin of safety. These risk assessments should take into account exposure to vulnerable populations such as children under the age of three, the elderly, pregnant and breast-feeding women, and people with compromised immune systems (as described in the EU Cosmetic Products Regulation (EC) No 1223/2009).

Product level risk assessments must be performed for all products that are sold by a manufacturer and must account for interactions between individual ingredients in final formulations to justify safe use by consumers.

Resources for performing risk assessment, formulating products for adequate microbiological protection, and post market safety surveillance include, but are not limited to, those listed in the Background Information for this KPI.

Certifications, Standards & Tools

European Chemicals Agency Guidance on Information Requirements and Chemical Safety Assessment (ECHA): This guidance document describes the information requirements under REACH with regard to substance properties, exposure, use and risk management measures, in the context of the chemical safety assessment.
https://echa.europa.eu/guidance-documents/guidance-on-information-requirements-and-chemical-safety-assessment

The SCCS Notes of Guidance for the Testing of Cosmetic Ingredients and Their Safety Evaluation - 10th Revision: The SCCS Notes of Guidance for the Testing of Cosmetic Ingredients and Their Safety Evaluation is a document compiled by the members of the Scientific Committee on Consumer Safety (SCCS). The document contains information on the different aspects of testing and safety evaluation of cosmetic substances in Europe, with an emphasis on cosmetic ingredients and finished products. It is designed to provide guidance to public authorities and to the cosmetic industry in order to improve harmonized compliance with the current cosmetic EU legislation.
https://op.europa.eu/en/publication-detail/-/publication/1d5f1653-38ce-11e9-8d04-01aa75ed71a1/language-en/format-PDF/source-87840423

Background Information	**Cosmetics Europe The Personal Care Association:** Cosmetics Europe is the European trade association for the cosmetics and personal care industry and provides information on ingredient safety assessment, manufacturing according to good manufacturing practices, marketing, labeling, and market surveillance. https://cosmeticseurope.eu/cosmetics-industry/understanding-cosmetics-regulation/ **Microbiological Safety and Cosmetics:** The FDA provides guidance and resources on Microbiological Safety for Cosmetics such as Good Manufacturing Practice for Cosmetics, Microbiological Methods for Cosmetics, and Product Testing. https://www.fda.gov/cosmetics/potential-contaminants-cosmetics/microbiological-safety-and-cosmetics
Definitions	**Post market surveillance:** The practice of monitoring the safety of products after they have been released on the market. **Risk assessment - Home and Personal Care:** A systematic process to evaluate the potential risks associated with consumer exposure to individual ingredient hazards or final formulations when used in products under conditions of instructed use or foreseeable misuse.
Hotspots Addressed	***12.*** *Adverse health effects - Product application* ***15.*** *Wastewater generation - Product flush*

10. INGREDIENT DISCLOSURE TO MANUFACTURERS

Question	Response Options	Points	Rules
What level of raw material disclosure does your organization require from suppliers?	**A.** We require that ONLY a safety data sheet accompany all purchased raw materials and ingredients.	0	OR B - E
	B. We require a list from our suppliers of all substances intentionally added to ingredients or raw materials.	2	Multi
	C. We ensure that our suppliers identify in the composition of all raw materials and ingredients any intentionally added chemicals on the stewardship list and incidental chemicals and known contaminants.	3	Multi
	D. We require from our suppliers that a list accompany all procured raw materials identifying all chemicals on the stewardship list that are reasonably expected to be present at 100 ppm, whether intentionally added or not, and we verify this information by internal testing methodologies or additional research.	5	OR E
	E. We require from our suppliers that a list accompany all procured raw materials identifying all chemicals on the stewardship list that are reasonably expected to be present at detectable levels, whether intentionally added or not, and we verify this information by internal testing methodologies or additional research.	10	OR D
	TOTAL POINTS AVAILABLE	**15**	

Guidance

Calculation & Scope

Both intentionally and unintentionally added ingredients in final formulations are in scope for this KPI.

For D and E, chemicals that are reasonably expected to be present include intentionally and unintentionally added ingredients present above trace quantities where the manufacturer knows or should reasonably know of such ingredients, impurities, or contaminants, unless they are withheld as confidential business information (adapted from the New York State Department of Environmental Conservation).

For D, the limit of detection is 100 ppm. Chemicals that are reasonably expected to be present at levels lower than 100 ppm are not included.

For E, chemicals that are reasonably expected to be present at detectable levels are included.

The stewardship list is comprised of the following lists which describe the conditions under which the identified chemicals can or cannot be used. If a chemical on a stewardship list is listed with a qualifying statement on production, exposure, or threshold, the statement should be considered for this KPI.

- CA EPA Prop 65 – Reproductive and Developmental Toxicants, Carcinogens
- EPA Toxics Release Inventory PBTs
- EU – Cosmetics Regulation Annex II
- EU – Priority Endocrine Disruptors (Categories 1, 2)
- EU REACH – Annex XVII CMRs (Appendices 1 - 6)
- IARC – Groups 1, 2A, 2B

These published lists have been referenced in public retailer chemical policies.

Where a chemical is accompanied by a specific route of exposure on these published lists and the exposure route is relevant to the product during consumer use or foreseeable misuse, then the chemical is relevant to this KPI.

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	manufacturers, retailers, and non-profit organizations that represent broad perspectives on sustainability. To build a KPI set that can be deployed across the beauty and personal care industry, 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.
Certifications, Standards & Tools	**The Globally Harmonized System of Classification and Labelling of Chemicals (GHS):** GHS provides specific human and environmental health criteria along with physical hazard criteria for chemicals in industry. These criteria are used for hazard communication and labeling of chemicals. https://www.osha.gov/dsg/hazcom/global.html
Definitions	**Intentionally added ingredient:** A chemical that provides a function to the final formulation during consumer use or is present as a result of formulating a product for safe use by consumers (e.g., pH balancing by acids or bases). **Limit of detection:** Defined by the IUPAC Compendium of Chemical Terminology, 2nd ed. (the "Gold Book") as: "[the concentration, or the quantity, derived from the smallest measure that can be detected with reasonable certainty for a given analytical procedure.]" **Unintentionally added ingredient:** An ingredient that provides no function in a final formulation and is not present as a result of formulating a product for safe use by consumers (e.g., pH balancing by acids or bases). Unintentionally added ingredients include chemical contaminants (naturally occurring impurities present in procured raw materials that are unintentionally incorporated into final formulations where they provide no function) and incidental chemicals (chemicals in raw materials present as a result of processing or for stabilization such as catalysts, solvents, residual monomers, reactive by-products, and raw material preservatives).
Hotspots Addressed	***12.*** *Adverse health effects - Product application* ***15.*** *Wastewater generation - Product flush*

11. RESPONSIBLE SOURCING

Question	Response Options	Points	Rules
How does your organization address responsible sourcing in your products' supply chains?	**A.** We do NOT have policies in place at this time to address responsible sourcing.	0	OR B - E
	B. We have stated environmental principles and we require all of our suppliers to commit and adhere to them.	1	Multi
	C. We use supply-chain environmental risk mapping to identify risks associated with our raw material or other component sourcing.	1	Multi
	D. We conduct audits of suppliers identified as high risk through supply-chain environmental risk mapping and we take corrective action where needed.	2	Multi, OR E
	E. We do NOT source from suppliers identified as high risk.	5	Multi, OR D
	F. We publicly disclose our policies.	1	IF B - E
	TOTAL POINTS AVAILABLE	**8**	

Guidance

Calculation & Scope

Responsible sourcing may be demonstrated by second or third party verification that the raw material has been harvested or produced legally and in a way that minimizes damage to the environment, workers, and communities.

For D, a risk assessment can include an on-site audit by a second or third party, or a first party systematic risk assessment of suppliers identified as high risk through supply-chain environmental risk mapping.

Definitions

Public disclosure - Home and Personal Care: Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.

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.

Hotspots Addressed

6. *Palm oil production - Environmental impacts*

7. *Palm oil production - Social impacts*

12. HUMAN RIGHTS – SUPPLY CHAIN

Question	Response Options	Points	Rules
How does your organization address human rights in your products' supply chains?	**A.** We do NOT have a human rights policy to assure the protection of human rights throughout our products' value chain.	0	OR B - E
	B. We have a human rights policy to assure the protection of human rights throughout our products' value chain.	1	Multi
	C. We have publicly communicated our human rights policy.	1	IF B
	D. We perform internal risk assessments and social compliance audits.	2	Multi
	E. We conduct third party audits of our suppliers at least once every 36 months.	4	Multi
	F. Selection of our third party audit locations includes previous human rights incidents.	1	IF E
	G. We have formal systems in place to ensure that any adverse findings are mitigated.	1	IF B - F
	TOTAL POINTS AVAILABLE	**10**	

Guidance

Calculation & Scope

For B, the human rights policy must address the following issues: child labor, compensation, discipline, discrimination, forced labor, freedom of association and right to collective bargaining, management systems for human resources, and working hours.

For D, risk assessments should use tools to determine if a country is low risk or high risk for rights violations. The tool should measure the strength of a country's ability to govern and enforce laws, regulations, and internationally recognized principles. This 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 assessments and audits must be verifiable and must address freedom of association & collective bargaining, forced & child labor, fair income, and equality of opportunity & treatment, as outlined by the United Nations Global Compact or the International Labour Organization Declaration on Fundamental Principles and Rights at Work. Other standards, certifications, and tools may also be applicable. Where freedom of association & 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. Audits must have been completed within 12 months of the completion date of this question.

For C and E, public reporting and third-party audits are valid for vertically integrated organizations.

Certifications, Standards & Tools

Business Social Compliance Initiative Countries' 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

Social Accountability International SA8000 Standard: SA8000 is a human rights standard that can be used for audits of workplaces across industries. It is based on principles developed by the United Nations Declaration on Human Rights and the Conventions of the International Labour Organization.

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

Background Information

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 **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	**Human rights:** Universal rights of all human beings as born free and equal in dignity and rights as described in the United Nations Universal Declaration of Human Rights. **Human rights incident:** An incident which violates the human rights of workers within the value chain. **Public disclosure - Home and Personal Care:** Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance. **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. **Third-party audit:** An audit conducted by external, independent auditing organizations, such as those providing certification of conformity to a standard.
Hotspots Addressed	***7.** Palm oil production - Social impacts*

13. PALM OIL, PALM KERNEL OIL, AND DERIVATIVE INGREDIENT SOURCING

Question	Response Options	Points	Rules
What percentage of your palm oil and palm oil-derived ingredients is Certified Sustainable Palm Oil (CSPO) purchased through RSPO book and claim, mass balance, segregated, and identity preserved supply chain models?	**A.** Not applicable. We do not produce or use palm oil, palm kernel oil, or their associated chemically-derived ingredients in our products.	-	OR B, C
	B. We are unable to determine at this time.	0.000	OR C
	C. We are able to report the following for our palm oil ingredient supply:	-	OR B
	C1. _____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO book and claim.	2.5 × %	Multi
	C2. _____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO mass balance.	5.0 × %	Multi
	C3. _____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO segregated.	7.5 × %	Multi
	C4. _____% of our palm oil and palm oil-derived ingredients is from Certified Sustainable Palm Oil (CSPO) purchased through RSPO identity preserved.	10 × %	Multi

TOTAL POINTS AVAILABLE 10

Guidance

Calculation & Scope

Your palm oil supply includes all palm oil, palm kernel oil, and their chemically-derived ingredients purchased or produced for inclusion in your final products. "Chemically-derived ingredients" refers to any material that originated from a chemical reaction that included palm oil or palm kernel oil as a raw material.

Calculate C1 as the mass of your certified palm oil ingredient supply for your products that was purchased through RSPO book and claim (e.g., GreenPalm), divided by the total mass of your palm oil ingredient supply, then multiply by 100.

Calculate C2 as the mass of your certified palm oil ingredient supply for your products that was purchased through RSPO mass balance, divided by the total mass of your palm oil ingredient supply, then multiply by 100.

Calculate C3 as the mass of your certified palm oil ingredient supply for your products that was purchased through RSPO segregated, divided by the total mass of your palm oil ingredient supply, then multiply by 100.

Calculate C4 as the mass of your certified palm oil ingredient supply for your products that was purchased through RSPO identity preserved, divided by the total mass of your palm oil ingredient supply, then multiply by 100.

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

Certifications, Standards & Tools	**Consumer Goods Forum Palm Oil Roadmap (CGF - Palm Oil 2021):** The Consumer Good Forum (CGF) Palm Oil Roadmap is a guide for companies implementing their own policies and practices for sourcing palm oil more sustainably and achieving deforestation reduction goals. https://www.theconsumergoodsforum.com/wp-content/uploads/2017/09/20150810-Sustainable-Plam-Oil-Sourcing-Guidelines-Final-Version-1.pdf **GreenPalm - Certified Sustainable Palm Oil:** The GreenPalm trading program allows companies to support RSPO growers and suppliers by allowing them to purchase book and claim certificates of RSPO to offset their use of palm and palm kernel oil. http://greenpalm.org/ **RSPO - Roundtable on Sustainable Palm Oil - Certification:** The RSPO certification is a seal of approval ensuring that the palm oil is traceable through the supply chain by certifying each facility that processes or uses it. RSPO was founded on and supports principles for palm oil production including transparency, regulatory compliance, financial viability, natural resource conservation, and continuous improvement. http://www.rspo.org/about **RSPO supply chain models Book and Claim, Mass Balance, Segregated, and Identity Preserved:** The palm oil and palm oil-derived ingredients may go through many production and logistical stages between plantations and the end product. Any individual batch of palm oil and palm oil-derived ingredients can be traded through one of four supply chain models that are approved by RSPO - Book and Claim, Mass Balance, Segregated, and Identity Preserved. https://rspo.org/certification/supply-chains
Background Information	**Palm Oil Innovation Group Charter (2019):** The Palm Oil Innovation Group (POIG) Charter supports the group's goals to support innovation and improvements in palm oil plantation management, create value for those using the practices outlined, and be a platform for communication for plantation managers and governments. http://poig.org/the-poig-charter/ **Walmart Sustainability Hub Forest Conservation (Walmart 2021):** This website offers resources and guidance to support supplier engagement for deforestation-risk commodities (i.e. beef, cocoa, palm oil, and soy) in the jurisdictional approach to encourage forest conservation in places at highest risk of deforestation. https://www.walmartsustainabilityhub.com/forest-conservation
Definitions	**Chemically-derived ingredients:** Any material that originated from a chemical reaction that included palm oil or palm kernel oil as a raw material. Examples of ingredients that may be derived from palm oil or palm kernel oil include, but are not limited to: surfactants such as sodium lauryl sulfate, sodium laureth sulfate, and sodium dodecyl sulphate; emulsifiers such as glyceryl stearate, steareth-20, and cetyl alcohol, as well as emollients such as palmitic acid.
Hotspots Addressed	***6.** Palm oil production - Environmental impacts* ***7.** Palm oil production - Social impacts*

14. GREENHOUSE GAS – SUPPLY CHAIN

Question	Response Options	Points	Rules
What percentage of ingredients used in your final product, by total spend, was produced by suppliers that reported their annual Scope 1 and 2 greenhouse gas emissions?	**A.** We are unable to determine what percentage of our ingredients, by total spend, was produced by suppliers that reported their annual scope 1 and 2 greenhouse gas emissions in the last twelve months.	0	OR B - C
	B. _____% of our ingredients, by total spend, was produced by suppliers that reported scope 1 and 2 greenhouse gas emissions in the last twelve months.	7 × (%)	Multi
	C. We have set goals to reduce our scope 3 greenhouse gas emissions. We track, and publicly disclose, our scope 3 emissions.	2	Multi
	TOTAL POINTS AVAILABLE	**9**	

Guidance

Calculation & Scope

Scope 1, 2, and 3 emissions are defined by the Greenhouse Gas Protocol Corporate Standard (2015).

Calculate B as the spend on ingredient suppliers for personal care products sold that reported scope 1 and 2 greenhouse gas emissions, divided by total spend on all ingredient suppliers for personal care products sold, then multiply by 100.

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

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

If suppliers responded to the most recent CDP Climate Change questionnaire you may refer to each supplier's CDP Climate Change responses (in the 2021 questionnaire, refer to questions C6.1: Scope 1 Emissions Data and C6.3: Scope 2 Emissions Data to determine if they report emissions).

For C, public disclosure must have occurred within 12 months of the date you respond to this question. Resources that can be used to establish and track greenhouse gas reduction goals include, but are not limited to, the Greenhouse Gas (GHG) Protocol Corporate Standard and GRI Performance Indicators.

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

Greenhouse Gas (GHG) Protocol Corporate Standard: The Greenhouse Gas (GHG) Protocol provides guidance and is a useful resource published by the World Resources Institute with the World Business Council for Sustainable Development as a guide for monitoring and accounting for greenhouse gas emissions.
https://ghgprotocol.org/corporate-standard

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

GRI G4 Sustainability Reporting Guidelines: The GRI G4 Sustainability Reporting Guidelines provide a standard set of metrics for companies to report on material environmental, social, and economic impacts, actions, and outcomes.
https://www.globalreporting.org/standards/

Background Information	**The Global Reporting Initiative:** The Global Reporting Initiative provides guidance globally on sustainable reporting standards. https://www.globalreporting.org/how-to-use-the-gri-standards/resource-center/
Definitions	**Goals:** Goals should be specific, measurable, achievable, relevant, and time-bound. **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. **Public disclosure - Home and Personal Care:** Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.
Hotspots Addressed	***2.*** *Electricity consumption - Organic chemical manufacturing* ***3.*** *Feedstock consumption - Chemical production* ***5.*** *Fossil fuel combustion - Chemical plant operation*

15. GREENHOUSE GAS EMISSIONS – MANUFACTURING

Question	Response Options	Points	Rules
Does your organization report to CDP or what was the greenhouse gas emissions intensity associated with final manufacture of your product?	**A.** We do NOT report to CDP and we are NOT able to determine at this time the GHG emissions intensity in our company-owned or contract-manufacturing facilities.	0	OR B OR C
	B. Our CDP Climate Change score for company-owned or contract-manufacturing facilities is:		OR C
	B1. Our CDP Climate Change score is A or A-.	9 × 1.00	
	B2. Our CDP Climate Change score is B or B-.	9 × 0.75	
	B3. Our CDP Climate Change score is C or C-.	9 × 0.50	
	B4. Our CDP Climate Change score is D or D-.	9 × 0.25	
	B5. Our CDP Climate Change score is F.	9 × 0.00	
	C. We have measured our GHG intensity and are able to report the following:		OR B
	C1. _____kg CO2e emissions per tonne of product from our company-owned and contract-manufacturing facilities.		
	C2. _____% of our product is represented by the number reported above.	9 × (%)	IF C1

TOTAL POINTS AVAILABLE 9

Guidance

Calculation & Scope

If your organization reports to CDP or is able to determine its GHG emissions intensity then answer either B OR C, not both.

Included in the scope of this question are fuels combusted and electricity used in facilities that perform final manufacturing activities for personal care products, as well as trace gases released during the manufacture of these products. This may include some or all corporate scope 1 and 2 emissions, as well as scope 1 and 2 emissions from any final manufacturing facilities not within an organization's financial or operational control (e.g., contract manufacturers). Excluded from the scope of this question are GHG allowances, offsets, and credits.

For B, enter your most recent CDP Climate Change score for company-owned or contract manufacturing facilities. This score must have been earned within 12 months of the completion date of this questionnaire.

C1 may be calculated using product-specific data or the intensity may be estimated via facility data that is not product specific. If using product-specific data, calculate C1 as the average of each product's greenhouse gas emissions intensity, weighted by the mass of each product.

If using facility data, calculate C1 as the average of each final manufacturing facility's greenhouse gas emissions intensity, weighted by the mass in tonnes, of personal care products. If the manufacturing facilities produce more than one category of product, only weight using the total weight of production specific to personal care products.

Calculate C2 as the mass of personal care products sold for which you are able to obtain data, divided by total mass of personal care products sold, then multiply by 100. For each final manufacturing facility, follow the instructions in the Greenhouse Gas Protocol Corporate Standard (2015) to calculate scope 1 and 2 greenhouse gas emissions generated from electricity purchased or produced, fuels combusted, and trace gases released, and then add them together. Worksheets are available on the GHG Protocol web site to facilitate these calculations.

Perform these calculations using data from a 12-month period that ended within 12 months of the completion date of this questionnaire.

The data required for the most recent CDP Climate Change questionnaire combined with production data can be used to calculate your response (in the 2021 questionnaire, refer to C7.3b: Scope 1 Emissions Breakdown by

	Facility and C7.6b: Scope 2 Emissions Breakdown by Facility). The data required for "Disclosure 302-1 Energy consumption within the organization" in GRI 302: Energy 2016 or "Disclosure 305-1 Direct (Scope 1) GHG emissions" and "Disclosure 305-2 Energy indirect (Scope 2) GHG emissions" in GRI 305: Emissions 2016 can also be used to calculate your response.
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 **Greenhouse Gas (GHG) Protocol Corporate Standard:** The Greenhouse Gas (GHG) Protocol provides guidance and is a useful resource published by the World Resources Institute with the World Business Council for Sustainable Development as a guide for monitoring and accounting for greenhouse gas emissions. https://ghgprotocol.org/corporate-standard **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 **GRI G4 Sustainability Reporting Guidelines:** The GRI G4 Sustainability Reporting Guidelines provide a standard set of metrics for companies to report on material environmental, social, and economic impacts, actions, and outcomes. https://www.globalreporting.org/standards/
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. **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. **Public disclosure - Home and Personal Care:** Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.
Hotspots Addressed	***10.*** *Energy consumption - Formulated product manufacturing*

16. GREENHOUSE GAS – REDUCTION GOAL

Question	Response Options	Points	Rules
Has your organization set, tracked, or publicly disclosed a goal to reduce your greenhouse gas emissions from company-owned and contract manufacturing facilities?	**A.** We have NOT set, tracked, or publicly disclosed a goal to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products.	0	OR B - C
	B. We set, track, and publicly disclose an intensity-based goal(s) and results to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products.	2	Multi
	C. We set, track, and publicly disclose an absolute goal(s) and results to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products.	4	Multi
	D. We set, track, and publicly disclose an absolute science-based goal(s) and results to reduce our greenhouse gas emissions from the company-owned and contract manufacturing facilities that produce our products.	2	IF C
	E. We publicly disclose our greenhouse gas emissions.	2	IF B - D
	TOTAL POINTS AVAILABLE	**10**	

Guidance

Calculation & Scope

Resources that can be used to establish and track greenhouse gas reduction goals include, but are not limited to, the Greenhouse Gas (GHG) Protocol Corporate Standard and GRI Performance Indicators.

For B, intensity based goals include, but are not limited to, reducing emissions intensity to a defined amount, interim carbon intensity goals, and increasing non-carbon generating capacity by a target time frame.

For C, an absolute GHG reduction goal is one that is set using one of a number of methodologies, including, but not limited to, those established by the Science Based Targets Initiative.

For D, absolute science based goals are defined by WRI and must be in line with the two degree Celsius temperature limit as described by IPCC.

For E, public disclosure must have occurred within 12 months of the completion date of this questionnaire.

Certifications, Standards & Tools

Greenhouse Gas (GHG) Protocol Corporate Standard: The Greenhouse Gas (GHG) Protocol provides guidance and is a useful resource published by the World Resources Institute with the World Business Council for Sustainable Development as a guide for monitoring and accounting for greenhouse gas emissions.
https://ghgprotocol.org/corporate-standard

Science Based Targets: This initiative, a collaboration between CDP, World Resources Institute (WRI), the World Wide Fund for Nature (WWF), and the United Nations Global Compact (UNGC), and one of the We Mean Business Coalition commitments, aims to showcase and promote science based targets for GHG emission reduction. Science Based Targets sets best practices for science-based target setting, offers resources for adoption, and independently assesses company targets.
http://sciencebasedtargets.org/

Background Information	**The Global Reporting Initiative:** The Global Reporting Initiative provides guidance globally on sustainable reporting standards. https://www.globalreporting.org/how-to-use-the-gri-standards/resource-center/ **World Resources Institute, WRI Report - Target: Intensity:** This analysis provides an overview of GHG Intensity targets along with rationales for establishing these targets and an assessment of the environmental effectiveness of establishing and achieving these goals. Complex issues surrounding public interpretation and compliance are also addressed. https://www.wri.org/publication/target-intensity
Definitions	**Absolute GHG reduction goal:** A goal for GHG reduction based on a reduction in total emissions expressed as tons of CO2 equivalent per year. **Absolute science based goal:** Defined by Science Based Targets as "Targets adopted by companies to reduce greenhouse gas (GHG) emissions are considered “science-based” if they are in line with the level of decarbonization required to keep global temperature increase below 2 degrees Celsius compared to pre- industrial temperatures, as described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR5)." **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. **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. **Intensity based goals:** A goal for GHG reduction based on decreased emissions per unit of output (e.g., tons CO2e per unit produced). **Public disclosure - Home and Personal Care:** Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.
Hotspots Addressed	***10.*** *Energy consumption - Formulated product manufacturing*

17. WATER USE – FORMULATION RAW MATERIAL SUPPLIERS

Question	Response Options	Points	Rules
What percentage of the ingredients used in your final product, by total spend, was produced by suppliers that reported their annual water use?	**A.** We are unable to determine the percentage of our ingredients, by total spend, that was produced by suppliers that reported their annual water use.	0	OR B
	B. _____% of our ingredients, by total spend, was produced by suppliers that reported their annual water use in the last 12 months.	7 × (%)	OR A
	TOTAL POINTS AVAILABLE	**7**	

Guidance

Calculation & Scope

Calculate B as the total spend on ingredient suppliers for your personal care products sold that reported their annual water use, divided by the total spend on all ingredient suppliers for your personal care products sold, then multiply by 100.

Perform these calculations using data from a 12-month period that ended within 12 months of the completion date of this questionnaire.

Supplier water use reporting can occur through public disclosure or private disclosure from the supplier to your organization directly or through another party.

If suppliers completed CDP's Water Security 2021 Questionnaire you may refer to W1.2b and W1.2h: Company-Wide Water Accounting or W5.1a: Facility-Level Water Accounting to determine if they report water use.

Certifications, Standards & Tools

CDP Water Information Request: The CDP Water Information Request provides questions that assess a company's water use, goals, and management. The report provided by CDP provides the overview of the results from companies responding to the request. CDP can be contacted to respond to the Water Information Request.
https://www.cdp.net/en/guidance/guidance-for-companies

GRI G4 Sustainability Reporting Guidelines: The GRI G4 Sustainability Reporting Guidelines provide a standard set of metrics for companies to report on material environmental, social, and economic impacts, actions, and outcomes.
https://www.globalreporting.org/standards/

Definitions

Public disclosure - Home and Personal Care: Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.

Water use: Water use is defined as total withdrawals from municipal and private water providers, surface water, groundwater, or wells.

Hotspots Addressed

4. *Water use - Chemical plant operation*

18. WATER USE – MANUFACTURING

Question	Response Options	Points	Rules
Does your organization report water use to CDP or what was the water use intensity in company-owned or contract manufacturing facilities that manufactured your final product in the last twelve months?	**A.** We do NOT report to CDP and we are NOT able to determine at this time the water use intensity in our company-owned or contract-manufacturing facilities.	0	OR B OR C
	B. Our CDP Water score for company-owned or contract-manufacturing facilities is:		OR C
	B1. Our CDP Water score is A or A-.	8 × 1.00	
	B2. Our CDP Water score is B or B-.	8 × 0.75	
	B3. Our CDP Water score is C or C-.	8 × 0.50	
	B4. Our CDP Water score is D or D-.	8 × 0.25	
	B5. Our CDP Water score is F.	8 × 0.00	
	C. We have measured our water use intensity and are able to report the following:		OR B
	C1._____ liters of water per tonne of product.		
	C2._____% of our product is represented by the number reported above.	8 × (%)	IF C1
	TOTAL POINTS AVAILABLE	**8**	

Guidance

Calculation & Scope

If your organization reports to CDP or is able to determine its water use intensity then answer either B OR C, not both.

For B, enter the most recent CDP Water score for company-owned or contract manufacturing facilities. This score must have been earned within 12 months of the completion date of this questionnaire.

You may calculate C1 using product-specific data or estimate intensity via facility data that is not product specific. If using product-specific data, calculate C1 as the average of each product's water use intensity, weighted by the mass of each product.

If using facility data, calculate C1 as the average of each final manufacturing facility's water use intensity, weighted by the total mass of final product produced. If the manufacturing facilities produce more than one category of product, only weight using the total weight of production specific to personal care products.

Calculate C2 as the mass of personal care products sold for which you are able to obtain data, divided by total mass of personal care products sold, then multiply by 100.

Perform these calculations using data from a 12-month period that ended within 12 months of the completion date of this questionnaire.

The data required for the CDP Water Security 2021 Questionnaire can be used to calculate your response (refer to W1.2b and W1.2h: Company-Wide Water Accounting or W5.1a: Facility-Level Water Accounting). The data required for “Disclosure 303-3 Water withdrawal” in GRI 303: Water and Effluents 2018 can also be used to calculate your response. Total Water Withdrawal by Source can also be used to calculate your response.

Certifications, Standards & Tools	**CDP Water Information Request:** The CDP Water Information Request provides questions that assess a company's water use, goals, and management. The report provided by CDP provides the overview of the results from companies responding to the request. CDP can be contacted to respond to the Water Information Request. https://www.cdp.net/en/guidance/guidance-for-companies **GRI G4 Sustainability Reporting Guidelines:** The GRI G4 Sustainability Reporting Guidelines provide a standard set of metrics for companies to report on material environmental, social, and economic impacts, actions, and outcomes. https://www.globalreporting.org/standards/
Background Information	**CDP:** This program assists in the measuring and reporting of carbon emissions and water use. https://www.cdp.net/en
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. **Public disclosure - Home and Personal Care:** Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance. **Water use:** Water use is defined as total withdrawals from municipal and private water providers, surface water, groundwater, or wells.
Hotspots Addressed	***11.*** *Water use - Formulated product manufacturing*

19. WATER USE – REDUCTION GOAL

Question	Response Options	Points	Rules
Has your organization set, tracked, or publicly disclosed a goal to reduce its water use intensity in company-owned and contract manufacturing facilities?	**A.** We do NOT have an intensity-based target or absolute goal to reduce our water use from company-owned and contract manufacturing facilities.	0	OR B OR C
	B. We set, track, and publicly disclose our intensity-based goal(s) and results to reduce our water use in the company-owned and contract manufacturing facilities that produce our products.	2	OR C
	C. We set, track, and publicly disclose our absolute goal(s) and results to reduce our water use in the company-owned and contract manufacturing facilities that produce our products.	4	OR B
	D. We publicly disclose our water use.	3	IF B OR C
	TOTAL POINTS AVAILABLE	**7**	

Guidance

Calculation & Scope

Resources that can be used to establish goals for water reduction include, but are not limited to, those in the Certifications, Standards & Tools section.

Certifications, Standards & Tools

THESIS Help Center Video: Water use – Reduction goal KPI: Short video tutorial on the Water use – Reduction goal KPI. Use case-sensitive password 'thesis' when prompted.
https://vimeo.com/531017229

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

Definitions

Absolute water reduction goal: An organization's goal for water use reduction expressed as liters of water per year.

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.

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

Intensity based water reduction goal: A goal for water use reduction expressed as liters per unit of output (e.g., liters per unit produced).

Public disclosure - Home and Personal Care: The act of making information available and readily accessible to consumers.

Water use: Water use is defined as total withdrawals from municipal and private water providers, surface water, groundwater, or wells.

Hotspots Addressed

***11.** Water use - Formulated product manufacturing*

20. WATER USE – SCARCITY MAPPING

Question	Response Options	Points	Rules
How does your organization address water scarcity in regions that manufacture your products or their raw materials?	**A.** We have NO formal, documented program to reduce water use in our manufacturing or from our raw material suppliers and have conducted NO water scarcity mapping.	0	OR B - C OR E
	B. We have conducted water scarcity mapping to identify our high risk manufacturing facilities that are in water scarce areas and have publicly disclosed our findings.	3	OR E
	C. We have conducted water scarcity mapping to identify our raw material production facilities in our supply chain that are in water scarce areas and we have publicly disclosed our findings.	3	OR E
	D. We have achieved our established goals from the last 48 months.	1	IF B OR C
	E. We have conducted water scarcity mapping and have determined that our manufacturing facilities and raw material production facilities are not in water scarce areas.	7	OR B - C
	TOTAL POINTS AVAILABLE	**7**	

Guidance

Calculation & Scope

Tools that can be used to perform water scarcity mapping include, but are not limited to, those in the Certifications, Standards & Tools section.

Certifications, Standards & Tools

Global Water Tool: This tool from World Business Council for Sustainable Development creates maps of water use and assesses corresponding risks.
https://www.wbcsd.org/Programs/Food-and-Nature/Water/Resources/Global-Water-Tool

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

Public disclosure - Home and Personal Care: Voluntary corporate reporting, sustainability reporting programs, or reporting as part of regulatory compliance.

Raw material: The basic materials from which a product is made. Raw materials are composed of synthetic or naturally derived ingredients or ingredient blends and may contain unintentionally added chemicals that are incidental or contaminants.

Water scarce area: A geographical area that lacks access to adequate quantities of water for use by humans and the environment.

Hotspots Addressed

4. *Water use - Chemical plant operation*

11. *Water use - Formulated product manufacturing*

21. USE PHASE – MESSAGING AND DESIGN

Question	Response Options	Points	Rules
How does your organization engage consumers regarding energy reduction, water consumption, or product waste?	**A.** For products in this category, we have NOT conducted an on-pack, web-based, or media educational campaign in the last twelve months to inform consumers regarding the reduction of energy, water consumption, or product waste.	0	OR B - D
	B. For products in this category, we have conducted an on-pack, web-based, or media educational campaign in the last twelve months to inform consumers regarding the reduction of energy, water consumption, or product waste.	3	OR A
	C. For products in this category, we measure and track the reach of our communications through consumer surveys or other market research.	3	IF B
	D. For products in this category, we develop and market products that are designed to reduce energy, water consumption, or product waste during consumer use phase.	4	OR A
	TOTAL POINTS AVAILABLE	**10**	

Guidance

Calculation & Scope

For this KPI, “category” is defined by the Performance Assessment name and description.

For D, an example of a product that qualifies for this response option is one that is designed to replace a product that requires more water or energy to use while providing the same functionality to the consumer.

Definitions

Consumer use phase: The life cycle stage of a product during which it is being used by a consumer.

Public disclosure - Home and Personal Care: The act of making information available and readily accessible to consumers.

Hotspots Addressed

13. *Water heating and use - Product application*

22. BIODEGRADABILITY AND ENVIRONMENTAL RISK

Question	Response Options	Points	Rules
Does your organization evaluate the biodegradability and/or environmental risk of the ingredients used in your products?	**A.** We do NOT evaluate the biodegradability and/or environmental risk of the ingredients used in our products.	0	OR B - F
	B. We have a program in place to evaluate the environmental safety of our ingredients using risk assessment methodologies that consider environmental fate (including biodegradability), toxicity, and exposure for the relevant environmental compartments.	1	Multi
	C. We continuously work to develop new methods and drive the science regarding biodegradation testing in order to ensure that biodegradation is being assessed accurately in all relevant environmental compartments.	1	Multi
	D. _____% of our organic ingredients in this category, by number, have been evaluated for biodegradability using standardized test methods, or accepted in silico models where appropriate.	1 × (%)	Multi
	E. _____% of our organic ingredients in this category, by number, achieve pass level criteria for Ready or Inherent biodegradability using standardized test methods, or accepted in silico models where appropriate.	1 × (%)	Multi
	F. _____% of all of our products' ingredients in this category, by number, that were evaluated for environmental fate and environmental risk have been determined to be safe for the environment in our products' use scenarios.	1 × (%)	Multi

TOTAL POINTS AVAILABLE 5

Guidance

Calculation & Scope

For this KPI, “category” is defined by the Performance Assessment name and description.

For C, resources for environmental risk assessment include, but are not limited to, those in the Certifications, Standards & Tools and Background Information sections.

Calculate E as the number of organic ingredients in this product category that have been evaluated for biodegradability using standardized test methods, or accepted in silico models where appropriate, divided by the total number of organic ingredients in this product category, then multiply by 100.

Calculate F as the number of organic ingredients in this product category that achieve pass level criteria for ready or inherent biodegradability using standardized test methods, or accepted in silico models where appropriate divided by the total number of organic ingredients in this product category, then multiply by 100.

Calculate G as the number of ingredients in this product category that were evaluated for environmental fate and environmental risk that have been determined to be safe for the environment in this product's use scenario, divided by the total number of ingredients in this product category, then multiply by 100.

Certifications, Standards & Tools	**European Chemicals Bureau - Technical Guidance Document on Risk Assessment:** This document outlines environmental chemical risk assessment methodologies for notified new substances. https://echa.europa.eu/documents/10162/16960216/tgdpart2_2ed_en.pdf **Guidance on Information Requirements and Chemical Safety Assessment Chapter R.7b:** Endpoint specific guidance. Version 4.0 – June 2017: This guidance document provides valuable information regarding REACH regulatory requirements with emphasis on substance properties, exposure, uses, and risk management measures. https://echa.europa.eu/documents/10162/13632/information_requirements_r7b_en.pdf **OECD Guidelines for the Testing of Chemicals, Section 3 - Test No. 301:** Ready Biodegradability: This OECD Test Guideline outlines the steps necessary to perform tests for ready biodegradability. http://www.oecd-ilibrary.org/environment/test-no-301-ready-biodegradability_9789264070349-en **OECD Guidelines for the Testing of Chemicals, Section 3 - Test No. 302B:** Inherent Biodegradability: Zahn-Wellens/ EVPA Test: This OECD Test Guideline outlines the steps necessary to perform tests for inherent biodegradability. http://www.oecd-ilibrary.org/content/book/9789264070387-en
Background Information	**EPA Ecological Risk Assessment:** This EPA website describes the phases necessary for effective ecological risk assessment which include planning and scoping, problem formulation, analysis, and risk characterization. https://www.epa.gov/risk/ecological-risk-assessment
Definitions	**Biodegradability:** A property of matter in which it is able to be decomposed by bacteria or other living organisms. **Environmental fate:** The fate of a chemical in the environment after its disposal by a consumer. **Risk assessment - Home and Personal Care:** A systematic process to evaluate the potential risks associated with environmental release of individual ingredients or final formulations.
Hotspots Addressed	***15.*** *Wastewater generation - Product flush*

23. PRODUCT CERTIFICATIONS

Question	Response Options	Points	Rules
What percentage of your product, by sales, has the following certifications?	**A.** We are unable to determine at this time	0.000	OR B
	B. The following percentage of our product, by sales, was certified:	-	OR A
	B1. _____% of our product is Cradle to Cradle Certified™.	0 × (%)	Multi
	B2. _____% of our product is EPA Safer Choice Certified.	0 × (%)	Multi
	B3. _____% of our product is EWG VERIFIED™.	0 × (%)	Multi
		TOTAL POINTS AVAILABLE	**0**

Guidance

Calculation & Scope

Calculate B1-B3 as the sales of your product that underwent the specified certification, divided by the total sales of the product, them multiply by 100. The sum of B1-B3 may exceed 100% if product has more than one certification.

Certifications, Standards & Tools

Cradle to Cradle Product Certification™: Cradle to Cradle Product Certification™ provides a standard of performance for manufacturers regarding product sustainability and material safety. Individual product assessments are performed by independent and trained third parties and certifications are made by the Cradle to Cradle Products Innovation Institute.
http://www.c2ccertified.org/product_certification

Environmental Working Group EWG VERIFIED™ Standard: The Environmental Working Group (EWG) is a non-profit, non-partisan organization dedicated to protecting human health and the environment. EWG produces research and educational guides on health hazards in food and personal care products. Companies work with EWG by disclosing ingredients not listed on labels and manufacturing processes that is then compared to EWG's strict criteria standards and if they meet the criteria they receive the EWG verified mark.
http://www.ewg.org/ewgverified/

EPA Safer Choice Program: EPA developed the Safer Choice Program in which companies can voluntarily participate by researching and reformulating their product to meet Safer Choice Standards in order to earn the Safer Choice Label on their products. Safer Choice reviews the formulation of ingredients in terms of environmental and human health risk, and characteristics of concern within a functional class against the Master and Functional-Class Criteria documents.
https://www.epa.gov/saferchoice

Hotspots Addressed

5. *Fossil fuel combustion - Chemical plant operation*

12. *Adverse health effects - Product application*

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

RAW MATERIAL EXTRACTION

1. Plastic use - Packaging production
Using petroleum-based raw materials to create plastic packaging depletes available resources.

Related Improvement Opportunities

6. *Reduction in the material used in packaging*
7. *Packaging design improvement - Use recycled plastic*
15. *Make packaging recyclable*

KPIs

1. *Packaging – Design, policy, and goals*
2. *Packaging – Sustainable Sourcing*
3. *Packaging – Recyclability - Improving collection and recovery*
4. *Packaging – Recycle Labeling*

References

- Herron, 2013c
- Herron, 2013a
- Herron, 2013b

RAW MATERIAL PROCESSING

2. Electricity consumption - Organic chemical manufacturing*
Electricity consumption for ingredient manufacturing in the chemical industries leads to greenhouse gas emissions.

Related Improvement Opportunities

1. *Energy efficient processes*
19. *Measure and report energy use and greenhouse gas emissions*

KPIs

14. *Greenhouse gas – Supply chain*

References

- OECD, 2001
- U.S. Department of Energy., 2004

3. Feedstock consumption - Chemical production*
Feedstock and fuel materials are extracted from non-renewable sources. Greenhouse gas emissions also result from the extraction process.

Related Improvement Opportunities

1. *Energy efficient processes*
2. *Raw materials and feedstocks - Renewable resources*

KPIs

4. *Packaging – Recycle Labeling*
14. *Greenhouse gas – Supply chain*

References

- Gerngross, 1999
- Hellweg, Wernet, Mutel, & Hungerbuhler, 2010
- ICCA, 2009

4. Water use - Chemical plant operation* Water-intensive processes in the chemical industry lead to fresh water depletion and wastewater generation. **Related Improvement Opportunities** ***16.*** *Water tracking - Risk management* **KPIs** ***17.*** *Water use – Formulation raw material suppliers* ***20.*** *Water use – Scarcity mapping*	**References** ▪ European Union, 2015 ▪ Environment Canada., 2004 ▪ Milmo, S., 2008 ▪ Pellerin, T., 2005
5. Fossil fuel combustion - Chemical plant operation Fossil fuel combustion (natural gas and coal) for the operation of organic chemical plants leads to non-renewable resource depletion and greenhouse gas emissions. **Related Improvement Opportunities** ***1.*** *Energy efficient processes* **KPIs** ***14.*** *Greenhouse gas – Supply chain* ***23.*** *Product Certifications*	**References** ▪ Hellweg, Wernet, Mutel, & Hungerbuhler, 2010 ▪ ICCA, 2009 ▪ OECD, 2001 ▪ Overcash, M., and Kim, S., 2003 ▪ U.S. Department of Energy., 2004 ▪ Wernet, Mutel, Hellweg, & Hungerbühler, 2011

AGRICULTURE AND LIVESTOCK

6. Palm oil production - Environmental impacts Palm oil cultivation requires fossil fuel consumption, chemical fertilizer and pesticide application, local and long-distance transportation, along with land transformation which releases wastewater. These activities contribute to climate change, biodiversity loss, ecotoxicity, and decreased soil fertility. **Related Improvement Opportunities** ***3.*** *Palm oil - Sourcing sustainable product* ***18.*** *Palm oil - Sustainable supplier selection* **KPIs** ***11.*** *Responsible sourcing* ***13.*** *Palm Oil, Palm Kernel Oil, and Derivative Ingredient Sourcing*	**References** ▪ Boucher et al., 2011 ▪ Brown and Jacobson, 2005 ▪ Brühl & Eltz, 2010 ▪ Fitzherbert et al., 2008 ▪ Hansen, 2005 ▪ Hatti-Kaul, Tornvall, Gustafsson, & Borjesson, 2006 ▪ Koh, 2008 ▪ Laurance et al., 2010 ▪ Nellemann et al., 2007 ▪ Tan, Lee, Mohamed, & Bhatia, 2009 ▪ Teoh, 2011 ▪ Wakker, 2005
7. Palm oil production - Social impacts Palm oil cultivation may contribute to health and safety risks to workers and communities, unfair labor conditions regarding gender equality and compensation, inconsistent recognition of the customary land rights of native populations, and displacement of primates by removal of natural habitats. **Related Improvement Opportunities** ***3.*** *Palm oil - Sourcing sustainable product* ***18.*** *Palm oil - Sustainable supplier selection* **KPIs** ***11.*** *Responsible sourcing* ***12.*** *Human rights – Supply chain* ***13.*** *Palm Oil, Palm Kernel Oil, and Derivative Ingredient Sourcing*	**References** ▪ Brown and Jacobson, 2005 ▪ Nellemann et al., 2007 ▪ Nordic Ecolabelling, 2012 ▪ Tan, Lee, Mohamed, & Bhatia, 2009 ▪ Teoh, 2011 ▪ Wakker, 2005

INTERMEDIATE PRODUCTION

8. Energy consumption - Plastics manufacturing*

Energy consumption for plastic packaging material manufacturing leads to non-renewable resource depletion.

Related Improvement Opportunities

6. *Reduction in the material used in packaging*
8. *Packaging - Optimized packaging-product systems*
9. *Packaging - Design for recyclability*
10. *Packaging - Utilize recycled content*
15. *Make packaging recyclable*

KPIs

1. *Packaging – Design, policy, and goals*
2. *Packaging – Sustainable Sourcing*
3. *Packaging – Recyclability - Improving collection and recovery*
4. *Packaging – Recycle Labeling*

References

- Ecolabelling Norway, 2006
- Person, 1997
- TSC, 2011a

MANUFACTURING AND ASSEMBLY

9. Animal testing - Product manufacturing

Depending on local, legal, and regulatory requirements, animal testing is used to substantiate the safety of final formulations that are used in personal care products, an activity that is inconsistent with sustainable management of a living resource.

Related Improvement Opportunities

4. *Restrict animal testing*
17. *Aid in the development of alternatives to animal tests*

KPIs

6. *Animal testing*

References

- Abbott, A., 2005
- Bayne, K., & Wang, J., 2014
- Bottini & Hartung, 2009
- Chemical Inspection & Regulation Service., 2013
- Roudabush, R. L., Terhaar, C. J., Fassett, D. W., & Dziuba, S. P., 1965
- Xuan, 2011

10. Energy consumption - Formulated product manufacturing*

Energy consumption associated with formulated goods manufacturing consumes energy and can result in greenhouse gas emission and global warming.

Related Improvement Opportunities

20. *Track greenhouse gas emissions*

KPIs

15. *Greenhouse gas emissions – Manufacturing*
16. *Greenhouse gas – Reduction goal*

References

- Cowan, Dopart, Ferracini, Sahmel, Merryman, Gaffney, & Paustenbach, 2010
- Hong, Su, & Lee, 2014

11. Water use - Formulated product manufacturing*

Formulated goods manufacturing uses water for mixing and rinsing in manufacturing operations which can lead to natural resource depletion.

Related Improvement Opportunities

16. *Water tracking - Risk management*

KPIs

18. *Water use – Manufacturing*
19. *Water use – Reduction goal*
20. *Water use – Scarcity mapping*

References

- Koehler and Wildbolz, 2009
- Zhang, & Hoekstra, 2012

USE

12.	**Adverse health effects - Product application*** The use of some personal care products may cause adverse health effects, such as acute irritation or sensitization, when used as directed or under foreseeable conditions of misuse. **Related Improvement Opportunities** ***5.*** *Priority chemical disclosure, risk assessment, and management* ***11.*** *Follow International Fragrance Association (IFRA) standards* ***13.*** *Ingredient disclosure (manufacturer to consumers)* **KPIs** ***7.*** *Formulation - Chemical selection* ***8.*** *Chemical footprint* ***9.*** *Risk assessment and product safety* ***10.*** *Ingredient disclosure to manufacturers* ***23.*** *Product Certifications*	**References** ▪ Andersen, 2008 ▪ Boberg, Taxvig, Christiansen, & Hass, 2010 ▪ Calafat et al., 2008 ▪ Darbre & Harvey, 2008 ▪ Elberling et al., 2007 ▪ Environmental Health Association of Nova Scotia, 2011 ▪ European Union Scientific Committee on Consumer Safety, 2012 ▪ Golden, Gandy, & Vollmer, 2005 ▪ Hamilton & de Gannes, 2011 ▪ Hauser & Calafat, 2005 ▪ Kamrin, 2009 ▪ Schlumpf et al., 2004 ▪ Simonsen et al., 2011 ▪ Wang, Dusza, & Lim, 2010
13.	**Water heating and use - Product application** Some BPC products require water or energy during product use. This requires energy from electricity, oil, or natural gas resulting in greenhouse gas emissions. **Related Improvement Opportunities** ***12.*** *High efficiency formulations* ***14.*** *Proper use instructions - Energy and Water* **KPIs** ***21.*** *Use phase – Messaging and design*	**References** ▪ European Union, 2015 ▪ Henkel, 2009 ▪ Dewaele et al., 2006 ▪ Koehler and Wildbolz, 2009 ▪ Koerner, M. ,2010 ▪ TSC, 2011a1 ▪ Van Hoof, Schowanek & Feijtel, 2003
14.	**Packaging material chemical migration - Formulated products** Some packaging materials for formulated consumer products may contain chemicals that migrate into the product formulation and result in exposure to the consumer. Packaging materials can be assessed for migration and risk assessments can be performed to understand and mitigate potential consumer health impacts. **Related Improvement Opportunities** ***5.*** *Priority chemical disclosure, risk assessment, and management* **KPIs** ***5.*** *Packaging – Stewardship list chemical management*	**References** ▪ Bhunia, Sablani, Tang, & Rasco, 2013 ▪ Rochester, & Bolden, 2015 ▪ Yang, Yaniger, Jordan, Klein, & Bittner, 2011

END-OF-LIFE AND DISPOSAL

15. Wastewater generation - Product flush

Some product formulations may contain ingredients that do not biodegrade at conventional wastewater treatment plants, leading to accumulation in the environment and potential ecotoxicity.

Related Improvement Opportunities

5. *Priority chemical disclosure, risk assessment, and management*

KPIs

7. *Formulation - Chemical selection*
8. *Chemical footprint*
9. *Risk assessment and product safety*
10. *Ingredient disclosure to manufacturers*
22. *Biodegradability and environmental risk*

References

- Brillas, E., & Martinez-Huitle, C. A. , 2009
- Forgracs, E., Cserhati, T., & Oros, G., 2004
- Mitch, Kemper, & Walse, 2010
- Skin Deep, 2012
- Ternes et al., 2004
- Tsai & Ding, 2004
- Yi, J. Z., & Zhang, L., 2008

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

RAW MATERIAL PROCESSING

1.	**Energy efficient processes** Reduce energy consumption by optimizing reactions and processes to ambient conditions that do not require external heating or cooling. **Related Hotspots** ***2.*** *Electricity consumption - Organic chemical manufacturing* ***3.*** *Feedstock consumption - Chemical production* ***5.*** *Fossil fuel combustion - Chemical plant operation*	**References** ▪ Anastas & Warner, 1998 ▪ ICCA, 2009
2.	**Raw materials and feedstocks - Renewable resources** Implement the use of renewable sources of raw materials or feedstocks in order to mitigate the impacts associated with depleting fossil feedstocks during the production of ingredients used in consumer products. **Related Hotspots** ***3.*** *Feedstock consumption - Chemical production*	**References** ▪ Anastas & Warner, 1998

AGRICULTURE AND LIVESTOCK

3.	**Palm oil - Sourcing sustainable product** Purchase palm oil and palm kernel oil certified as sustainable by an independent, international, transparent, multi-stakeholder organization such as the Roundtable of Sustainable Palm Oil (RSPO), either directly or through purchase of certificates through organizations such as Green Palm. **Related Hotspots** ***6.*** *Palm oil production - Environmental impacts* ***7.*** *Palm oil production - Social impacts*	**References** ▪ RSPO, 2007 ▪ Wakker, 2005

MANUFACTURING AND ASSEMBLY

4.	**Restrict animal testing** Adopt policies that restrict the testing of finished personal care products on animals. Only test individual ingredients on animals where required by law. **Related Hotspots** ***9.*** *Animal testing - Product manufacturing*	**References** ▪ Cosmetics organic and Natural Standard. (2013, October)

5. Priority chemical disclosure, risk assessment, and management Justify formulation safety by obtaining complete chemical disclosure of raw materials, performing ingredient risk assessments that include aggregate exposures to vulnerable populations, and utilizing informed substitution using alternative screening tools and protocols. **Related Hotspots** ***12.*** *Adverse health effects - Product application* ***14.*** *Packaging material chemical migration - Formulated products* ***15.*** *Wastewater generation - Product flush*	**References** ▪ Anastas & Warner, 1998 ▪ BizNGO, 2011 ▪ European Chemicals Agency, 2012 ▪ Lavoie et al., 2011 ▪ National Research Council (U.S.), 2009 ▪ Scientific Committee on Consumer Safety, 2012

PACKAGING

6. Reduction in the material used in packaging Optimize the amount of packaging while maintaining functionality by reducing the packaging to product ratio. **Related Hotspots** ***1.*** *Plastic use - Packaging production* ***8.*** *Energy consumption - Plastics manufacturing*	**References** ▪ Chiu & Chu, 2012 ▪ The Consumer Goods Forum, 2011
7. Packaging design improvement - Use recycled plastic Utilize post-consumer and post-industrial recycled plastic, instead of virgin plastic resin, to create plastic packaging, thus mitigating the impacts associated with virgin material sourcing. **Related Hotspots** ***1.*** *Plastic use - Packaging production*	**References** ▪ Brennan, n.d. ▪ Green Seal, 2011 ▪ Clorox, 2013
8. Packaging - Optimized packaging-product systems Optimize packaging systems to reduce environmental and social impacts associated with packaging production while appropriately protecting products. **Related Hotspots** ***8.*** *Energy consumption - Plastics manufacturing*	**References** ▪ Sustainable Packaging Coalition, 2009 ▪ The Consumer Goods Forum, 2011
9. Packaging - Design for recyclability Design plastic packaging with consideration for recycling infrastructure and consumer access. Principles of design for recyclability include: use of fewer materials, use of mono-materials, design for ease of separation, use of recycling labels that are clearly communicated, and avoidance of extraneous materials. **Related Hotspots** ***8.*** *Energy consumption - Plastics manufacturing*	**References** ▪ Association of Postconsumer Plastic Recyclers, 2011 ▪ Bhamra, 2004 ▪ Eureka Recycling, 2012 ▪ Selke, 2006 ▪ Waste and Resources Action Program, 2009c
10. Packaging - Utilize recycled content Utilizing recycled content, measured as percentage pre-consumer and post-consumer recycled content per packaging unit, can reduce impacts associated with virgin material sourcing, lower overall packaging costs, and improve an organization's environmental and social impact. **Related Hotspots** ***8.*** *Energy consumption - Plastics manufacturing*	**References** ▪ European Commission, 2001b ▪ IFC, 2007c ▪ Miller, Justiniano, & McQueen, 2005 ▪ Paper Task Force, 1995 ▪ Pulselli et al., 2009 ▪ Sustainable Packaging Coalition, 2009 ▪ The Consumer Goods Forum, 2011 ▪ US EPA, 2012b ▪ U.S. General Services Administration, 2013 ▪ US EPA, 2008c

USE

11.	**Follow International Fragrance Association (IFRA) standards** Manufacture fragrances in accordance with the standards of the International Fragrance Association (IFRA). **Related Hotspots** ***12.*** *Adverse health effects - Product application*	**References** ▪ European Commission, 2007c ▪ Good Environmental Choice, 2007 ▪ Green Seal, 2011 ▪ Nordic Ecolabelling, 2012 ▪ United States Environmental Protection Agency, 2010a
12.	**High efficiency formulations** Formulate detergents for use in high efficiency washers, and add labeling to compatible products that recommends use in high efficiency machines. **Related Hotspots** ***13.*** *Water heating and use - Product application*	**References** ▪ Energy Star, 2011 ▪ Golden et al., 2010
13.	**Ingredient disclosure (manufacturer to consumers)** Disclose ingredients that are in home and personal care products in an easily accessible way to inform consumers. **Related Hotspots** ***12.*** *Adverse health effects - Product application*	**References** ▪ American Cleaning Institute, 2011 ▪ Personal care and Product council, 2014 ▪ US EPA, 2011b ▪ U.S. Food and Drug Administration, 2012
14.	**Proper use instructions - Energy and Water** Educate consumers regarding proper product use related to water use, dosage, and waste disposal. Include this information on product labels. **Related Hotspots** ***13.*** *Water heating and use - Product application*	**References** ▪ Davies, Haines, Norris, & Wilson, 1998 ▪ Koerner, M. ,2010

IMPROVEMENT OPPORTUNITIES FOR MULTIPLE LIFE CYCLE STAGES

15.	**Make packaging recyclable** Design packaging to be easily separated for recycling purposes. **Related Hotspots** ***1.*** *Plastic use - Packaging production* ***8.*** *Energy consumption - Plastics manufacturing*	**References** ▪ Brennan, n.d. ▪ Green Seal, 2011
16.	**Water tracking - Risk management** Identify integrated and cumulative threats to inform effective water resource planning and management. Implement water efficiency measures, such as recycling and reuse. **Related Hotspots** ***4.*** *Water use - Chemical plant operation* ***11.*** *Water use - Formulated product manufacturing*	**References** ▪ Environment Canada., 2004 ▪ Milmo, S., 2008
17.	**Aid in the development of alternatives to animal tests** Contribute to the development and validation of alternative testing methods to prevent unnecessary animal testing of personal care products. **Related Hotspots** ***9.*** *Animal testing - Product manufacturing*	**References** ▪ Alternatives to animal tests, 2013 ▪ European Chemicals Agency, 2011

18. Palm oil - Sustainable supplier selection Select suppliers that work to improve the sustainability of their own operations and adopt the guidelines set by the Roundtable of Sustainable Palm Oil (RSPO). **Related Hotspots** ***6.*** *Palm oil production - Environmental impacts* ***7.*** *Palm oil production - Social impacts*	**References** ▪ Green Palm, 2010 ▪ RSPO, 2009 ▪ RSPO, 2007
19. Measure and report energy use and greenhouse gas emissions Measure, report, and be accountable for organizational performance towards the goal of sustainable development using the Global Reporting Initiative (GRI) framework. **Related Hotspots** ***2.*** *Electricity consumption - Organic chemical manufacturing*	**References** ▪ Global Reporting Initiative, 2013 ▪ Kramer, Masanet, & Xu, 2009 ▪ Lopes, Dias, Arroja, Capela, & Pereira, 2003 ▪ Miller, Justiniano, & McQueen, 2005 ▪ PE International, 2009
20. Track greenhouse gas emissions Track and publicly report greenhouse gas emissions from the supply chain (manufacturing, packaging manufacturing, and distribution). **Related Hotspots** ***10.*** *Energy consumption - Formulated product manufacturing*	**References** ▪ PG&E, 2006 ▪ Tschudi, Mills, Xu, & Rumsey, 2005 ▪ World Resources Institute & World Business Council for Sustainable Development, 2004

References

A A.I.S.E. (2015). PEF screening report in the context of the EU Product Environmental Footprint Category Rules (PEFCR) Pilots: Household Heavy Duty Liquid Laundry Detergents (HDLLD) for machine wash.

Abbott, A. (2005). Animal testing: More than a cosmetic change. Nature, 144–146. doi:10.1038/438144a

Alternatives to animal tests. (2013). The Humane Society of the United states. Retrieved from http://www.humanesociety.org/issues/cosmetic_testing/facts/alternatives_animal_tests.html

American Cleaning Institute. (2011). Consumer product ingredient initiative. Retrieved from http://www.cleaninginstitute.org/assets/1/Page/Ingredient%20Communication%20Model%20fnl%20rev%200311.pdf

Anastas, P. T., & Warner. (1998). Green chemistry: Theory and practice. Oxford [England]; New York: Oxford University Press.

Andersen, F. A., ed. (2008). Final amended report on the safety assessment of methylparaben, ethylparaben, propylparaben, isopropylparaben, butylparaben, isobutylparaben, and benzylparaben as used in cosmetic products. International Journal of Toxicology, 27: 1-82.

Association of Postconsumer Plastic Recyclers. (2011). APR design for recyclability guidelines. Retrieved from http://www.plasticsrecycling.org/images/stories/doc/dfr_2011_dec_3.pdf

B Bayne, K., & Wang, J. (2014). Oversight of Animal research in China. In Laboratory Animals (pp. 223–265). Elsevier.

Bhamra, T. A. (2004). Ecodesign: The search for new strategies in product development. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 218(5), 557-569. doi:10.1177/095440540421800509

Bhunia, K., Sablani, S. S., Tang, J., & Rasco, B. (2013). Migration of Chemical Compounds from Packaging Polymers during Microwave, Conventional Heat Treatment, and Storage. Comprehensive Reviews in Food Science and Food Safety, 12(5), 523–545. https://doi.org/10.1111/1541-4337.12028

BizNGO. (2011). The need for chemical ingredient disclosure across the supply chain. Retrieved from http://www.bizngo.org/static/ee_images/uploads/resources/BizNGO_chem_ingredient_disclosure_factsheet.pdf

Boberg, J., Taxvig, C., Christiansen, S., Hass, U. (2010). Possible endocrine disrupting effects of parabens and their metabolites. Reproductive Toxicology, 30: 301-312.

Bottini, A. A., & Hartung, T. (2009). Food for Thought … on the Economics of Animal Testing. ALTEX, 26, 3–16. Retrieved from http://www.altex.ch/Current-issue.50.html?iid=104&aid=1

Boucher, D., Elias, P., Lininger, K., May-Tobin, C., Roquemore, S., & Saxon, E. (2011). The root of the problem, What is driving tropical deforestation today? Union of Concerned Scientists. Tropical Forest and Climate Initiative.

Brennan, J. (n.d.). Benefits and savings of recycling plastic. National Geographic: Green Living. Retrieved from http://greenliving.nationalgeographic.com/benefits-savings-recycling-plastic-3219.html

Brillas, E., & Martinez-Huitle, C. A. (2009). Decontamination of wastewaters containing synthetic organic dyes by electrochemical methods: A general review. Applied Catalysis B: Environmental, 87, 105–145. Retrieved from http://www.sciencedirect.com/science/article/pii/S0926337308003718

Brown, E., & Jacobson, M. (2005) Cruel oil: How palm oil harms health, rainforest & wildlife. Center for Science in the Public Interest.

Brühl, C. A., & Eltz, T. (2010). Fuelling the biodiversity crisis: Species loss of ground-dwelling forest ants in oil palm plantations in Sabah, Malaysia (Borneo). Biodiversity and Conservation, 19(2), 519-529. doi:10.1007/s10531-009-9596-4

C Calafat, A. M., Wong, L., Ye, X., Reidy, J. A., & Needham, L. L. (2008). Concentrations of the sunscreen agent benzophenone-3 in residents of the United States: National health and nutrition examination survey 2003-2004. Environmental Health Perspectives, 116, 893-897.

Case Study Persil Megaperls by Henkel AG CO. Kgaa. (2009).

Chemical Inspection & Regulation Service. (2013). Cosmetics and ingredient laws. Retrieved from http://www.cirs-reach.com/China_Chemical_Regulation/China_Cosmetics_Cosmetic_Ingredient_Law.html

Chiu, M.-C., & Chu, C.-H. (2012). Review of sustainable product design from life cycle perspectives. International Journal of Precision Engineering and Manufacturing, 13(7), 1259 -1272. doi:10.1007/s12541-012-0169-1

Cosmetics organic and Natural Standard. (2013, October). COSMOS-Standard AISBL. Retrieved from http://www.cosmos-standard.org/docs/COSMOS-standard-v2-21102013.pdf

Cowan, D. M., Dopart, P., Ferracini, T., Sahmel, J., Merryman, K., Gaffney, S., & Paustenbach, D. J. (2010). A cross-sectional analysis of reported corporate environmental sustainability practices. Regulatory Toxicology and Pharmacology, 58(3), 524–538. https://doi.org/10.1016/j.yrtph.2010.09.004

D Darbre, P. D. & Harvey, P. W. (2008). Paraben esters: review of recent studies of endocrine toxicity, absorption, esterase and human exposure, and discussion of potential human health risks. Journal of Applied Toxicology, 28: 561-578.

Davies, S., Haines, H., Norris, B., & Wilson, J. R. (1998). Safety pictograms: are they getting the message across?. Applied ergonomics, 29(1), 15-23.

Dewaele, J., Pant, R., & Schowanek, D. (2006). Comparative life cycle assessment (LCA) of Ariel Actif à froid (2006), a laundry detergent that allows to wash at colder wash temperatures, with previous Ariel laundry detergents (1998, 2001). (p. 57). Procter Gamble.

E Ecolabelling Norway. (2006). Final report, EU eco-label for shampoo and soaps.

Elberling, J., Skov, P. S., Mosbech, H., Holst, H., Dirksen, A., & Johansen, J. D. (2007). Increased release of histamine in patients with respiratory symptoms related to perfume. Clinical and Experimental Allergy, 37: 1676-1680.

Energy Star. (2011). Clothes washers for consumers. Retrieved from http://www.energystar.gov

Environment Canada. (2004). Threats to water availability in Canada (Government) (p. 128). Ontario: National Water Research Institute. Retrieved from http://www.ec.gc.ca/inre-nwri/default.asp?lang=En&n=0CD66675-

Environmental Health Association of Nova Scotia. (2011). Guide to less toxic products. Guide to less toxic products. Retrieved from http://lesstoxicguide.ca/?fetch=personal#found

Eureka Recycling. (2012). Recycling plastic: Complications & limitations. Retrieved from http://www.eurekarecycling.org/imageupload/file/Plastics_Fact_Sheet-2012.pdf

European Chemicals Agency. (2011). The use of alternatives to testing on animals for the REACH Regulation. Finland. Retrieved from http://echa.europa.eu/documents/10162/13639/alternatives_test_animals_2011_en.pdf

European Chemicals Agency. (2012, October 9). Registration, evaluation, authorisation and restriction of chemicals-REACH (2006), Consolidated version. Retrieved from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2006R1907:20121009:EN:PDF

European Commission. (2001b). Integrated pollution prevention and control (IPPC): Reference document on best available techniques in the glass manufacturing industry. Retrieved from http://www.prtr-es.es/data/images/vidrio-052A143B3A73F757.pdf

European Commission. (2007c). Reference document on best available techniques in the production of polymers. Retrieved from http://eippcb.jrc.ec.europa.eu/reference/BREF/pol_bref_0807.pdf.

European Union Scientific Committee on Consumer Safety. (2012). Opinion on Fragrance allergens in cosmetic products. Accessed online at http://ec.europa.eu/health/scientific_committees/consumer_safety/docs/sccs_o_102.pdf.

F Fitzherbert, E. B., Struebig, M. J., Morel, A., Danielsen, F., Brühl, C. A., Donald, P. F., & Phalan, B. (2008). How will oil palm expansion affect biodiversity? Trends in Ecology & Evolution, 23(10), 538 - 545. doi:10.1016/j.tree.2008.06.012

Forgracs, E., Cserhati, T., & Oros, G. (2004). Removal of synthetic dyes from wastewaters: A review. Environmental International, 30(7), 953–971. Retrieved from http://www.sciencedirect.com.ezproxy1.lib.asu.edu/science/article/pii/S0160412004000340

G Gerngross, T. (1999). Can biotechnology move us toward a sustainable society? Nature Biotechnology, 17, 541-544.

Global Reporting Initiative. (2013). G4 sustainability reporting principles and standard disclosures. Amsterdam: NL. Retrieved from: https://www.globalreporting.org/reporting/g4/pages/default.aspx

Golden, J., Vairavan, S., Ugarte, G.M., White, P., & Meier, K. (2010). Energy and carbon impact from residential laundry in the United States. Journal of Integrative Environmental Sciences, 7(1), 53-73.

Golden, R., Gandy, J., & Vollmer, G. (2005). A review of the endocrine activity of parabens and implications for potential risks to human health. Critical Reviews in Toxicology, 35: 435-458.

Good Environmental Choice Australia Ltd. (2007). The Australian ecolabel program, Australian voluntary environmental labeling standard, No: GECA 17-2007. Cleaning Products. Retrieved from http://www.geca.org.au/list-of-geca-standards.html.

Green Seal. (2011). Green seal certification checklist, personal care and cosmetic products. Retrieved from http://www.greenseal.org/GreenBusiness/Standards.aspx?vid=ViewStandardDetail&cid=12&sid=37

GreenPalm Sustainability. A Fresh Approach to Delivering Sustainability. (2009). Book & Claim Ltd. http://www.greenpalm.org/upload/files/6/GreenPalm-Overview-2009.pdf

H Hamilton, T. & de Gannes, G. C. (2011). Allergic contact dermatitis to preservatives and fragrances in cosmetics. Skin Therapy Letter, 16.

Hansen, S. B., & Yusoff, S. (2007). LCA case studies feasibility study of performing a life cycle assessment on crude palm oil production in Malaysia. International Journal, 12(1), 50-58.

Hatti-Kaul, R., Tornvall, U., Gustafsson, L., & Borjesson, P. (2006). Industrial biotechnology for the production of bio-based chemicals: A cradle-to-grave perspective. Trends in Biotechnology, 25(3), 119-124.

Hauser, R., & Calafat, A. (2005). Phthalates and human health. Occupational and Environmental Medicine, 62(11), 806-818. doi:10.1136/oem.2004.017590.

Hellweg, S., Wernet, G., Mutel, C., & Hungerbuhler, K. (2010). The environmental importance of energy use in chemical production. Journal of Industrial Ecology, 15(1), 96-107.

Herron, S. (2013). Life Cycle Impact Screening of Aerosol Air Fresheners. The Sustainability Consortium.

Herron, S. (2013). Life Cycle Impact Screening of Leave-on Skin Products. The Sustainability Consortium.

Herron, S. (2013). Life cycle impact screening of non-aerosol air fresheners. The Sustainability Consortium.

Hong, G.-B., Su, T.-L., & Lee, J.-D. (2014). ENERGY USE, CONSERVATION AND EMISSIONS REDUCTIONS IN TAIWANESE COSMETICS INDUSTRY. Environmental Engineering and Management Journal, 13(12), 2971–2976. https://doi.org/10.30638/eemj.2014.335

I Innovations for Greenhouse Gas Reductions. (2009). A life cycle quantification of carbon abatement solutions enabled by the chemical industry. International Council of Chemical Associations (ICCA). Retrieved from: http://www.icca-chem.org/ICCADocs/ICCA_A4_LR.pdf

International Finance Corporation. (2007c). Environmental, health, and safety guidelines for glass manufacturing. Retrieved from http://www.ifc.org/wps/wcm/connect/384e20804885574ebc0cfe6a6515bb18/Final%2B-%2BGlass%2BManufacturing.pdf?MOD=AJPERES&id=1323152002618

K Kamrin, M. A. (2009). Phthalate risks, phthalate regulation, and public health: a review. Journal of Toxicology and Environmental Health, Part B, 12: 157-174.

Koehler, A., & Wildbolz, C. (2009). Comparing the environmental footprints of home-care and personal-hygiene products: The Relevance of Different Life-Cycle Phases. Environmental Science Technology, 43(22), 8643 - 8651.

Koerner, M. (2010). LCA of clothes washing options for city west water's residential customers (Technical No. 206853-00). (p. 247). Melbourne: Arup Pty Ltd.

Koh, L. P. (2008). Can oil palm plantations be made more hospitable for forest butterflies and birds? Journal of Applied Ecology, 45(4), 1002 - 1009. doi:10.1111/j.1365-2664.2008.01491.x

Kramer, K. J., Masanet, E., & Xu, T. (2009). Energy efficiency improvement and cost saving opportunities for the pulp and paper industry an ENERGY STAR ® Guide for the Pulp and Paper Industry. Technical Report. EPA, (October).

L Laurance, W. F., Koh, L. P., Butler, R., Sodhi, N. S., Bradshaw, C. J. A., Neidel, J. D., & Mateo Vega, J. (2010). Improving the performance of the roundtable on sustainable palm oil for nature conservation. Conservation Biology, 24(2), 377 - 381. doi:10.1111/j.1523-1739.2010.01448.x

Lavoie, E. T., Heine, L. G., Holder, H., Rossi, M. S., Lee II, R. E., Connor, E. A., & Davies, C. L. (2011). Chemical alternatives assessment: Enabling substitution to safer chemicals. Environmental Science & Technology, 45(4), 1747 - 1747. doi:10.1021/es200029j

Lopes, E., Dias, A., Arroja, L., Capela, I., Pereira, F. (2003) Application of life cycle assessment to the Portuguese pulp and paper industry. Journal of Cleaner Production, 11, 51-59.

M Miller, M., Justiniano, M., & McQueen, S. (2005). Energy and environmental profile of the U.S. pulp and paper industry. Retrieved from http://www.energetics.com/resourcecenter/products/studies/Pages/PulpPaper-Industry-Profile.aspx

Milmo, S. (2008). Thirsty work (Business). Dow Chemical. Retrieved from www.chemistryworld.org

Mitch, W., Kemper, J. & Walse, S. (2010). Quaternary amines as nitrosamine precursors: A role for consumer products? Environmental Science Technology, 44(4), 1224-1231. http://pubs.acs.org/doi/abs/10.1021/es902840h

N National Research Council of the National Academies (U.S.). (2009). Science and decisions: Advancing risk assessment. Washington, D.C: National Academies Press.

Nellemann, C., Miles, L., Kaltenborn, B. P., Virtue, M., & Ahlenius, H. (Eds). (2007). The last stand of the orangutan - State of emergency: Illegal logging, fire and palm oil in Indonesia's national parks. United Nations Environment Programme.

Nordic Ecolabelling. (2012). Nordic Ecolabelling of Cosmetic Products, v 2.4.

O OECD. (2001). Environmental outlook for the chemicals industry. Retrieved from http://www.oecd.org/env/ehs/2375538.pdf

Overcash, M., & Kim, S. (2003). Energy in chemical manufacturing processes: Gate-to-gate information for life cycle assessment. Journal of Chemical Technology and Biotechnology, 78, 995-1005.

Overview of RSPO. (2009). Roundtable on Sustainable Palm Oil. http://www.rspo.org/files/pdf/Factsheet-RSPO-Overview.pdf

P Pacific Gas & Electric (2006). High performance cleanrooms - A design guidelines sourcebook. Retrieved from hightech.lbl.gov/documents/cleanrooms/Cleanroom_Air_Design.pdf.

Paper Task Force. (1995). Paper Task Force recommendations for purchasing and using environmentally preferable paper. Environmental Defense Fund.

PE International. (2009). Case study sanft & sicher toilet paper by dm drogeriemarkt. PCF Pilotprojekt: Germany. Retrieved from http://www.pcf-projekt.de/files/1232962631/pcf_dm_sanft_und_sicher.pdf

Pellerin, T. (2005). Optimize water use. Chemical Processing. Newsletter. Retrieved from http://www.chemicalprocessing.com/articles/2005/571/

Person, L. (1997). Life cycle assessment of shampoos. Chalmers Industriteknik Ekologik (CIT), a division of Chalmers Industriteknik. Provided by TSC member company.

Personal Care and Product Council. (2014). Personal care council. Retrieved from http://www.personalcarecouncil.org/legislation-regulation/labeling-packaging

Pulselli, R., Ridolfi, R., Rugani, B., & Tiezzi, E. (2009). Application of life cycle assessment to the production of man-made crystal glass. The International Journal of Life Cycle Assessment, 14(5), 490–501. doi:10.1007/s11367-009-0085-5

R Rochester, J. R., & Bolden, A. L. (2015). Bisphenol S and F: A Systematic Review and Comparison of the Hormonal Activity of Bisphenol A Substitutes. Environmental Health Perspectives, 123(7), 643–650. https://doi.org/10.1289/ehp.1408989

Roudabush, R. L., Terhaar, C. J., Fassett, D. W., & Dziuba, S. P. (1965). Comparative Acute Effects of Some Chemicals on the Skin of Rabbits and Guinea Pigs. Toxicology and applied Pharmacology, 559–565. Retrieved from http://ac.els-cdn.com/0041008X65900414/1-s2.0-0041008X65900414-main.pdf?_tid=8e1e5d20-3de0-11e3-9a02-00000aab0f26&acdnat=1382752221_98120c68a02155aff5c6dc22ce2533a1

Roundtable on Sustainable Palm Oil. (2007). RSPO-Principles and criteria for sustainable palm oil production. Retrieved from http://www.rspo.org/files/resource_centre/keydoc/2%20en_RSPO%20Principles%20and%20Criteria%20for%20Sustainable%20Palm%20Oil%20Production%20(2007).pdf

S Schlumpf, M., Schmid, P., Durrer, S., Conscience, M., Maerkel, K., Henseler, M., Gruetter, M., Herzog, I., Reolon, S., Ceccatelli, R., Faass, O., Stutz, E., Jarry, H., Wuttke, W., & Lichtensteiger, W. (2004). Endocrine activity and developmental toxicity of cosmetic UV filters - an update. Toxicology, 205: 113-122.

Scientific Committee on Consumer Safety. (2012). The SCCC's notes of guidance for the testing of cosmetic substances and their safety evaluation 8th revision. Retrieved from http://ec.europa.eu/health/scientific_committees/consumer_safety/docs/sccs_s_006.pdf

Selke, S. E. (2006). Plastics recycling and biodegradable plastics. In C.A .Harper, (Ed.), Handbook of plastics technologies: The complete guide to properties and performance (pp 1-109). New York: McGraw-Hill.

Simonsen, A. B., Deleuran, M., Johansen, J. D., & Sommerlund, M. (2011). Contact allergy and allergic contact dermatitis in children – a review of current data. Contact Dermatitis, 65(5), 254–265. doi:10.1111/j.1600-0536.2011.01963.x

Skin Deep. (2012). Environmental working group. Retrieved from http://www.ewg.org/skindeep/

Sustainable Packaging Coalition. (2009). Sustainable packaging indicators and metrics framework. Retrieved from http://www.sustainablepackaging.org/content/default.aspx?type=5&id=sustainable-packaging-metrics

T Tan, K. T., Lee, K. T., Mohamed, A. R., & Bhatia, S. (2009). Palm oil: Addressing issues and towards sustainable development. Renewable and Sustainable Energy Reviews, 13(2), 420-427. doi:10.1016/j.rser.2007.10.001

Teoh, C. H. (2011). Key sustainability issues in the palm oil sector. International Finance Corporation.

Ternes, T., Joss, A., & Siegrist, H. (2004). Scrutinizing pharmaceuticals and personal care products in wastewater treatment. Environmental Science & Technology, 393A-399A.

The Clorox Company. (2013). The buzz about Burt's Bees [Company web log post]. Retrieved from http://www.thecloroxcompany.com/corporate-responsibility/products/product-sustainability/burts-bees/

The Consumer Goods Forum. (2011). Global Protocol on Packaging Sustainability 2.0. Retrieved from http://globalpackaging.mycgforum.com/allfiles/GPPS_2.pdf

The Sustainability Consortium (2011a). Product Category Life Cycle Assessment (PCLCA) Laundry Detergent. The Sustainability Consortium Sustainability Measurement and Reporting System pilot project.

The Sustainability Consortium (2011a). Product Category Life Cycle Assessment (PCLCA) Surface Cleaners. The Sustainability Consortium "Sustainability Measurement and Reporting System", pilot project.

Tsai, P.-C., & Ding, W.-H. (2004). Determination of alkyltrimethylammonium surfactants in hair conditioners and fabric softeners by gas chromatography - mass spectrometry with electron-impact and chemical ionization. Journal of Chromatography A, 1027(1 - 2), 103-108. doi:10.1016/j.chroma.2003.10.047

Tschudi, W., Mills, E., Xu, T. & Rumsey, P. (2005, December). Measuring and managing cleanroom energy use. HPAC Engineering, 29-35.

U U.S. Department of Energy. (2004). Energy use and loss analysis- U.S. manufacturing and mining (p. 76). Retrieved from http://www.swagelokenergy.com/download/ELAUSInd.pdf

U.S. Environmental Protection Agency. (2011b). EPA's DfE standard for safer products (DfE Standard). Retrieved from http://www.epa.gov/dfe/pubs/projects/gfcp/standard-for-safer-products.pdf

U.S. Environmental Protection Agency. (2012b). Comprehensive procurement guidelines. Collections & Lists. Retrieved http://www.epa.gov/epawaste/conserve/tools/cpg/index.htm

U.S. Food and Drug Administration. (2012). Cosmetic labeling and label claims. Retrieved from http://www.fda.gov/Cosmetics/CosmeticLabelingLabelClaims/default.htm

U.S. General Services Administration. (2013). Recycled content products. Retrieved from http://www.gsa.gov/portal/content/105366

United State Environmental Protection Agency. (2010a). Design for the environment program criteria for fragrances, Version 2.0. Retrieved from http://www.epa.gov/dfe/pubs/projects/gfcp/dfe_screen_criteria_for_fragrances.pdf

United States Environmental Protection Agency. (2008c). BAT guidance note on best available techniques for the manufacture of glass including glass fibre (1st edition). Retrieved from http://www.epa.ie/pubs/advice/bat/batguidancenotefortheglasssectorincludingglassfibre.html#.UuBD6Pvn-Uk

V Van Hoof, G., Schowanek, D., & Feijtel, T. (2003). Comparative life-cycle assessment of laundry detergent formulations in the UK. Carl Hanser Publisher, Munich, 40(5), 266 - 275.

W Wakker, E. (2005). Greasy palms, The social and ecological impacts of large-scale oil palm plantation development in Southeast Asia. Friends of the Earth.

Wang, S. Q., Dusza, S. W., & Lim, H. W. (2010). Safety of retinyl palmitate in sunscreens: a critical analysis. Journal of the American Academy of Dermatology, 63: 903-906.

Waste and Resources Action Program. (2009). An introduction to packaging and recyclability. Retrieved from http://www.wrap.org.uk/content/packaging-and-recyclability-guidance-nov-2009

Wernet, G., Mutel, C., Hellweg, S., & Hungerbühler, K. (2011). The environmental importance of energy use in chemical production. Journal of Industrial Ecology, 15(1), 96–107. doi:10.1111/j.1530-9290.2010.00294.x

World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). (2004). The greenhouse gas protocol: A corporate accounting and reporting standard (revised edition). Retrieved from http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf

X Xuan. (2011). Cosmetics and Animal testing-Ministry of Health national standard GB7919-87 . Douban. Retrieved from http://www.douban.com/note/129867375/

Y Yang, C. Z., Yaniger, S. I., Jordan, V. C., Klein, D. J., & Bittner, G. D. (2011). Most Plastic Products Release Estrogenic Chemicals: A Potential Health Problem That Can Be Solved. Environmental Health Perspectives, 119(7), 989–996. https://doi.org/10.1289/ehp.1003220

Yi, J. Z., & Zhang, L. . (2008). Removal of methylene blue dye from aqueous solution by adsorption onto sodium humate/polyacrylamide/clay hybrid hydrogels. Bioresource Technology, 99, 2182–2186. doi:10.1016/j.biortech.2007.05.028

Z Zhang, G. P., Hoekstra, A. Y., (2012). Solving the Water Crisis: Common Action toward a Sustainable Water Footprint. waterfootprint.org. https://waterfootprint.org/media/downloads/Report60-Solvingthewatercrisis-PuP-London_1.pdf

Release Notes

*** 01.02.10, May 2021 ***
- Added hotspots, improvement opportunities, and references for newly added KPI(s) or response options.
- 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.

Palm Oil, Palm Kernel Oil, and Derivative Ingredient Sourcing (replaced previous “Palm Oil Sourcing” KPI):
- Question: The question text was updated to reflect the response options below.
- Question and Response Options: Text was updated to track the percentages of palm oil and palm-oil derived ingredients that are Certified Sustainable Palm Oil (CSPO) purchased through RSPO book and claim, mass balance, segregated, and identity preserved supply chain models have been added.
- Calculation & Scope: Text added to support the new response options above.
- Certifications, Standards & Tools: References have been kept where applicable and added where needed to support the new response options above.
- Definitions: Updated to reflect the changes above.

NEW KPI - “Product Certifications”

NEW KPI - “Packaging – Recycle Labeling”

*** 1.00.10, May 2020 ***

Minor corrections to guidance have been made throughout. In-text references and broken resource links (URLs) included in the KPI guidance were updated to the most recent available versions.

*** 1.00.10, June 2019 ***

This KPI set has been aligned with KPIs from the Beauty and Personal Care (BPC) Sustainability Product Rating System. In this alignment, company and category-level BPC KPIs have been used in this set to cover all of the same hotspots previously addressed by the following Toolkits:
• Leave-On Personal Care Products
• Rinse-off Personal Care Products
• Oral Care Products
• Hair Coloring Products
KPI guidance language referencing CDP's Information Requests for Climate Change and Water were updated to reflect the 2019 versions.

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.