

MSCI ESG Ratings Methodology: Raw Material Sourcing Key Issue

MSCI ESG Research LLC

October 2023



Contents

nts	Introduction	3
	Risks associated with this Key Issue	4
	Raw Material Sourcing Key Issue Score	4
	Raw Material Sourcing Management Score	4
	Management Score category: Sourcing Policy & Commitments Score	5
	Controversies	11
	Raw Material Sourcing Exposure Score	11
	Company-Specific Exposure Score	12
	Data Sources	13



Introduction

This document provides essential information on the components of the Raw Material Sourcing Key Issue to enable users of ESG Ratings to understand how our outputs are determined. Raw Material Sourcing is a Key Issue in the Environmental Pillar of the MSCI ESG Ratings model. Companies are evaluated on the environmental impacts of the raw materials used in their products and their efforts around supply-chain traceability and certification.

For additional details on the MSCI ESG Ratings Model, refer to Section 2, Data, ratings and scores, of "ESG Ratings Methodology."

3 Pillars	10 Themes	33 ESG Key Issues
		Carbon Emissions
	Climate Change	Climate Change Vulnerability
	Climate Change	Financing Environmental Impact
		Product Carbon Footprint
		Biodiversity & Land Use
	Natural Capital	Raw Material Sourcing
Environmental		Water Stress
		Electronic Waste
	Pollution & Waste	Packaging Material & Waste
		Toxic Emissions & Waste
		Opportunities in Clean Tech
	Environmental Opportunities	Opportunities in Green Building
		Opportunities in Renewable Energy
		Health & Safety
	Human Capital	Human Capital Development
		Labor Management
		Supply Chain Labor Standards
		Chemical Safety
		Consumer Financial Protection
Social	Product Liability	Privacy & Data Security
occiai		Product Safety & Quality
		Responsible Investment
	Stakeholder Opposition	Community Relations
	Stakeholder opposition	Controversial Sourcing
		Access to Finance
	Social Opportunities	Access to Health Care
		Opportunities in Nutrition & Health
Governance	Corporate Governance	Board
ouvernance		Pay

Exhibit 1: MSCI ESG Key Issue hierarchy





3 Pillars	10 Themes	33 ESG Key Issues
		Ownership & Control
		Accounting
	Corporate Behavior	Business Ethics
		Tax Transparency

Risks associated with this Key Issue

- Damage to brand value.
- Failure to meet consumer demand for more environmentally sound products.

Raw Material Sourcing Key Issue Score

The Raw Material Sourcing Key Issue Score evaluates the company's level of exposure to, and management of, risks on this Key Issue. The Key Issue Score is based on the Exposure Score and the Management Score using the formula below. The Exposure Score and the Management Score are combined such that a higher level of exposure requires a higher level of demonstrated management capability in order to achieve the same overall Key Issue Score.

$$KI_i = 7 - (\max(EXP_i, 2) - MGMT_i)$$

Where:

- *KI*_{*i*} is the Key Issue Score for company *i*.
- *EXP_i* is the Exposure Score for company *i*.
- *MGMT_i* is the Management Score for company *i*.

Raw Material Sourcing Management Score

The Raw Material Sourcing Management Score evaluates the company's ability to manage its exposure to risks on this Key Issue. It is based on the Management Score category listed below, modified by Controversies. These scores are derived from data points that are scored on a 0-10 scale, with 10 corresponding to best practice and 0 corresponding to lack of management. Refer to Section 3.3, Analyzing risk management, of "ESG Ratings Methodology" for additional details. Sources are



company disclosures except where otherwise indicated. The following formula is used to calculate the Raw Material Sourcing Management Score - Excluding Controversies:

$$MGMT_{RMS,i} = SPC_{RMS,i}$$

Where:

- *MGMT_{RMS,i}* is the Raw Material Sourcing Management Score Excluding Controversies for company *i*.
- SPC_{RMS,i} is the Sourcing Policy & Commitments Score for company *i*.

The following data points, without constituting an exhaustive list, are representative of the inputs to the Management Score. The data points listed below are used in the Management Score calculation:

Management Score category: Sourcing Policy & Commitments Score

For indicators related to certification and traceability, we use company-disclosed values where available. Where company disclosures are not sufficiently granular, we extrapolate from company disclosures to derive more granular values.

Extent of supply chain initiatives to address impacts of beef and/or dairy production.

Definition: The extent of the company's initiatives to develop sustainable practices within its beef and/or dairy supply chain, e.g., sustainable land management program, methane reduction program, implementation of specific sustainable requirements for suppliers and verification of compliance.

• Extent of supply chain initiatives to address impacts of cotton production.

Definition: The extent of the company's initiatives to develop sustainable practices within its cotton supply chain, e.g., water and pesticide reduction programs, technical assistance to obtain sustainable certification.

• Extent of supply chain initiatives to address impacts of leather production.



Definition: The extent of the company's initiatives to develop sustainable practices within its leather supply chain, e.g., technical assistance to obtain sustainable certification, reduction of chemical use in the dyeing and tanning process.

• Extent of supply chain initiatives to address impacts of palm oil production.

Definition: The extent of the company's initiatives to develop sustainable practices within its palm oil supply chain, e.g., technical assistance to obtain sustainable certification, implementation of specific sustainable requirements for suppliers and verification of compliance.

• Extent of supply chain initiatives to address impacts of seafood production.

Definition: The extent of the company's initiatives to develop sustainable practices within its seafood supply chain, e.g., technical assistance to obtain sustainable certification, involvement in Fisheries Improvement Projects.

• Extent of supply chain initiatives to address impacts of timber and/or paper production.

Definition: The extent of the company's initiatives to develop sustainable practices within its timber and/or paper supply chain, e.g., technical assistance to obtain sustainable certification, implementation of specific sustainable requirements for suppliers and verification of compliance.

• Future targets for beef and/or dairy sourcing.

Definition: The extent to which the company has clear, measurable targets for certifying or tracing its sources of beef and/or dairy.

• Future targets for cotton sourcing.

Definition: The extent to which the company has clear, measurable targets for certifying or tracing its sources of cotton.

• Future targets for leather sourcing.



Definition: The extent to which the company has clear, measurable targets for certifying or tracing its sources of leather.

• Future targets for palm oil sourcing.

Definition: The extent to which the company has clear, measurable targets for certifying or tracing its sources of palm oil.

• Future targets for seafood sourcing.

Definition: The extent to which the company has clear, measurable targets for certifying or tracing its sources of seafood.

• Future targets for timber and/or paper sourcing.

Definition: The extent to which the company has clear, measurable targets for certifying or tracing its sources of timber and/or paper.

• Percentage of beef and/or dairy third-party certified to an environmental sustainability standard.

Definition: The estimated share of beef and/or dairy externally certified to sustainable standards (e.g., organic certification).

• Percentage of cotton third-party certified to an environmental standard.

Definition: The estimated share of cotton externally certified to sustainable standards (e.g., Better Cotton Initiative).

• Percentage of leather third-party certified to an environmental sustainability standard.

Definition: The estimated share of leather externally certified to sustainable standards (e.g., Leather Working Group Silver and Bronze).

• Percentage of palm oil third-party certified to an environmental sustainability standard.



Definition: The estimated share of palm oil externally certified to sustainable standards (e.g., Roundtable on Sustainable Palm Oil).

• Percentage of seafood third-party certified to an environmental sustainability standard.

Definition: The estimated share of seafood externally certified to sustainable standards (e.g., Global Aquaculture Alliance's Best Aquaculture Practices).

• Percentage of timber or paper third-party certified to an environmental sustainability standard.

Definition: The estimated share of timber or paper externally certified to sustainable standards (e.g., Programme for the Endorsement of Forest Certification).

• Extent of beef and/or dairy certification against the most stringent sustainable criteria.

Definition: The estimated share of the company's supply of beef and/or dairy externally certified to the most stringent sustainable standards (e.g., Rainforest Alliance).

• Extent of leather certification against the most stringent sustainable criteria.

Definition: The estimated share of the company's supply of leather externally certified to the most stringent sustainable standards (e.g., Leather Working Group Gold).

• Extent of palm oil certification against the most stringent sustainable criteria.

Definition: The estimated share of the company's supply of palm oil externally certified to the most stringent sustainable standards (e.g., Segregated or Identity Preserved Roundtable on Sustainable Palm Oil).



• Extent of seafood certification against the most stringent sustainable criteria.

Definition: The estimated share of the company's supply of seafood externally certified to the most stringent sustainable standards (e.g., Marine Stewardship Council, Aquaculture Stewardship Council).

• Extent of timber certification against the most stringent sustainable criteria.

Definition: The estimated share of the company's supply of timber externally certified to the most stringent sustainable standards (e.g., Forest Stewardship Council).

• Extent of beef and/or dairy traceability to place of origin.

Definition: The estimated level of traceability of beef and/or dairy up to the plantation/farm level. Best practice is for all products to be traceable.

• Extent of cotton traceability to place of origin.

Definition: The estimated level of traceability of cotton up to the plantation/farm level. Best practice is for all products to be traceable.

• Extent of leather traceability to place of origin.

Definition: The estimated level of traceability of leather up to the plantation/farm level. Best practice is for all products to be traceable.

• Extent of palm oil traceability to place of origin.

Definition: The estimated level of traceability of palm oil up to the plantation/farm level. Best practice is for all products to be traceable.

• Extent of seafood traceability to place of origin.

Definition: The estimated level of traceability of seafood up to the fishing location/farm level. Best practice is for all products to be traceable.



• Extent of timber and/or paper traceability to place of origin.

Definition: The estimated level of traceability of timber and/or paper up to the plantation or forest level. Best practice is for all products to be traceable.

• Commitments towards responsible beef and/or dairy sourcing.

Definition: Indicates whether the company has an explicit policy to sustainably source beef and/or dairy (e.g., zero-deforestation beef policy) or whether it belongs to an industry group with such a policy (e.g., the Global Roundtable on Responsible Beef).

• Commitments towards responsible cotton sourcing.

Definition: Indicates whether the company has an explicit policy to sustainably source cotton or whether it belongs to an industry group with such a policy (e.g., Textile Exchange or Better Cotton Initiative).

• Commitments towards responsible leather sourcing.

Definition: Indicates whether the company has an explicit policy to sustainably source leather (e.g., addressing deforestation) or whether it belongs to an industry group with such a policy (e.g., Leather Working Group).

• Commitments towards responsible palm oil sourcing.

Definition: Indicates whether the company has an explicit policy to sustainably source palm oil (e.g., no deforestation, no peat, no exploitation policy) or whether it belongs to an industry group with such a policy (e.g., the Roundtable on Sustainable Palm Oil).

• Commitments towards responsible seafood sourcing.

Definition: Indicates whether the company has an explicit policy to sustainably source seafood (e.g., banning the sale of endangered species, specifying acceptable fishing methods) or whether it belongs to an industry group with such a policy (e.g., Marine Stewardship Council).



• Commitments towards responsible timber and/or paper sourcing.

Definition: Indicates whether the company has an explicit policy to sustainably source timber or whether it belongs to an industry group with such a policy (e.g., Forest Stewardship Council).

Sources: company disclosures; Roundtable on Sustainable Palm Oil; other stakeholder working groups, for example, Rainforest Alliance, Better Cotton, Textile Exchange, Leather Working Group.

Controversies

A controversy deduction ranging from 0 to 5 points is subtracted from the overall Management Score, based on the severity and type of controversies facing the company on this Key Issue. The following categories of controversies are used in the assessment:

• Environmental issues in the supply chain controversies.

For more details on how controversies are included in the MSCI ESG Ratings model, refer to Section 3.3.2, Controversies cases, of "ESG Ratings Methodology."

Raw Material Sourcing Exposure Score

The Raw Material Sourcing Exposure Score evaluates the company's exposure to risks on this Key Issue. It is based on the Company-Specific Exposure Score only. The Company-Specific Exposure Score is scored on a 0-10 scale, with 10 corresponding to the highest risk and 0 corresponding to the lowest risk. Refer to Section 3.2, Analyzing risk exposure, of "ESG Ratings Methodology" for additional details. The following formula is used in the Exposure Score calculation:

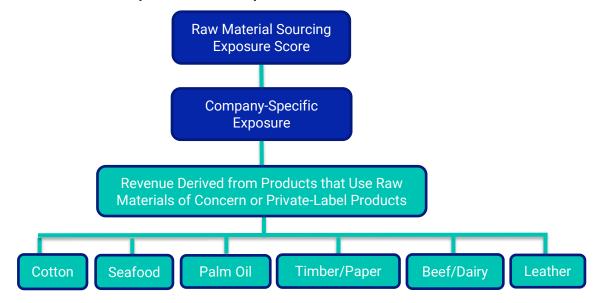
$$EXP_{RMS,i} = COM_{RMS,i}$$

Where:

- *EXP_{RMS,i}* is the Raw Material Sourcing Exposure Score of company *i*.
- *COM_{RMS,i}* is the Company-Specific Exposure Score of company *i*.



Exhibit 2: Exposure Score components



Company-Specific Exposure Score

The Company-Specific Exposure Score is a simple average of the Company-Specific Exposure Scores of the raw materials of concern sourced by that company:

$$COM_{RMS,i} = \frac{1}{n} \sum_{k=1}^{n} (COM_{RMS,i,k})$$

Where:

- *n* represents the number of materials of concern that are sourced by company *i*. This may be different for each company depending on the raw materials sourced by them. Raw materials of concern include:
 - 1. cotton,
 - 2. seafood,
 - 3. palm oil,
 - 4. timber/paper,
 - 5. beef/dairy, and
 - 6. leather.



• *COM_{RMS,i,k}* is the Company-Specific Exposure Score for raw material of concern *k* sourced by company *i*.

The Company-Specific Exposure Score for each raw material of concern is a simple average of the Dependency Score and the Footprint Score for each raw material of concern k sourced by company i.

$$COM_{RMS,i,k} = \frac{DS_{RMS,i,k} + FS_{RMS,i,k}}{2}$$

Where:

- $DS_{RMS,i,k}$ is the Dependency Score for raw material k sourced by company i.
- $FS_{RMS,i,k}$ is the Footprint Score for raw material k sourced by company i.

For each raw material of concern sourced by the company, the Dependency Score is derived from the estimated percentage of the company's revenues that rely on the specific raw material of concern.¹

For each raw material of concern sourced by the company, the Footprint Score is derived from the total estimated revenues (three-year average, in USD million)¹ that rely on the raw material of concern. To derive revenue and revenue percentage estimates, we generally extrapolate from company disclosures to derive more granular values.

Data Sources

The following sources are used to determine the Raw Material Sourcing Exposure Score:

Refinitiv, MSCI ESG Research, company disclosures.

¹ Companies are assessed on revenues from their private-label products where applicable.



Contact us

msci.com/contact-us

AMERICAS

United States	+ 1 888 588 4567 *
Canada	+ 1 416 687 6270
Brazil	+ 55 11 4040 7830
Mexico	+ 52 81 1253 4020

EUROPE, MIDDLE EAST & AFRICA

South Africa	+ 27 21 673 0103
Germany	+ 49 69 133 859 00
Switzerland	+ 41 22 817 9777
United Kingdom	+ 44 20 7618 2222
Italy	+ 39 02 5849 0415
France	+ 33 17 6769 810

ASIA PACIFIC

China	+ 86 21 61326611
Hong Kong	+ 852 2844 9333
India	+ 91 22 6784 9160
Malaysia	1800818185 *
South Korea	+ 82 70 4769 4231
Singapore	+ 65 67011177
Australia	+ 612 9033 9333
Taiwan	008 0112 7513 *
Thailand	0018 0015 6207 7181
Japan	+ 81 3 4579 0333
* toll-free	

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading researchenhanced solutions that clients use to gain insight into and improve transparency across the investment process.

About MSCI ESG Research Products and Services

MSCI ESG Research products and services are provided by MSCI ESG Research LLC, and are designed to provide in-depth research, ratings and analysis of environmental, social and governancerelated business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research LLC. are also used in the construction of the MSCI ESG Indexes. MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc.

To learn more, please visit <u>www.msci.com</u>.



Notice and disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or redisseminated in whole or in part without prior written permission from MSCI. All rights in the Information are reserved by MSCI and/or its Information Providers.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information may include "Signals," defined as quantitative attributes or the product of methods or formulas that describe or are derived from calculations using historical data. Neither these Signals nor any description of historical data are intended to provide investment advice or a recommendation to make (or refrain from making) any investment decision or asset allocation and should not be relied upon as such. Signals are inherently backward-looking because of their use of historical data, and they are not intended to predict the future. The relevance, correlations and accuracy of Signals frequently will change materially.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investible assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. The calculation of indexes and index returns may deviate from the stated methodology. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.'s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.'s company filings on the Investor Relations section of msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI's products or services are not a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such, provided that applicable products or services from MSCI ESG Research may constitute investment advice. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. MSCI ESG and climate ratings, research and data are produced by MSCI ESG Research LLC, a subsidiary of MSCI Inc. MSCI ESG Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. MSCI Indexes are administered by MSCI Limited (UK).

Please note that the issuers mentioned in MSCI ESG Research materials sometimes have commercial relationships with MSCI ESG Research and/or MSCI Inc. (collectively, "MSCI") and that these relationships create potential conflicts of interest. In some cases, the issuers or their affiliates purchase research or other products or services from one or more MSCI affiliates. In other cases, MSCI ESG Research rates financial products such as mutual funds or ETFs that are managed by MSCI's clients or their affiliates, or are based on MSCI Inc. Indexes. In addition, constituents in MSCI Inc. equity indexes include companies that subscribe to MSCI products or services. In some cases, MSCI ESG Research has taken a number of steps to mitigate potential conflicts of interest and safeguard the integrity and independence of its research and ratings. More information about these conflict mitigation measures is available in our Form ADV, available at https://adviserinfo.sec.gov/firm/summary/169222.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P Global Market Intelligence. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and S&P Global Market Intelligence.



MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data.

Privacy notice: For information about how MSCI collects and uses personal data, please refer to our Privacy Notice at https://www.msci.com/privacy-pledge.