

MSCI Natural Resources Stewardship Index Methodology

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1 MSCI Natural Resources Stewardship Index

The MSCI Natural Resources Stewardship Index (the ‘Index’) aims to represent the performance of a set of companies from MSCI ACWI IMI that are associated with key aspects of the protection of natural resources through their products or services, and/or through their management of related issues, all assessed within the context of potential contribution towards a circular economy (see Appendix 1).

In particular, the Index incorporates companies that provide technologies (“circular technologies”) and/or those that help enable the transition to a circular economy (“circular transition”), as defined using the following measures:

- Pollution Prevention
- Sustainable Agriculture
- Sustainable Water
- Biodiversity and Land Use
- Raw Material Sourcing
- Toxic Emissions & Waste

The MSCI Natural Resources Stewardship Index also applies a set of exclusions criteria to screen companies with business activities that are not considered aligned with the overall objective of protecting natural resources or promoting circularity. Additionally, the Index utilizes a combination of weighting strategies at both security and component levels, as well as applying region-neutrality and issuer capping.

2 MSCI ESG Research

The MSCI Natural Resources Stewardship Index uses company ratings and research provided by MSCI ESG Research LLC. In particular, the Index uses the following MSCI ESG Research products: MSCI Impact Solutions, MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research, and MSCI Climate Change Metrics.

For details on MSCI ESG Research’s full suite of ESG products, please refer to: <https://www.msci.com/esg-investing>.

2.1 MSCI Impact Solutions: Sustainable Impact Metrics

MSCI Impact Solutions’ Sustainable Impact Metrics is designed to identify companies that derive revenue from products or services with positive impact on society and the environment. The Sustainable Impact Metrics are comprised of six Environmental Impact categories and seven Social Impact categories arranged by theme.

MSCI Sustainable Impact Taxonomy

Pillar	Themes	Categories
Environmental Impact	Climate Change	1. Alternative energy 2. Energy efficiency 3. Green building
	Natural capital	4. Sustainable water 5. Pollution prevention 6. Sustainable agriculture
Social Impact	Basic needs	7. Nutrition 8. Major Disease Treatment 9. Sanitation 10. Affordable Real Estate
	Empowerment	11. SME Finance 12. Education 13. Connectivity – Digital divide

Under each of the actionable environmental and social impact themes, MSCI ESG Research has identified specific categories of products and services that it has determined companies can offer as potential solutions to environmental and social challenges.

More detailed taxonomy for each category can be found in Section 2.4 of the MSCI ACWI Sustainable Impact Index Methodology available at <https://www.msci.com/index-methodology>.

2.2 MSCI Impact Solutions: SDG Alignment

MSCI Impact Solutions' SDG Alignment is designed to provide a holistic view of companies' net contribution – both positive and negative – towards addressing each of the 17 UN Sustainable Development Goals (SDGs). SDG Alignment assessments and scores include analysis of companies' operations, products and services, policies, and practices and their net contribution – positive and adverse – to addressing key global challenges.

The MSCI SDG Alignment framework provides 17 SDG Net Alignment scores and 17 SDG Net Alignment assessments (including Strongly Aligned, Aligned, Neutral, Misaligned and Strongly Misaligned) for each of the 17 global goals. In addition, the model offers assessments and scores for two dimensions, product alignment and operation alignment, for each company and for each of the 17 goals.

For more details on MSCI Impact Solutions including MSCI SDG Alignment, please refer to <https://www.msci.com/our-solutions/esg-investing/impact-solutions>.

2.3 MSCI ESG Ratings

MSCI ESG Ratings provides research, data, analysis and ratings of how well companies manage environmental, social and governance risks and opportunities. MSCI ESG Ratings provides an overall company ESG rating - a seven-point scale from 'AAA' to 'CCC'. In addition, the product provides scores and percentiles indicating how well a company manages each key issue relative to industry peers, as well as underlying data and metrics used to compile the scores and ratings.

For more details on MSCI ESG Ratings, please refer to <https://www.msci.com/esg-ratings>.

2.4 MSCI ESG Controversies

MSCI ESG Controversies (formerly known as MSCI Impact Monitor) provides assessments of controversies concerning the negative environmental, social, and/or governance impact of company operations, products and services. The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact. MSCI ESG Controversies Score falls on a 0-10 scale, with "0" being the most severe controversy.

For more details on MSCI ESG Controversies, please refer to <https://www.msci.com/documents/10199/acbe7c8a-a4e4-49de-9cf8-5e957245b86b>.

2.5 MSCI ESG Business Involvement Screening Research

MSCI ESG Business Involvement Screening Research (BISR) aims to enable institutional investors to manage environmental, social and governance (ESG) standards and restrictions reliably and efficiently.

For more details on MSCI ESG Business Involvement Screening Research, please refer to http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf.

2.6 MSCI Climate Change Metrics

MSCI Climate Change Metrics provides climate data & tools to support investors integrating climate risk & opportunities into their investment strategy and processes. It supports investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, align with temperature pathways and factoring climate change research into their risk management processes, in particular through climate scenario analysis for both transition and physical risks.

The dataset spans across the four dimensions of a climate strategy: transition risks, green opportunities, physical risks and 1.5° alignment.

For more details on MSCI Climate Change Metrics, please refer to <https://www.msci.com/climate-solutions>.

3 Constructing the MSCI Natural Resources Stewardship Index

3.1 Selection Universe

The underlying universe for the MSCI Natural Resources Stewardship Index is defined by the constituents of the MSCI ACWI Investable Market Indexes (IMI, the 'Parent Index'¹), from which three separate universes of stocks are constructed (as described in Sections 3.2 to 3.4).

3.2 ESG Filtered Universe

The MSCI Natural Resources Stewardship Index methodology applies two sets of exclusions criteria to determine eligibility in the ESG Filtered Universe.

3.2.1 Natural Resources Stewardship-specific Exclusions

The MSCI Natural Resources Stewardship Index uses MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research, MSCI Climate Change Metrics, and MSCI Impact Solutions' SDG Alignment to identify companies that have been assessed as negatively impacting the index objective. The criteria are as follows:

- Human Rights Controversies
- Palm Oil
- Genetically Modified Organisms (GMO)
- Biocide
- Tobacco
- Thermal Coal Mining
- Oil & Gas Extraction and Production
- Oil & Gas Pipelines and Transportation
- Oil & Gas Refining
- SDG 14 and 15 Net Alignment

Please refer to Appendix 2 for details on these exclusions criteria.

¹ Other parent indexes, as a subset of MSCI ACWI IMI, may also be used. However, use of some indexes as parent indexes may result in a low number of constituents, which may affect replicability.

3.2.2 Circular Economy-related Screens

The MSCI Natural Resources Stewardship Index uses MSCI ESG Research data to apply a set of exclusions standards which either address headline risks and/or contribute negatively to a circular economy. The exclusions filters are as follows:

1. **ESG Controversies Score:** All companies that are involved in environmental, social, and/or governance controversies assessed as Red Flags (Score of 0 or those with very severe controversies).
2. **Environmental Controversies:** All companies that are involved in environmental controversies assessed as Red, Orange, and Yellow Flags (Score of 4 and below).
3. **Environmental Pillar Quartile:** All companies that are assessed as belonging to the bottom quartile relative to their relevant ESG Ratings Industry.
4. **Key Issue Management Score/s:** All companies belonging to the bottom 25% of the applicable² key issue management score/s.
5. **SDG 12 Net Alignment:** All companies that are assessed as Strongly Misaligned and Misaligned on their Net Alignment to SDG 12 (Responsible Consumption and Production).
6. **Controversial Weapons:** All companies with any tie to Controversial Weapons (cluster munitions, landmines, depleted uranium weapons, biological/chemical weapons, blinding lasers, non-detectable fragments and incendiary weapons), as defined by the methodology of the MSCI Global Ex-Controversial Weapons Indexes available at <https://www.msci.com/index-methodology>.

Notes on Unrated Securities or Securities with Missing Coverage:

- Companies that are not assessed on MSCI ESG Research’s ESG Controversies (exclusion filters 1 and 2) are excluded from the final universe.
- Companies that are not assessed on MSCI ESG Research’s ESG Ratings and SDG Alignment (exclusion filters 3 to 5) are not excluded from the final universe.

² The exclusion is applied by key issue, which means that an index using multiple key issues will exclude companies with the lowest 25% score for key issue 1, lowest 25% score for key issue 2, and so forth.

3.3 “Circular Technologies” Universe

The MSCI Natural Resources Stewardship Index uses MSCI Impact Solutions’ Sustainable Impact Metrics to identify companies that have exposure to products and services that aim to protect natural resources. Companies in the ESG Filtered Universe that have an aggregated revenue of 25% or more from the following categories (‘ESG Revenue’) are included in the Circular Technologies Universe:

- Pollution Prevention
- Sustainable Agriculture
- Sustainable Water: aggregated revenue from the Wastewater Treatment Solutions, Water Recycling Equipment & Services, and Rainwater Harvesting Solutions sub-categories is considered

3.4 “Circular Transition” Universe

The MSCI Natural Resources Stewardship Index uses MSCI ESG Ratings’ key issue management scores to identify companies that have better management strategies to protect natural resources relative to their sector peers.

The Circular Transition Universe is constructed by selecting stocks in the top 10% of the Intermediate Universe (as described in Section 3.4.1) based on their Sector-Relative Management Score, which is computed using the following key issue management score/s:

- Biodiversity & Land Use
- Raw Material Sourcing³
- Toxic Emissions & Waste

Please refer to Appendix 3 detailing the computation steps.

3.4.1 Intermediate Universe

The Intermediate Universe is constructed by selecting stocks in the ESG Filtered Universe (Section 3.2) that are not part of the Circular Technologies Universe (Section 3.3).

³ There is no single management score for the Raw Material Sourcing Key Issue, as the underlying data incorporates six raw materials. As a result, the Raw Material Sourcing Key Issue Score is used in lieu of the management score.

3.5 Weighting Scheme

The MSCI Natural Resources Stewardship Index constituents that are determined to be part of the Circular Technologies and Circular Transition universes are weighted as follows:

3.5.1 Security Weighting

- **Circular Technologies Universe**
Securities that meet the selection criteria outlined in Section 3.3 are weighted by the product of the aggregated ESG Revenue and their free float-adjusted market capitalization. The weights are then normalized to sum to 100%.
- **Circular Transition Universe**
Securities that meet the selection criteria outlined in Section 3.4 are weighted in proportion of their free float-adjusted market capitalization. The weights are then normalized to sum to 100%.

3.5.2 Region Neutrality

Regions in the Circular Technologies and Circular Transition universes are each set to be equal to the weight of the corresponding region in the Parent Index⁴, with constituents re-weighted in proportion to their respective region weights. Constituents of the Parent Index are mapped to the specified region to arrive at the region weight. The regions, including the exceptional treatment⁵ for North America, are as follows:

Region	Parent Index
Developed Asia Pacific	MSCI Pacific Index
Developed Europe & Middle East	MSCI Europe & Middle East Index
Canada	MSCI Canada Index
USA	MSCI USA Index
Emerging Asia	MSCI Emerging Markets Asia Index
Emerging Europe, Middle East & Africa	MSCI Emerging Markets Europe, Middle East & Africa Index
Emerging Latin America	MSCI Emerging Markets Latin America Index

The weights are then normalized to sum to 100% for each component.

⁴ Other parent indexes, as subsets of ACWI IMI, will follow the same regions listed in the table. However, region neutrality would only apply to regions that are present in the parent index.

⁵ North America is not used, so Canada and the USA are considered separately.

3.5.3 Component Weighting

Each component is scaled down to the following proportion:

Component	Component Weight
Circular Technologies	60%
Circular Transition	40%

3.5.4 Issuer Capping

The maximum weight of any issuer in the MSCI Natural Resources Stewardship Index is then capped at 5% in accordance with the MSCI Capped Indexes methodology⁶. The excess weight of the capped issuers is distributed among the remaining constituents in proportion of their existing weights in the Index⁷.

⁶ Please refer to the MSCI Capped Indexes methodology at www.msci.com/index-methodology

⁷ Issuer capping may result in a drift in the component weights.

4 Maintaining the MSCI Natural Resources Stewardship Index

4.1 Semi-Annual Index Review

The MSCI Natural Resources Stewardship Index is reviewed on a semi-annual basis, as of the close of the last business day of May and November, coinciding with the May and November Semi-Annual Index Reviews of the Parent Index. The pro forma index is generally announced nine business days before the effective date.

As a rule, MSCI uses MSCI ESG Research data (including MSCI Impact Solutions, MSCI ESG Ratings, MSCI ESG Controversies, MSCI Business Involvement Screening Research, and MSCI Climate Change Metrics) as of the end of the month preceding the Index Reviews for the rebalancing of the Index. For some securities, such data may not be published by MSCI ESG Research by the end of the month preceding the Index Review. For such securities, MSCI will use ESG data published after the end of month, when available, for the rebalancing of the MSCI Natural Resources Stewardship Index.

At each Semi-Annual Index Review, the ESG Filtered, Circular Technologies, and Circular Transition universes are updated based on the criteria outlined in Sections 3.2 to 3.4.

4.2 Quarterly Index Reviews

The MSCI Natural Resources Stewardship Index is also reviewed on a quarterly basis to coincide with the regular Index Reviews of the Parent Indexes. The changes are implemented at the end of February and August. The pro forma indexes are generally announced nine business days before the effective date.

For the Quarterly Index Reviews, MSCI ESG Ratings, MSCI ESG Controversies, MSCI BISR, MSCI Climate Change Metrics, and MSCI SDG Alignment data are taken as of the end of the month preceding the Index Reviews, i.e., January and July. For some securities, this data may not be published by MSCI ESG Research by the end of the month preceding the Index Review. For such securities, MSCI will use ESG data published after the end of month, when available, for the rebalancing of the MSCI Natural Resources Stewardship Index.

At the Quarterly Index Reviews, existing constituents in the ESG Filtered Universe are deleted from the MSCI Natural Resources Stewardship Index if they do not meet the criteria described in Section 3.2. Existing constituents that meet the criteria are retained in the Index.

4.3 Ongoing Event-Related Maintenance

The general treatment of corporate events in the MSCI Natural Resources Stewardship Index aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor’s participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved. Further, changes in index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

The following section briefly describes the treatment of common corporate events within the Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously.

There are no deletions from the MSCI Natural Resources Stewardship Index between Index Reviews on account of a security becoming ineligible because of reduced ESG revenue falling below the threshold, lower SRMS resulting in a drop in ranking, decrease in MSCI ESG Controversies Score, change in SDG Alignment assessment, and/or change in business involvement.

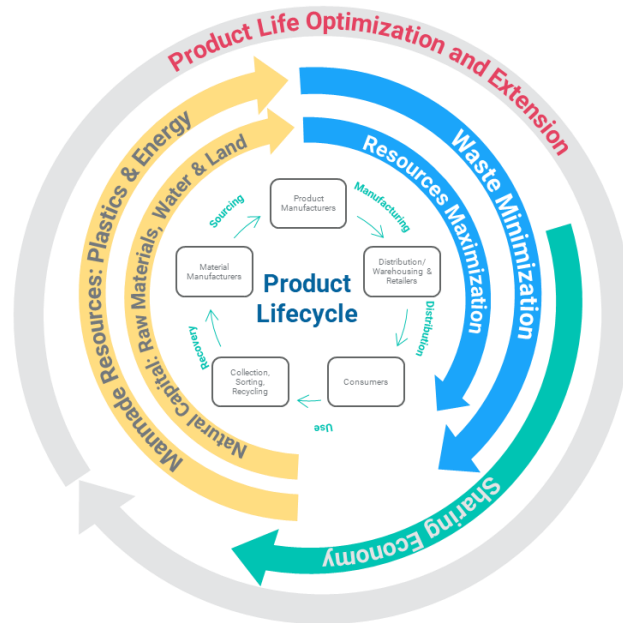
EVENT TYPE	EVENT DETAILS
New additions to the Parent Index	A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the index.
Spin-Offs	All securities created as a result of the spin-off of an existing Index constituent will not be added to the Index at the time of event implementation. Reevaluation for addition in the Index will occur at the subsequent Index Review.
Merger/Acquisition	<p>For Mergers and Acquisitions, the acquirer’s post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the Index.</p> <p>If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Index.</p>

Changes in Security Characteristics A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.). Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology.

The MSCI Corporate Events methodology book is available at:
<https://www.msci.com/index-methodology>.

Appendix 1: What is a Circular Economy?



A circular economy is an economic system wherein resources are kept as long as possible within the system, whether by rethinking resource-intensive products and processes, maximizing the use of materials, extending the life of products, and/or recycling of waste materials. This is a structural shift from the current linear economy, where materials are taken, converted via a manufacturing process, used, and then disposed. Underlying to the concept of a circular economy are the 9R strategies,⁸ which provide a holistic view to improving circularity at each stage of a product’s lifecycle.

For more information, please see the Circular Economy Theme Insight written by Rachel A. Meidl:

<https://www.msci.com/documents/1296102/28401354/ThematicIndex-CircularEconomy-cbr-en.pdf>

⁸ Circular Economy: Measuring Innovation in the Product Chain, Policy Report by PBLK Netherlands Environmental Assessment Agency, (Potting, J., Hekkert, M., Worrell, E., Hanemaaijer, A.), <https://www.pbl.nl/sites/default/files/downloads/pbl-2016-circular-economy-measuring-innovation-in-product-chains-2544.pdf>

Appendix 2: Natural Resources Stewardship-specific Exclusions Criteria

Companies are excluded based on the following MSCI ESG Controversies, MSCI Business Involvement Screening Research, and MSCI Climate Change Metrics filters:

- Human Rights Controversies
 - All companies that are involved in human rights-related controversies assessed as Red and Orange (Score of 1 and below).
- Palm Oil
 - All companies with any tie to Palm Oil – in particular, ties through production, distribution, and/or ownership categories.
- Genetically Modified Organisms (GMO)
 - All companies that genetically modify plants, such as seeds and crops, and other organisms intended for agricultural use or human consumption. This category also covers companies that have applied for USDA APHIS permits for field testing, notifications, or deregulated status of genetically modified crops.
- Biocide
 - All companies that produce biocides, covering anti-fouling products and pesticides, such as rodenticides, avicides, molluscicides, vermicides, piscicides, and insecticides.
- Tobacco
 - All companies that manufacture tobacco products, such as cigars, blunts, cigarettes, e-cigarettes, inhalers, beedis, kreteks, smokeless tobacco, snuff, snus, dissolvable and chewing tobacco. This category also covers companies that grow or process raw tobacco leaves.
- Thermal Coal Mining
 - All companies deriving any revenue (either reported or estimated) from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It does not cover revenue from metallurgical coal; coal mined for internal power generation (e.g., in the case of vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading.

- Oil & Gas Extraction and Production
 - All companies deriving any revenue (either reported or estimated) from the extraction and production of oil and gas.
- Oil & Gas Pipelines and Transportation
 - All companies deriving any revenue (either reported or estimated) from oil and gas pipelines and transportation. It covers revenues from mid-stream operations but excludes revenues from terminals and storage facilities.
- Oil & Gas Refining
 - All companies deriving any revenue (either reported or estimated) from refining oil and gas.
- SDG 14 and 15 Net Alignment
 - All companies that are assessed as Strongly Misaligned and Misaligned on their Net Alignment to SDG 14 (Life Below Water) and SDG 15 (Life on Land)

Appendix 3: Sector-Relative Management Score (SRMS) Calculation

Companies are selected based on their SRMS. The calculation steps are as follows:

1. An average management score (AMS) is calculated for companies in MSCI ACWI IMI using management scores based on the identified key issue/s, granted that they meet the following conditions:
 - Companies are assessed on any of the identified key issue/s listed in Section 3.4.
 - Companies have corresponding key issue weight/s greater than 5%.

The calculation of AMS will consider the applicable number of key issues, meaning a company with two relevant scores are divided by two, for example.

2. The SRMS is calculated for companies that are identified in Step 1 by dividing the AMS by the corresponding highest (maximum) AMS based on their GICS®⁹ Sector.

Exception clause: A GICS® Sector with a maximum AMS below 5 is excluded from scope, which in turn, results in the exclusion of all companies belonging to the excluded sector, from the calculation of SRMS.

⁹ GICS, the global industry classification standard, jointly developed by MSCI Inc. and S&P Global.

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