METHODOLOGY BOOK FOR:

- **MSCI WORLD NATURAL CAPITAL PARIS-ALIGNED EQUITY SELECT INDEX**
- **MSCI EMERGING MARKET NATURAL CAPITAL PARIS-ALIGNED EQUITY SELECT INDEX**

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Contents

1 Introduction

The MSCI World Natural Capital Paris-Aligned Equity Select Index and MSCI Emerging Market Natural Capital Paris-Aligned Equity Select Index ("MSCI Natural Capital Paris-Aligned Equity Select Indexes" or the "Indexes[1]") are designed to meet the minimum standards of the EU Paris-Aligned Benchmark (PAB) as per the EU Low Carbon Benchmark Regulation[2], reduce exposure to select indicators that are associated with adverse impact on natural resources, and increase exposure to companies that are associated with positive contribution to the environment through their products or services, or through their management of their natural capital-related risks. The Indexes are constructed from their corresponding parent indexes and applies an optimization-based approach to meet select climate change- and natural capital-related objectives, such as:

- Reduce the weighted average greenhouse gas intensity by 50% compared to the underlying investment universe.
- Reduce the weighted average GHG intensity by 7% on an annualized basis,
- Increase the weight of companies deriving revenue from products or services with positive environmental impact ("green revenue") by 100% relative to the Parent Index,
- Increase the weight of the companies belonging to the top decile based on their management of natural capital-related risks by 100% relative to the Parent Index,
- Achieve a modest tracking error compared to the Parent Index and maintain relatively low turnover.

[1] The Indexes are governed by a set of methodology and policy documents ("Methodology Set"), including the present index methodology document. The Methodology Set for the Indexes can be accessed from MSCI's webpage https://www.msci.com/index-methodology in the section 'Search Methodology by Index Name or Index Code'. The methodology set includes a document 'ESG Factors in Methodology' that contains the list of environmental, social, and governance factors considered, and how they are applied in the methodology (e.g., selection, weighting or exclusion).

[2] Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks (EU Low Carbon Benchmarks Delegated Acts): https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R1818&rid=1

2 Constructing the Indexes

2.1 APPLICABLE UNIVERSE

The Applicable Universe of the Indexes includes all the constituents of their respective MSCI Parent Index ("the Parent Index") as shown in the table below:

Table 1: Indexes and their corresponding Parent Indexes

No.	Index Name	Parent Index
1.	MSCI World Natural Capital Paris Aligned Equity Select Index	MSCI World Index
2.	MSCI Emerging Market Natural Capital Paris Aligned Equity Select Index	MSCI Emerging Market Index

2.2 ELIGIBLE UNIVERSE

The Eligible Universe comprises of all securities from the Applicable Universe that meet each of the below eligibility criteria[3]:

2.2.1. ESG CONTROVERSIES SCORE ELIGIBILITY CRITERIA

The Indexes use MSCI ESG Controversies to identify companies that are involved in very serious environmental, social, or governance controversies related to their operations and/or products and services. Securities are excluded based on the following criteria:

1. **ESG Controversies**: Securities with environmental, social or governance controversies that are assessed as "Red Flags" (score of 0)
2. **Environment Controversies**: Securities with environmental controversies that are assessed as "Red" and "Orange" Flags (score 1 or below)
3. **Human Rights Controversies**: Securities with human rights-related controversies that are assessed as "Red Flags" (score of 0).
4. **Labor Rights Controversies**: Securities with labor rights-related controversies that are assessed as "Red Flags" (score of 0).
5. **Governance Controversies**: Securities with governance-related controversies that are assessed as "Red Flags" (score of 0).

A Score of Zero is a 'red flag' controversy, defined as an ongoing, Very Severe ESG controversy implicating a company directly through its actions, products, or operations.

[3] Where ESG data is applied, please refer to Section 4 for further information regarding the ESG and climate data used in the Indexes that MSCI Limited sources from MSCI ESG Research LLC, a separate subsidiary of MSCI Inc. MSCI ESG Research is solely responsible for the creation, determination and management of such data. MSCI Limited is the benchmark administrator for the MSCI indexes.

Missing Controversy Score[4] – Companies not assessed by MSCI ESG Research's MSCI ESG Controversy Scores are excluded from the Eligible Universe.

2.2.2. SELECT CLIMATE CHANGE- AND NATURAL CAPITAL-RELATED CRITERIA

Companies that are involved in specific business activities or lag peers in managing risks associated with negative contribution to climate change, natural resource scarcity, and pollution considerations are ineligible for inclusion in the Indexes. The Indexes use MSCI ESG BISR, MSCI ESG Ratings, MSCI Climate Change Metrics, and MSCI Impact Solutions' SDG Alignment to identify companies that are involved in the following business activities[5]:

1. Thermal Coal Mining
2. Oil and Gas Value Chain
3. Unconventional Oil & Gas (including Arctic Oil) Extraction
4. Fossil Fuel-based Power Generation
5. Palm Oil
6. SDG 14 and 15 Net Alignment
7. Water Stress
8. Raw Material Sourcing

2.2.3. CONTROVERSIAL BUSINESS INVOLVEMENT EXCLUSIONS CRITERIA

Companies that are involved in specific businesses, which are associated with negative environmental and/or social impact are ineligible for inclusion in the Index. The Index uses MSCI ESG BISR to identify companies that are involved in the following business activities[6]:

1. Controversial Weapons
2. Nuclear Weapons
3. Aggregate Weapons
4. Civilian Firearms
5. Tobacco
6. For Profit Prisons

[4] The exclusion of missing MSCI ESG Controversy Score also means the exclusion of missing scores for the controversy sub-pillars, specifically the Environment, Human Rights, Labor Rights and Governance sub-pillars.

[5] Please refer to Appendix I for more details on these criteria.

[6] Please refer to Appendix II for more details on these criteria.

2.2.4. ADDITIONAL GOVERNANCE CRITERIA FOR MSCI EMERGING MARKET NATURAL CAPITAL PARIS-ALIGNED EQUITY SELECT INDEX

Companies that meet the below screens are excluded from the MSCI Emerging Market Natural Capital Paris Aligned Equity Select Index[7]:

1. Board Composition
2. Accounting
3. Ownership Structure

2.3 SECURITY SELECTION AND WEIGHTING

Securities in the Eligible Universe are selected and weighted following an optimization-based approach as described below:

At each Semi-Annual Index Review, the Index is constructed using an optimization process that aims to achieve replicability and investability, as well as minimize ex-ante tracking error relative to the Parent Index, subject to the following constraints:

1. Climate change and natural capital-related objectives – constraints detailed in Table 2
2. Diversification objectives – constraints detailed in Table 3

The definitions of the target metrics for the optimization are detailed in Appendix III.

Table 2: Constraints imposed to meet climate change and natural capital-related objectives

No.	Climate Change and Natural Capital-Related Objectives	
1.	Minimum reduction in Greenhouse Gas (GHG) Intensity relative to EVIC (Scope 1+2+3[8]) relative to the Parent Index	50%
2.	Minimum average reduction (per annum) in GHG Intensity relative to EVIC relative to the GHG Intensity of the Index at the Base Date[9]	7%
3.	Minimum active weight in High Climate Impact Sector relative to Parent Index	0%
4.	Minimum increase in Weighted Average Green Revenue relative to the Parent Index	100%
5.	Minimum increase in Aggregate Weight of Companies belonging to the Top Decile based on their Sector Relative Management Score (SRMS) as defined in Appendix IV, using the following key issue management scores:	100%

[7] Please refer to Appendix VIII for more details on these screens.

[8] Prior to the May 2020 Semi-Annual Index Review (SAIR) of the Index, the Weighted Average Carbon Emissions Intensity relative to EVIC has been calculated based on Scope 1+2 Emissions.

[9] Prior to the May 2020 Semi-Annual Index Review (SAIR) of the Index, the average reduction in Weighted Average Carbon Emissions Intensity relative to EVIC has been calculated using Scope 1+2 Emissions since Inception.

No.	Climate Change and Natural Capital-Related Objectives	
	• Water Stress • Biodiversity & Land Use • Raw Material Sourcing[10] • Toxic Emissions & Waste • Packaging Material & Waste • Electronic Waste	

No.	Diversification Objectives	
1.	Constituent Active Weight relative to the Parent Index	+/- 2%
2.	Security Weight as a multiple of its weight in the Parent Index	20x
3.	Active Sector Weights (the Energy GICS®[11] Sector is not constrained) relative to the Parent Index	+/-5%
4.	Country Weight as a multiple of its weight in the Parent Index	3x
5.	Active Country Weights relative to the Parent Index[12]	+/-5%
6.	One Way Turnover	5%
7.	Common Factor Risk Aversion	0.0075
8.	Specific Risk Aversion	0.075

During the Semi-Annual Index Review, in the event that there is no optimal solution that satisfies all the optimization constraints, the following constraints will be relaxed, until an optimal solution is found:

- Relax the one-way index turnover constraint in steps of 1% up to 20%
- Relax the active sector weight constraint in steps of 1% up/down to +/-20%
- The one-way index turnover constraint and the active sector weight constraint are alternately relaxed until a feasible solution is achieved.

In the event that no optimal solution is found after the above constraint relaxations are exhausted, the relevant Index will not be rebalanced for that Semi-Annual Index Review.

[10] 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.

[11] GICS®, the Global Industry Classification Standard, jointly developed by MSCI Inc. and S&P Global.

[12] In case there are countries in the Parent Index which weigh less than 2.5% in the Parent Index then for such countries the active country upper bound of +5% is not applicable. When a country weighs less than 2.5% in Parent Index then the upper bound of country weight in the Index is set at three times of the country's weight in Parent Index.

2.4 DETERMINING THE OPTIMIZED INDEX

The Indexes are constructed using the Barra Open Optimizer in combination with the relevant Barra Equity Model. The optimization uses the universe of eligible securities and the specified optimization objectives and constraints to determine the constituents of and the weights of constituents in the Indexes.

Please refer to Appendix V and VI for more details.

3 Maintaining the MSCI Natural Capital Paris-Aligned Equity Select Indexes

3.1 SEMI-ANNUAL INDEX REVIEWS

The Indexes are rebalanced on a semi-annual basis, as of the close of the last business day of May and November, coinciding with the May and November Index Reviews of the MSCI Global Investable Market Indexes. The pro forma Indexes are in general announced nine business days before the effective date.

In general, MSCI uses MSCI ESG Research data (including MSCI Climate Change Metrics, MSCI ESG Controversies, MSCI ESG Ratings, MSCI Business Involvement Screening Research, and MSCI Impact Solutions) as of the end of the month preceding the Index Reviews for the rebalancing of the Indexes.

3.2 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the Indexes 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.

Additionally, if the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the Index.

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.

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 be added to the Index at the time of event implementation if the spin-off security is also added to the Parent Index. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.
Merger/Acquisition	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.

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.

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 book under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

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

4 MSCI ESG Research

The Indexes are products of MSCI Inc. that utilize information such as company ratings and research produced and provided by MSCI ESG Research LLC (MSCI ESG Research), a subsidiary of MSCI Inc. In particular, the Indexes use the following MSCI ESG Research products: MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research, MSCI Climate Change Metrics and MSCI Impact Solutions. MSCI Indexes are administered by MSCI Limited.

4.1 MSCI ESG RATINGS

MSCI ESG Ratings aim to measure entities' management of environmental, social and governance risks and opportunities. MSCI ESG Ratings use a weighted average key issue calculation that is normalized by industry to arrive at an industry-adjusted ESG score (0-10), which is then translated to a seven-point scale from 'AAA' to 'CCC', indicating how an entity manages relevant key issues relative to industry peers.

The MSCI ESG Ratings methodology can be found at: https://www.msci.com/esg-and-climate-methodologies.

4.2 MSCI ESG CONTROVERSIES

MSCI ESG Controversies provide assessments of controversies concerning the potential 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.

The MSCI ESG Controversies methodology can be found at: https://www.msci.com/esg-and-climate-methodologies

4.3 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.

4.4 MSCI CLIMATE CHANGE METRICS

MSCI Climate Change Metrics provide climate data & tools to support institutional investors seeking to integrate climate risk & opportunities into their investment strategy and processes. This includes investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, alignment 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.

4.5 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 4.4 of the MSCI ACWI Sustainable Impact Index Methodology available at https://www.msci.com/index-methodology.

4.6 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.

Appendix I: Select Climate Change- and Natural Capital-Related Criteria

Companies whose activities meet the following business activities- and key issue-based criteria, as evaluated by MSCI ESG Research, are excluded from the Index:

1. **Thermal Coal Mining**
   - All companies deriving 1% or more 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 screen out 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

2. **Oil and Gas Value Chain**
   - All companies deriving 10% or more revenue (either reported or estimated) from the following select oil and gas related activities:
     - *Oil and Gas Extraction and Production:* Revenue from the extraction and production of conventional and unconventional oil and gas
     - *Oil and Gas Refining:* Revenue from the refining of oil and gas
     - *Oil and Gas Distribution/Retail:* Revenue from the distribution and retailing of oil and gas and related products. It covers revenues from crude and petroleum products storage facilities and terminals, bulk stations, gasoline and fuel oil retail stations as well as liquefied petroleum gas stations and natural gas distribution
     - *Oil and Gas Pipelines and Transportation:* Revenue from oil and gas pipelines and transportation. It covers revenues from mid-stream operations but does not cover revenues from terminals and storage facilities
     - *Oil and Gas Equipment and Services*: Revenue from equipment and services used for the exploration and production of oil and natural gas. It covers revenues from oil and gas exploration services, related equipment manufacturing, seismic surveys, engineering services and heavy construction related to oil and gas exploration activities.

3. **Unconventional Oil & Gas (including Arctic Oil) Extraction**
   - All companies that meet the below two-step conditional exclusions rule:
     - **Step 1:** Identify all companies deriving 5% or more revenue from oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane, or 1% or more revenue from arctic oil production
     - **Step 2:** Exclude all companies flagged in Step 1 and either have a Low Carbon Transition (LCT) Management Score of 4 or below, or have a score belong to the bottom half of the Low Carbon Transition Management Score Quartile (defined as scores 3 or 4)

4. **Fossil Fuel-based Power Generation**

    - All companies deriving 50% or more aggregate revenue from thermal coal-, oil- (liquid fuel), and/or natural gas-based power generation
    - All companies deriving 30% or more revenue from thermal coal-based power generation
    - All companies that meet the below two-step conditional exclusions rule:
        - **Step 1:** Identify all companies deriving 5% or more revenue from thermal coal-based power generation
        - **Step 2:** Exclude all companies flagged in Step 1 and either have a Low Carbon Transition (LCT) Management Score of 4 or below, or have a score belong to the bottom half of the Low Carbon Transition Management Score Quartile (defined as scores 3 or 4)

5. **Palm Oil**

    - All companies that meet the below two-step conditional exclusions rule:
        - **Step 1:** Identify all companies deriving 5% or more revenue from palm oil production of, or 5% or more revenue from palm oil distribution
        - **Step 2:** Exclude all companies flagged in Step 1 and have less than 50% of their palm holdings / estates certified by the Roundtable on Sustainable Palm Oil

6. **SDG 14 and 15 Net Alignment**

    - All companies that are assessed as Strongly Misaligned on their Net Alignment to SDG 14 (Life Below Water) or to SDG 15 (Life on Land)
    - All companies that meet the below two-step conditional exclusions rule:
        - **Step 1:** Identify all companies that are assessed as Misaligned on their Net Alignment to SDG 14 or SDG 15
        - **Step 2:** Exclude all companies flagged in Step 1 and deriving less than 20% green revenue

7. **Water Stress Score Quartile**

    - All companies assessed on the Water Stress Key Issue, with more than 5% weight assigned, and have a score belonging to the bottom Water Stress Score Quartile (defined as score of 4)

      Exception clause: This rule does not apply to the Water Utilities GICS Sub-industry (GICS Sub-industry code 55104010)

8. **Raw Material Sourcing Score Quartile**

    - All companies assessed on the Raw Material Sourcing Key Issue, with more than 5% weight assigned, and have a score belonging to the bottom Raw Material Sourcing Quartile (defined as score of 4)

Appendix II: Controversial Business Involvement Exclusions Criteria

Companies whose activities meet the following business activities-based criteria, as evaluated by MSCI ESG Research, are excluded from the Index:

1. **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

2. **Nuclear Weapons**
    - All companies that manufacture nuclear weapons, including nuclear warheads, intercontinental ballistic missiles, and ballistic missile submarines, which are capable of the delivery of nuclear warheads
    - All companies that manufacture key nuclear weapons components

3. **Aggregate Weapons**
    - All companies deriving 5% or more aggregate revenue from weapons systems, components, and support systems and services

4. **Civilian Firearms**
    - All companies deriving 5% or more aggregate revenue from the production and distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use

5. **Tobacco**
    - All companies that manufacture tobacco products which include cigars, blunts, cigarettes, e-cigarettes, inhalers, kreteks, smokeless tobacco, snuff, snus, dissolvable and chewing tobacco. This also includes companies that grow or process raw tobacco leaves.
    - All companies deriving 5% or more revenue from the distribution of tobacco products
    - All companies deriving 5% or more revenue from retail sales of tobacco products
    - All companies deriving 5% or more revenue from the supply of products essential to the tobacco industry

6. **For Profit Prisons**
    - All companies deriving 5% or more revenue from involvement in the operation of “For Profit Prisons” or the provision of integral services to these types of facilities. These facilities may be alternatively known as private prisons

Appendix III: Calculation of Target Metrics

Calculation of GHG Intensity relative to EVIC

For Parent Index constituents where Scope 1+2+3 Emissions Intensity is not available, the average Scope 1+2+3 Emissions Intensity relative to EVIC of all the constituents of the MSCI ACWI in the same GICS Industry Group in which the constituent belongs to is used.

Security Level GHG Intensity relative to EVIC =

$$\frac{Scope\ 1+2+3\ Carbon\ Emissions * \ (1+EVIAF)}{Enterprise\ Value + Cash(in\ M\$)}$$

Enterprise Value Inflation Adjustment Factor (EVIAF) =

$$EVIAF = \left(\frac{Average(Enterprise\ Value + Cash)}{Previous\ (Average(Enterprise\ Value + Cash))}\right) - 1$$

Weighted Average GHG Intensity relative to EVIC of the Parent Index =

$$\sum(Weight\ in\ Parent\ Index * \ Security\ Level\ GHG\ Intensity\ relative\ to\ EVIC)$$

Weighted Average GHG Intensity relative to EVIC of the Optimized Index =

$$\sum(Index\ Weight * \ Security\ Level\ GHG\ Intensity\ relative\ to\ EVIC)$$

Calculation of Average Decarbonization

On average, the Index follows a 7% decarbonization trajectory since the Base Date. The Weighted Average GHG Intensity relative to EVIC at the Base Date (W_1) is used to compute the target Weighted Average GHG Intensity relative to EVIC at any given Semi-Annual Index Review (W_t) as per the below formula:

$$W_t = W_1 * \ 0.93^{\frac{(t-1)}{2}}$$

Where '*t*' is the number of Semi-Annual Index Reviews since the Base Date.

Thus, for the 3rd Semi-Annual Index Review since the Base Date (t=3), the target Weighted Average GHG Intensity relative to EVIC will be W_1*0.93.

Climate Impact Sectors

NACE[13] is the European Union's classification of economic activities. As per the EU Low Carbon Benchmark Delegated Acts, stocks in the NACE Section codes A, B, C, D, E, F, G, H, L are classified as

[13] For further details regarding NACE, please refer to https://ec.europa.eu/eurostat/statistics-explained/index.php?title=NACE_background

"High Climate Impact" sectors and other stocks are classified 'Low Climate Impact' sectors. The GICS Sub-Industry code for each security is mapped to the corresponding "Climate Impact Sector" using a mapping. This mapping is constructed in the following steps:

1. MSCI has published a mapping[14] between the NACE classes and GICS Sub-Industry.
2. For each GICS Sub-Industry, the number of NACE classes which fall under the High Climate Impact Sector (say the number of classes is N_H) and Low Climate Impact Sector (say the number of classes is N_L) is identified
3. If all the NACE classes for a given GICS Sub-Industry are identified in the High Climate Impact Sector ($N_L = 0$), then the GICS Sub-Industry is mapped to the High Climate Impact Sector. Conversely, if all the NACE classes for a given GICS Sub-Industry are identified in the Low Climate Impact Sector ($N_H = 0$) then the GICS Sub-Industry is mapped to the Low Climate Impact Sector
4. In case a GICS Sub-Industry is mapped to some NACE classes in the High Climate Impact Sector and the others in the Low Climate Impact Sector, the GICS Industry is mapped to the Climate Impact Sector in the following manner:
   a. **$N_H >= N_L$**: If the number of NACE classes in the High Climate Impact Sector is at least equivalent to the number of NACE classes in the Low Climate Impact Sector, the GICS Sub-Industry is mapped to the High Climate Impact Sector
   b. **$N_H < N_L$**: If the number of NACE classes in the High Climate Impact Sector is less than the number of NACE classes in the Low Climate Impact Sector, the GICS Sub-Industry is mapped to the Low Climate Impact Sector
5. Using the GICS Sub-Industry to Climate Impact Sector mapping created in Step 4, and the security-level GICS Sub-Industry, each security in the Parent Index is classified in either High Climate Impact Sector or Low Climate Impact Sector.

Green Revenue

For each constituent in the Parent Index, the Green Revenue% is calculated as the cumulative revenue (%) from the six Clean Tech themes which are as follows:

- Alternative Energy – products and services that support the transmission, distribution and generation of renewable energy and alternative fuels to reduce carbon and pollutant emissions in supporting affordable and clean energy to combat climate change
- Energy Efficiency – products, and services that support the maximization of productivity in labor, transportation, power and domestic applications with minimal energy consumption to ensure universal access to affordable, reliable and modern energy services
- Sustainable Water – products, services, infrastructure projects and technologies that resolve water scarcity and water quality issues, through minimizing and monitoring current water demand, improving the quality and availability of water supply to improve resource management in both domestic and industrial use

[14] This mapping is available in the Handbook of Climate Transition Benchmarks, Paris-Aligned Benchmark and Benchmarks' ESG Disclosures

- Green Building – design, construction, redevelopment, retrofitting, or acquisition of green-certified properties to promote mechanisms for raising capacity for effective climate change mitigation and adaptation
- Pollution Prevention – products, services, infrastructure projects and technologies that reduces volume of waste materials through recycling, minimizes introduction of toxic substances, and offers remediation of existing contaminants such as heavy metals and organic pollutants in various environmental media to significantly address pollution in all levels and its negative effects
- Sustainable Agriculture - revenues from forest and agricultural products that meet environmental and organic certification requirements to address significantly biodiversity loss, pollution, land disturbance, and water overuse

Weighted Average Green Revenue% of the Index =

$$\sum(Index\ Weight * \ Green\ Revenue\%)$$

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

The calculation steps for the SRMS are as follows:

1. An average management score (AMS) is calculated for companies in the Parent Index using management scores based on the identified key issues, granted that they meet the following conditions:

    - Companies are assessed on any of the identified key issues listed in Table 2 of Section 3.4.
    - Companies have corresponding key issue weights 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 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

The Indexes also apply the following additional filter to companies with an SRMS:

- Companies belonging to the bottom 25% on any of the six key issue management scores are excluded. The exclusion is applied on each key issue, excluding the bottom 25% score for key issue 1, bottom 25% score for key issue 2, and so forth. The bottom 25% per key issue management score is calculated from companies in the Parent Indexes with more than 5% weight assigned to the respective key issue.

Appendix V: Barra Equity Model Used in The Optimization

The Indexes currently uses an optimization setup using the MSCI Barra Global Equity Model for Long-Term Investors (GEMLTL).

Appendix VI: New release of Barra® Equity Model or Barra® Optimizer

A major new release of the relevant Barra Equity Model or Barra Optimizer may replace the former version within a suitable timeframe.

Appendix VII: MSCI World Natural Capital Paris-Aligned Equity Custom Index

The MSCI World Natural Capital Paris-Aligned Equity Custom Index (the "Custom Index") is constructed with an aim to meet the minimum standards of the EU Paris-Aligned Benchmark (PAB) as per the EU Low Carbon Benchmark Regulation[15], reduce exposure to select indicators that are associated with adverse impact on natural resources, and increase exposure to companies that are associated with positive contribution to the environment through their products or services, or through their management of their natural capital-related risks. The Custom Index also applies a few additional values-based exclusions criteria. The Custom Index is constructed from the Parent Index and applies an optimization-based approach to meet select climate change- and natural capital-related objectives.

The Custom Index follows the methodology outlined in Section 3 and the maintenance rules outlined in Section 4, but applies the following variations to Section 3.2:

- An additional criterion on Fossil Fuel-based Extraction and Distribution in lieu of the Thermal Coal Mining and Oil and Gas Value Chain criteria referenced in Section 2.2.2 and Appendix I
  - All companies deriving 5% or more aggregate revenue (either reported or estimated) from the following:
    - Thermal Coal Mining: Revenue 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 and Gas Extraction and Production: Revenue from the extraction and production of conventional and unconventional oil and gas
    - Oil and Gas Distribution/Retail: Revenue from the distribution and retailing of oil and gas and related products. It covers revenues from crude and petroleum products storage facilities and terminals, bulk stations, gasoline and fuel oil retail stations as well as liquefied petroleum gas stations and natural gas distribution
- An additional sub-criterion for the Tobacco screen (see Appendix II, criteria no. 5)
  - All companies deriving 5% or more aggregate revenue from the production, distribution, retail, supply and licensing of tobacco-related products
- Additional screens:
  - **Adult Entertainment**: All companies deriving 5% or more aggregate revenue from the production, distribution and retail of adult entertainment materials

[15] Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks (EU Low Carbon Benchmarks Delegated Acts): https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R1818&rid=1

- **Alcohol**: All companies deriving 5% or more aggregate revenue from the production, distribution, retail, supply and licensing of alcohol-related products
- **Gambling**: All companies deriving 5% or more aggregate revenue from gambling-related business activities

Appendix VIII: MSCI Emerging Market Natural Capital Paris-Aligned Equity Select Index

The MSCI Emerging Market Natural Capital Paris-Aligned Equity Select Index follows the methodology outlined in Section 2 and the maintenance rules outlined in Section 3, but applies the following variations to Section 2.2:

Additional Governance Screens:

1. **Board Composition**
   - Companies that meet all the following conditions are excluded:
     - The percentage of voting rights held by the largest shareholder is greater than or equal to 30%.
     - The percentage of board members that are considered independent of management is less than 50%. For companies with a two-tier board, the calculation is based on members of the Supervisory Board only.
     - Audit committee does not exist or the percentage of audit committee members that meet the designated criteria for independence is less than 50% or not available.
     - Pay committee does not exist or the percentage of pay committee members that meet the designated criteria for independence is less than 50% or not available.
2. **Accounting**
   - Companies with auditor's reports where an independent auditor has not assessed as having an unqualified opinion.
3. **Ownership Structure**
   - Companies that are state owned entities, with either 85% or more of the voting rights are held by the largest shareholder or have a MSCI Human Rights Controversy Score of less than 5, and belong to countries that meet all of the following four criteria, are excluded from the index.
     - Countries identified by Freedom House as having weak civil liberties in its Freedom in the World report.
     - Countries identified by Freedom House as having weak political rights in its Freedom in the World report.
     - Countries identified by Freedom House as Not Free in its Freedom of the Press Index.
     - Countries on the U.S. Commission on International Religious Freedom's list of Tier 1 Countries of Particular Concern.

Changes to this Document

The following sections have been modified as of September 2023:

Section 2 and Appendix VIII

- Methodology book was updated to add the Emerging Market Natural Capital Paris Aligned Equity Select Index.

Section 3.1

- Methodology book was updated to reflect the transition of the MSCI Global Investable Market Indexes (GIMI) to Quarterly Comprehensive Index Reviews.
- All references to “Semi-Annual Index Reviews” and “Quarterly Index Reviews” of the MSCI GIMI were replaced with “Index Reviews”.

Section 4

- ESG Research Section moved to the end (changed from Section 2 to Section 4)

Appendix I

- Clarified the Oil and Gas Value Chain criterion applied in the Indexes

Appendix VII

- Clarified the Fossil Fuel-based Extraction and Distribution criterion applied in the Custom Index.

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