

# ESG Report – Apple Inc.

4 April 2025





# ESG Scoring – Methodology

- ❑ This report takes a deep dive into various resources<sup>1,2,3,4,5</sup> to summarize Apple Inc.'s **risk exposures** and **risk management capabilities** around the **ESG building blocks** –
  - ❖ *Risk Exposures*: Potential ESG risk indicators (including controversies) influencing Apple Inc.'s economic value
  - ❖ *Risk Management Capabilities*: Measures outlining Apple Inc.'s commitments and actions (e.g., strategies, policies, governance frameworks etc.) to mitigate the underlying ESG risk exposure
  - ❖ *ESG Building Blocks*<sup>6</sup>: Overarching ESG themes to segment Apple Inc.'s risk exposures and risk management capabilities
- ❑ We score each of these risk indicators and measures against their **impact and likelihood** (on a scale of 1 – 5) under each of the 3 pillars –
  - ❖ *Impact*: 1 – Insignificant, 2 – Minor, 3 – Significant, 4 – Major, 5 – Severe
  - ❖ *Likelihood*: 1 – Rare, 2 – Unlikely, 3 – Moderate, 4 – Likely, 5 – Almost Certain
- ❑ The individual deduction scores are then **aggregated**, **rebased** (on a scale of 1 – 10) and **netted** against the base score of 10 to arrive at the pillar scores.
- ❑ The subsequent slides show the segmentation of these building blocks, scoring justifications and computations underpinning each pillar.

<sup>1</sup> Environmental Progress Report 2024: [https://www.apple.com/environment/pdf/Apple\\_Environmental\\_Progress\\_Report\\_2024.pdf](https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2024.pdf)

<sup>2</sup> CDP Corporate Questionnaire 2024: [https://www.apple.com/environment/pdf/Apple\\_CDP-Climate-Change-Questionnaire\\_2024.pdf](https://www.apple.com/environment/pdf/Apple_CDP-Climate-Change-Questionnaire_2024.pdf)

<sup>3</sup> Governance Documents: <https://investor.apple.com/leadership-and-governance/default.aspx>

<sup>4</sup> MSCI ESG Manager: <https://one.msci.com/esgManager>

<sup>5</sup> Other sources were also relied upon during our research on Apple Inc. These sources are indicated as part of the footnotes in the relevant slides.

<sup>6</sup> **ESG Building Blocks**: Can either be constructed internally with AIAIM's ESG risks and measures or using off-the-shelf vendor solutions (e.g., MSCI ESG Manager, Morningstar Sustainalytics etc.).

# ESG Scoring – Environmental

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Climate Change	Total Carbon Emissions (Scope 1, 2 and 3) per \$M EVIC <sup>1</sup> – Corporate	Corporate emissions has increased by 96% in 2022 (vs. 2021) and 32% in 2023 (vs. 2022). This casts a doubt on the company’s ability to limit its corporate emissions in future, which explains its higher score attribution.	4	4	16
	Total Carbon Emissions (Scope 1, 2 and 3) per \$M EVIC – Supply Chain	Supply chain emissions has decreased by 11% in 2022 (vs. 2021) and 30% in 2023 (vs. 2022). The downward trend justifies the moderate score attribution.	3	3	9
	Financing Environmental Impact	From its Environmental Progress Report 2024, the company has used carbon credits aggressively to achieve carbon neutrality. This gives a false sense of security about fighting climate change (might even be construed as greenwashing in the worst-case scenario). Furthermore, there are recent controversies on its carbon offset purchases, specifically in its Chyulu Hills REDD+ and Guinan Afforestation Projects <sup>2</sup> .	4	4	16
	Opportunities to curb supply chain emissions through clean technologies	The company has implemented initiatives, e.g., Supplier Clean Energy Program <sup>3</sup> and deploying GHG abatement manufacturing equipment <sup>4</sup> , to alleviate some of the climate impact on its supply chain. We believe such decarbonization efforts should be stepped up to achieve the desired impact.	2	3	6

<sup>1</sup> **Total Carbon Emissions per \$M EVIC:** This metric is adopted (vs. total emissions) because it provides an objective assessment of how Apple Inc.’s total debt and capital is deployed to finance its carbon emissions.

<sup>2</sup> **Carbon Offset Controversies:** <https://www.straitstimes.com/world/united-states/apple-accused-of-greenwashing-in-us-lawsuit>

<sup>3</sup> **Supplier Clean Energy Program:** [Initiative](#) to increase energy efficiency at supplier facilities and help suppliers transition to cleaner and renewable energy.

<sup>4</sup> **GHG Abatement Manufacturing Equipment:** <https://www.apple.com/in/newsroom/2024/04/apple-cuts-greenhouse-emissions-in-half>

# ESG Scoring – Environmental

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Biodiversity and Land Use	Water Stress – Supply Chain	The company’s major semiconductor supplier, Taiwan Semiconductor Manufacturing (TSMC), has its main operations in Taiwan - A region that is grappling with water scarcity woes brought about by climate change and high population density <sup>1</sup> . With high water demand needed to sustain the chip operations, this would inevitably cause undue environmental stress and damage on the region.	4	5	20
	Raw Material Sourcing	Recent controversies have surfaced about the company’s alleged use of raw minerals from conflict areas in DR Congo that saw forced child labor and environmental degradation <sup>2</sup> . However, we see this as a political ploy by the Congolese government in its ongoing war efforts with the armed militias controlling those mines, which explains its low score attribution.	3	1	3
	Biodiversity, Land Use and Water Conservation Projects / Collaborations	<p>The company has created a Restore Fund<sup>3</sup> to invest in high quality, nature-based carbon projects. Recently, the Fund is invested into regenerative agricultural projects<sup>4</sup> aimed at ensuring water security, efficiency, soil quality and biodiversity.</p> <p>Separately, the company has completed the installation of reusable air filters at its data centers worldwide, thus eliminating the need to send dirty filters to landfills each year.</p>	3	4	12

<sup>1</sup> Semiconductor Supply Chain: <https://www.weforum.org/stories/2024/12/how-climate-change-and-water-stress-is-risking-the-semiconductor-supply-chain>

<sup>2</sup> Use of Conflict Minerals: <https://www.bbc.com/news/articles/cn8g540wz3jo>

<sup>3</sup> Restore Fund: <https://www.apple.com/newsroom/2024/03/apples-restore-fund-cultivates-new-roots-in-the-atlantic-forest>

<sup>4</sup> Investing in Nature: <https://www.apple.com/in/newsroom/2024/04/apple-cuts-greenhouse-emissions-in-half>

# ESG Scoring – Environmental

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Pollution and Waste	Electronic Waste	<p>There are ongoing concerns<sup>1</sup> with the company’s annual roll-out of new iPhone models and reports alleging limited lifespan and repairability of its existing products.</p> <p>These practices would induce unintended / unnecessary consumer buying behaviors that would give rise to high electronic wastes<sup>2</sup> (and land demand for landfill purposes).</p>	5	4	20
	Packaging Material and Waste	Substantial single-use packaging <sup>1</sup> is still used for the company’s products today.	5	5	25
	Hazardous Waste	From its Environmental Progress Report 2024, the company conducts regular audits on its facilities on the disposal and management of hazardous wastes (7.3M pounds in 2023) in accordance with US safety and environmental standards.	3	5	15
	Waste Reduction Projects	<p>To reduce waste, the company has employed the use of recycled materials<sup>3</sup> in some products, e.g., MacBook Air, batteries, key thermal applications in iPhones, MacBooks etc. Recycled materials are either sourced externally or salvaged from used Apple products.</p> <p>For packaging, the company has also made strides in reducing plastic consumption (3% in 2023) and exploring more sustainable fiber-based alternative to protective foams for its packaging<sup>3</sup>.</p> <p>We feel that Apple Inc. should step up their game as these measures are not sufficient in addressing its existing waste issues.</p>	2	4	8

<sup>1</sup> Planned Obsolescence and Repairability: <https://karmawallet.io/blog/2023/06/apples-sustainability-the-good-the-bad>
<sup>2</sup> Apple Inc.’s Waste Generation Situation: <https://www.globaldata.com/data-insights/technology-media-and-telecom/apple-waste-generation-2095979>
<sup>3</sup> Investing in Nature: <https://www.apple.com/in/newsroom/2024/04/apple-cuts-greenhouse-emissions-in-half>



# ESG Scoring – Environmental

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Other Environmental Opportunities	Investments in Green Building	The company has made some progress in redesigning / developing corporate green building spaces <sup>1</sup> to promote greater energy and water efficiency.	2	4	8
	Investments in Renewable Energy	From its Environmental Progress Report 2024, the company has transitioned to renewable electricity to power its global facilities. However, the situation with its supply chain leaves much to be desired.	1	4	4

Rebased Environmental Deduction Score

$$= ( \text{Sum (Individual Risk Score)} - \text{Sum (Individual Measure Score)} ) / (25 * \text{Number of Risk Indicators and Measures}) * 10$$

$$= (16 + 9 + 16 - 6 + 20 + 3 - 12 + 20 + 25 + 15 - 8 - 8 - 4) / (25 * 13) * 10$$

$$= 2.6$$

Environmental Pillar Score

$$= \text{Maximum ( 1, Minimum (10, 10 - Rebased Environmental Deduction Score) )}$$

$$= \text{Maximum ( 1, Minimum (10, 10 - 2.6) )}$$

$$= \text{Maximum ( 1, Minimum (10, 7.4) )}$$

$$= 7.4$$

<sup>1</sup> Investing in Nature: <https://www.apple.com/in/newsroom/2024/04/apple-cuts-greenhouse-emissions-in-half>

# ESG Scoring – Social

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Human Capital	Health and Safety – Supply Chain	There has been little action / transparency on the working conditions in Apple Inc.'s supply chain. For example, there is a lack of disclosures on the workplace injuries / illnesses and safety trainings conducted at supplier factories in China <sup>1</sup> .	4	5	20
	Human Rights – Corporate	The company has been embroiled in a series of charges on questionable labor practices <sup>2,3</sup> , e.g., racial discrimination, unlawful terminations etc.  Also, there have been recent reports of workplace malpractices <sup>4</sup> and employee privacy / free speech violations <sup>5</sup> . All these evidence highly suggest the lack of HR enforcement of the company's internal human right policies and commitments.	4	4	16
	Human Rights – Supply Chain	Many of the company's suppliers are based in China, which have a reputation for poor labor regulations and systemic human right abuses <sup>6</sup> . However, no concrete plans has been implemented to protect worker rights in its supply chain.	5	5	25
	Employee Ethics	Recent scandal has surfaced that 185 employees were allegedly involved in a scheme to defraud the company by exploiting its CSR program to line their pockets amounting to USD 152K <sup>7</sup> . This suggest structural deficiencies in its hiring practices and trainings on ethical boundaries.	4	3	12

<sup>1</sup> Campaign for Employee Safety in Apple Inc.: <https://greenamerica.org/apple-response-campaign>

<sup>2</sup> Hiring Discrimination (Corporate): <https://www.theverge.com/2023/11/9/23954640/apple-hiring-discrimination-doj-perm>

<sup>3</sup> Unlawful Labor Practices (Corporate): <https://www.straitstimes.com/world/united-states/apple-accused-of-restricting-workers-slack-social-media-use>

<sup>4</sup> Workplace Bullying and Harassment (Corporate): <https://www.abc.net.au/news/2025-03-13/apple-accused-discrimination-jewellery-supporting-gaza/105042996>

<sup>5</sup> Unethical Labor Practices (Corporate): <https://www.techinasia.com/news/apple-faces-lawsuit-claiming-privacy-free-speech-violations>

<sup>6</sup> Human Right Violations (Supply Chain): <https://www.somo.nl/failures-in-due-diligence-and-workers-rights-protection>

<sup>7</sup> Employee fraud in Apple Inc.: <https://yourstory.com/2025/01/apples-core-scandal-employees-philanthropy-personal-profit>

# ESG Scoring – Social

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Stakeholder Governance	Community Relations	The company has been accused of restricting employees' ability to use social media and team communication platforms to advocate for better workplace conditions <sup>1</sup> etc. This episode leaves a bad taste in terms of managing stakeholders in an adequate and professional manner.	4	4	16
	Anti-Corruption and Anti-Money Laundering	The company has an anti-corruption and anti-money laundering policy. Likelihood of bad actors is rare, with 1 case reported in the last 5 years <sup>2</sup> .	5	1	5
	Consumer Financial Protection	In their joint credit card business with Goldman Sachs, Apple Inc. failed to send 10K+ consumer disputes to Goldman Sachs, which resulted in long waits for customer refunds and damaged credit reports <sup>3</sup> . This internal lapse questions Apple Inc.'s ability to safeguard consumers' financial interest.	4	4	16
	Privacy and Data Security	In addition to employee privacy concerns cited earlier, there are concerns about how iCloud data is stored in certain countries with government surveillance risks.	4	3	12
	Product Safety and Quality	There have been reports of the limited lifespan in iPhone batteries due to defects in its older iPhone models <sup>4</sup> . While the company has denied these defects, it has agreed to a \$113M settlement with regulators, which raises questions how such blatant design flaws could escape internal quality control processes and ensure product quality in the long run.	3	4	12

<sup>1</sup> Community Relations: <https://www.straitstimes.com/world/united-states/apple-accused-of-restricting-workers-slack-social-media-use>

<sup>2</sup> Employee Corruption: <https://forensicstrategic.com/what-one-bad-apple-employee-can-teach-us-about-avoiding-corruption-and-collusion>

<sup>3</sup> Consumer Financial Protection: <https://www.channelnewsasia.com/business/us-watchdog-orders-goldman-sachs-apple-pay-89-million-over-consumer-failures-4697866>

<sup>4</sup> Batterygate Scandal: <https://www.occrp.org/en/news/apple-to-pay-113-million-settlement-over-batterygate-scandal>



# ESG Scoring – Social

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Social Opportunities	Social Impact and Community Support	<p>The company has a Matching Grants initiative<sup>1</sup> that encourages its employees to contribute to societal well-being by matching their donations dollar-for-dollar to eligible non-profit organizations.</p> <p>Also, the company collaborates with organizations such as (RED) to fund HIV / AIDS research<sup>2</sup>.</p>	3	4	12

Rebased Social Deduction Score

$$= ( \text{Sum (Individual Risk Score)} - \text{Sum (Individual Measure Score)} ) / (25 * \text{Number of Risk Indicators and Measures}) * 10$$

$$= (20 + 16 + 25 + 12 + 16 + 5 + 16 + 12 + 12 - 12) / (25 * 10) * 10$$

$$= 4.9$$

Social Pillar Score

$$= \text{Maximum ( 1, Minimum (10, 10 - Rebased Social Deduction Score) )}$$

$$= \text{Maximum ( 1, Minimum (10, 10 - 4.9) )}$$

$$= \text{Maximum ( 1, Minimum (10, 5.1) )}$$

$$= 5.1$$

<sup>1</sup> Matching Grants Initiative: <https://yourstory.com/2025/01/apples-core-scandal-employees-philanthropy-personal-profit>  
<sup>2</sup> (RED): <https://www.apple.com/sg/product-red>

# ESG Scoring – Governance

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Corporate Governance		As of date, Apple Inc.’s Board has an appropriate level of independence (i.e., independent from management) and gender diversity (i.e., 4 females and 4 males) in its composition.			
	Board	According to MSCI ESG Manager, 5 directors (i.e., more than 50%) have served on the board for at least 10 years, with 2 of them hitting their 15 <sup>th</sup> year milestone. This calls into question whether such entrenched directors can still demonstrate an “independence of mind” and ensure effective governance.	4	4	16
	Pay	The People and Compensation Committee oversees executive compensations in Apple Inc. Today, there is a lack of transparency in how executive compensations are derived, which might be misaligned with shareholders’ interest.	3	4	12
	Ownership and Control	Apple Inc. only has one class of shares, which obeys the “One Share, One Vote” principle. According to MSCI ESG Manager, these shares are widely held with no identified shareholder or shareholder groups holding greater than 10% of the voting rights.	1	1	1
	Accounting	According to MSCI ESG Manager, none of the Audit and Finance Committee members have expertise in accounting or financial management. This questions the Committee’s ability to ensure the integrity and accuracy of the company’s financial reporting.	4	5	20



# ESG Scoring – Governance

Building Block	Risk Indicator / Measure	Justification	Impact [1]	Likelihood [2]	Score [1] x [2]
Corporate Behavior	Business Ethics	As of date, the company has been embroiled in a series of questionable / unethical business practices. For example, the company uses its market dominance to ban music streaming app developers from informing iOS users about alternative and cheaper music subscription services available outside of the app through its anti-steering provisions <sup>1</sup> . This comes on the heels of another antitrust case over the company's tap-and-go mobile payment service <sup>2</sup> .	4	4	16
	Tax Transparency	<p>The Board and management must step up its due diligence process to weed out such undesirable behaviors across the business.</p> <p>Recently, the company was ordered by the Court of Justice of the European Union to make good the tax obligations of 14B Euros (including interest) to the Irish government<sup>3</sup>.</p> <p>While the Irish government was responsible for keeping the tax rates artificially low at 0.005% (in the case of Apple Inc.), it begs the question whether such tax rates were applied consistently for every company operating in Ireland. While this incident is a one-off, we feel that Apple Inc. should be transparent in its reporting on tax jurisdictions where it has received significant tax breaks.</p>	2	1	2

<sup>1</sup> Abusive App Store Rules for Music Streaming Providers: [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_24\\_1161](https://ec.europa.eu/commission/presscorner/detail/en/ip_24_1161)

<sup>2</sup> Ethics and Compliance Failures: <https://ethisphere.com/major-ethics-compliance-issues-2024-2025>

<sup>3</sup> EU and the Apple Tax Case: <https://www.socialeurope.eu/ireland-the-eu-and-the-apple-tax-case>

# ESG Scoring – Governance

Rebased Governance Deduction Score

= ( Sum (Individual Risk Score) – Sum (Individual Measure Score) ) / (25 \* Number of Risk Indicators and Measures) \* 10

= (16 + 12 + 1 + 20 + 16 + 2) / (25 \* 6) \* 10

= 4.5

Governance Pillar Score

= Maximum ( 1, Minimum (10, 10 – Rebased Governance Deduction Score) )

= Maximum ( 1, Minimum (10, 10 – 4.5) )

= Maximum ( 1, Minimum (10, 5.5) )

= 5.5



# ESG Scoring – Disclaimers

- ❑ Note that the above methodology (and accompanying calculations) is purely for illustrative purposes and represent a naïve construct of how we can easily attribute Apple Inc.'s risk exposures and risk management capabilities under each ESG pillar.
- ❑ These illustrative ESG scores might differ from AIAIM's version, given the potential methodological dissimilarities in AIAIM's inherent ESG research and scoring framework, and the underlying data collection processes (e.g., data vendors, intel obtained from active engagements with investee companies etc.). Also, these illustrative ESG scores might have inherent bias and should be normalized (e.g., relative to ESG industry peer group) to remove those effects.
- ❑ Regardless the differences, the underlying ESG scores and justifications should be aligned with widely accepted principles (i.e., ensures comparisons and consistencies) and are easily understood by internal / third parties relying on those results.

# Top 3 Questions to Apple Inc.'s Chief Sustainability Officer

- ❑ In the company's CDP questionnaire response 2024, it was reported that Apple Inc. would continue its efforts to reduce emissions across the entire product value chain (...) to advance its 2030 carbon neutrality goal. What are the headwinds that you would expect when implementing emission reduction initiatives in the value chain and what are the concrete plans that would be put in place to help the value chain in this transition process?
- ❑ Can you share with us some of the upcoming initiatives that would help the company further reduce its electronic and packaging waste, and enhance the sustainability of its products? How would you measure the effectiveness of these initiatives (e.g., Is there an internal waste reduction / sustainability target that the company is working towards)?
- ❑ What specific measures is the company taking to ensure fair labor practices and preservation of basic human rights in its supply chain, especially in regions / countries where rights violations have historically been a concern? How does Apple Inc. monitor compliance and address any violations, moving forward?



# Carbon Neutrality by 2030

In its 2030 carbon neutrality goal, Apple Inc. plans to reduce its Scope 1 + 2 + 3 emissions (excluding carbon offsets) across its value chain by 75% (vs. 2015 base year).

The table on the right summarizes the Scope 1 + 2 + 3 emissions (excluding carbon offsets) that are of interest. Note the individual scope emissions are provided for reference.

Scope	Base Year Emissions <sup>1</sup> (metric tons)	SBTi Target <sup>2</sup> (metric tons)	Latest Year Emissions <sup>3</sup> (metric tons)	Apple Inc.'s 2030 Target (metric tons)
Scope 1	28,100	10,397	55,200	-
Scope 2	42,460	15,710	3,400	-
Scope 3	38,312,910	14,175,777	15,982,800	-
<b>Scope 1 + 2 + 3</b>	<b>38,383,470</b>	<b>14,201,884</b>	<b>16,041,400</b>	<b>9,595,868</b>

Comparing the latest year emissions against its base year, Apple Inc. on average<sup>4</sup> has **reduced emissions by 7.3% per year**. Assuming Apple Inc. continues with its annual 7.3% reduction pathway, we project Apple Inc. would be able to **reach its 75% reduction goal by the end of 2029**. See 2024 – 2030 projections in the table below. This would however require the company to consider **stepping up its efforts to decarbonize its supply chain emissions** (i.e., Scope 3), **using carbon offsets** etc.

Projections	2023	2024	2025	2026	2027	2028	2029	2030
Scope 1 + 2 + 3	16,041,400	14,874,237	13,707,074	12,539,911	11,372,749	10,205,586	<b>9,038,423</b>	7,871,260

<sup>1</sup> **Base Year Emissions:** These are reported GHG emissions by Apple Inc. for fiscal year 2015. Numbers are extracted from MSCI ESG Manager.  
<sup>2</sup> **SBTi Target:** These are [validated SBTi targets](#) that are aligned with 1.5-degree scenario (i.e., 63% emission reduction by 2030 from 2015 base year). Apple Inc. has set a more ambitious reduction target of 75%.  
<sup>3</sup> **Latest Year Emissions:** These are reported GHG emissions by Apple Inc. for fiscal year 2023. Numbers are extracted from MSCI ESG Manager.  
<sup>4</sup> **Emission Reduction Pathway:** We are assuming straight line basis, which is aligned with SBTi's methodology.

# Carbon Neutrality by 2050

In its 2050 carbon neutrality goal, Apple Inc. plans to reduce its Scope 1 + 2 + 3 emissions across its value chain by 90% (vs. 2015 base year). This would mean that Apple Inc. must **maintain emission level at 3,838,347 metric tons** (excluding carbon offsets).

Using the same annual 7.3% reduction pathway as before, we project Apple Inc. would be able to **reach its 90% reduction goal by the end of 2034**. See extended 2030 – 2034 projections in the table below.

Projections	2023	...	2030	2031	2032	2033	2034
Scope 1 + 2 + 3	16,041,400	...	7,871,260	6,704,097	5,536,934	4,369,772	<b>3,202,609</b>



# Carbon Neutrality - Disclaimers

- ❑ The projections illustrated earlier are idealistic outcomes. We need to recognize that **modern supply chains are often global** and involve **numerous tiers of suppliers**, which makes it hard for any organizations (including Apple Inc.) to exercise oversight over the practices that suppliers have put in place.
- ❑ In the long-run, it might make sense for Apple Inc. to
  - ❖ Review its partnerships with existing suppliers and set expectations to work with those that have their science-based targets validated by SBTi.
  - ❖ Accelerate its plans towards a Product-as-a-Service model to reduce electronic waste.
  - ❖ Scale up its investments in innovations and partner with customers to reduce emissions.