

Engagement Review

2024
engagement
projects

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Introduction

At Columbia Threadneedle, we view engagement and proxy voting as powerful levers that can help create investor value. Proactive engagement on behalf of our clients is an integral part of that.

Our approach to engagement continued to evolve, focusing on interactions that leverage our sustainability expertise alongside our fundamental analysts' knowledge, enabling more effective and impactful discussions on financially material Environmental, Social and Governance (ESG) issues. Our sustainability analysts conduct comprehensive assessments across six core themes: Climate Change, Environmental Stewardship, Human Rights, Labour Standards, Corporate Governance, and Business Conduct. The relevant ESG issues identified form our project proposals in the second phase of the annual **reo®** client consultation. The project-based research and engagement typically spans two to three years, allowing for meaningful progress tracking and outcome assessment. This report provides a summary review of the engagement projects we undertook in 2024, and the progress we observed. While some projects will continue into 2025, others concluded in 2024, allowing us to shift focus to emerging ESG challenges while embedding the learnings from those projects into our broader engagement activities.

We publish this report alongside our Engagement Outlook, which details our thematic outlook and engagement projects for 2025.



Claudia Wearmouth

Global Head of Responsible Investment



Coal phase-out 2.0

SDG goal(s):

Project duration:
2 years



Project summary:

With many electric utilities in the US and EU now having clear strategies to phase-out coal through decommissioning, in 2024 we focused our engagement to those companies seeking to retrofit or convert their coal-fired units, as well as those who are looking to sell these assets (largely companies based in Asia). We aimed to assess the technical and economic feasibility of some of the proposed technologies for conversion, for example with Carbon Capture Utilisation and Storage (CCUS) or co-firing with ammonia, seen across Asia. For those seeking conversion to biomass, we looked to engage with them on their sustainable sourcing policies. For those seeking to sell their coal assets, we sought to understand their responsible approach. Engagement on these topics aid us in assessing the credibility of these companies' transition plans, and the associated real-world emissions reductions. We continued to engage on the range

of social implications associated with a phase-out of coal. In addition, we deepened our understanding of how companies are managing physical climate risks, such as heatwaves and drought, which have exacerbated energy security concerns in many countries.

Key takeaways 2024:

- We have conducted multiple engagements with Asian utilities and miners during this project. This has focused primarily on Japanese utilities (**Electric Power Development (J-Power), Chubu Electric Power, Kansai Electric Power, Tokyo Electric Power**) and the Malaysian monopoly utility **Tenaga/TNB**. We have also engaged with Coal India, the largest government-owned coal miner globally. In Europe, we engaged with

utilities such as **RWE**, **EDP** and **EnBW** to gain further understanding of their coal phase-out progress considering ongoing uncertainty over government policy.

- Within Asia, there remains divergence in the approaches governments and companies are taking towards the phase-out of thermal coal. In Japan, we have seen a focus on restarting and expanding nuclear reactors, this has reduced thermal coal-fired power utilisation and generation. In China, increased renewables penetration has started to reduce the utilisation of coal-fired power plants. In July, the Chinese government also announced the Action Plan for Low-Carbon Transformation of Coal-fired power generation (2024-2027), which aimed to reduce coal power plant emissions by 50% by 2027 through retrofitting of coal plants. Meanwhile, in India, progress has been slower. Continued energy demand has created energy supply concerns, and the government have sought to increase domestic coal supply by relaxing permitting requirements on the opening of new thermal coal mines.
- Many of the utilities across Asia that we have spoken with are looking to decommission their older and less efficient thermal coal units, however details on the timelines remain limited. The average age of coal-fired power plants in Asia is significantly lower than in the US or EU (~15 yrs vs 40 yrs). As a result, they have explored retrofitting with alternatives, such as co-firing with ammonia. These technologies have been heavily questioned on their technical and economic feasibility, as well as their ability to reduce emissions. Therefore, we have requested disclosure of initial feasibility studies.
- We have noticed that many of these utilities have been exploring the increased co-firing of biomass into existing coal plants to reduce emissions, however none of the companies we have engaged have a public sustainable biomass sourcing policy, which we have encouraged the development of.

Conclusion:

This project has highlighted the importance of further disclosure of coal phase-out timelines for thermal coal-fired power and thermal coal mining. This also includes disclosures for asset-by-asset end of life plans. We will continue to engage companies on this within our broader engagement program. We also particularly encourage companies to develop sustainable biomass sourcing policies.

Case studies:

- We were pleased to note French utility company **Veolia** provided significantly enhanced disclosure in their new climate report. The 2030 coal phase-out date for European plants remains, and they have now disclosed asset-by-asset timelines for each of their coal assets across Germany, Poland, and Czech Republic, as well as disclosed the CapEx spend that they will allocate to each of these to support end of life and decommissioning. They also provided more detail on the China coal-fired combined heat plant, highlighting that while a phase-out remains uncertain given their contract with the local government, they have set an emissions intensity reduction target of 35% by 2032 for these assets. This was very welcome as we have engaged on this subject both in meetings and emails.
- In March 2024, the Finnish utility company **Fortum** announced the closure of their last coal-fired plant in Finland a year ahead of schedule as part of their broader Espoo Clean Heat program. This is following multiple engagements with us encouraging more disclosure on phase-out timelines for each asset and a welcome acceleration of their decarbonization ambitions.
- Engagement with Asian utilities has provided insights into their diverse approaches to phasing out thermal coal-fired generation, including retrofitting, conversion to alternative technologies, and asset divestment. While some companies have made progress in disclosing their decarbonization strategies, there is room for further transparency on the emissions reduction potential and feasibility of advanced coal technologies. We are also seeing a greater recognition of the importance of finance in supporting an accelerated early phase-out of coal-fired power generation. In March, Singaporean bank **DBS** updated their thermal coal financing policy to explicitly enable them to finance thermal coal plants with a goal towards supporting accelerated phase-out.

Diversity in clinical trials

SDG goal(s):

Project duration:
2 years



Project summary:

The Covid-19 pandemic highlighted the need to ensure vaccine uptake in ethnic minority and underrepresented communities by building trust through fully representative clinical trials. There is an increasing body of research recognizing that there can be a differential response to treatments across diverse populations. Existing and upcoming regulatory requirements such as by the US Food and Drugs Administration (FDA) will push the industry to include diversity planning in their trial protocol or justify why this is not necessary. In 2023 we commenced an engagement project on diversity in clinical trials with the objective to assess issuers' awareness of the importance of inclusion in clinical trials, to understand the challenges they are facing, to understand existing strategies and encourage efforts to improve diversity and disclosure. For 2024, we aimed to build on 2023's findings regarding the five key elements of an effective diversity in clinical trials strategy (policy commitment, governance, target-setting, stakeholder engagement and addressing systemic challenges). To stay ahead of evolving regulation and increasing commercial risk, we encouraged companies to make full use of industry best practices and collaborations to assess and improve diversity in clinical trials.

Key takeaways 2024:

- We learned of some companies such as the Danish Health Care Company **Novo Nordisk** with diversity in clinical trials as a key focus within its Diversity, Equity, and Inclusion (DEI) pillar and integrated within the Research & Development (R&D) function. Other companies, such as German Health and Agriculture Company Bayer AG, have appointed dedicated clinical diversity leads to deliver and execute on firm-wide clinical diversity strategy, an approach which we view as industry best practice.
- We have also welcomed baseline assessments by companies of prior performance in recruiting under-represented patient populations and anticipate a focus on improvement from these base-line levels.

Conclusion:

This project has now reached the end of its stated duration. We will take the learnings and the development of the 5 key elements of a diversity in clinical trials strategy (policy commitment, governance, target-setting, stakeholder engagement and addressing systemic challenges) and implement it in our broader engagement program where relevant. We have noticed an increased awareness in the industry of the importance of diversity in clinical trials. Where companies face practical obstacles in the implementation of more diverse clinical trials, we believe that sharing industry best practice in engagement conversations can be beneficial.

Case study:

- We spoke with US-American Healthcare company **IQVIA**'s Chief Medical Officer (CMO) to discuss its approach to diversity in clinical trials. We started the call by discussing the demand side of diversity in clinical trials. The CMO argued that demand is driven in two ways. Firstly, regulators are asking for diversity plans for new clinical trials. Secondly, clients ask for IQVIA's expertise and resources to assist with the diversity plans as well as the recruitment of clinical trial participants from underrepresented and underserved populations. 70-80% of Request for Proposals (RFPs) that IQVIA receives include diversity in clinical trials, showcasing the significant interest from clients. IQVIA stated that its competitive advantage to peers is its longstanding expertise on this. IQVIA also shared a tangible proof point of its success in recruiting trial participants. Other examples that we believe are beneficial to winning clients and successfully recruiting trial participants are their close collaboration with patient advocacy groups, focus on overcoming systemic challenges such as health literacy and trust as well as identifying new opportunities that will positively impact attraction and retention rates.



Emissions and plastics waste

SDG goal(s):

Project duration:
3 years



Project summary:

Chemicals companies have had serious adverse impacts on the environment and are a major contributor to GHG emissions that are connected to climate change. The chemical industry's energy consumption is the highest of any industrial sector; its operations cause substantial runoff of pollutants into the local environment, air and waterways; and many chemical sector products – such as plastics and fertilisers – are also causing serious harm to the environment. Over a 3-year period, this project aimed to engage with the 20 largest chemicals companies by market cap, focusing on the following targets as we look towards a sustainable transition within the chemicals sector: 1) Reducing GHG emissions; 2) Minimising harmful effects on local communities; 3) Reducing plastic waste. Initial focus for this project in 2021-22 was on decarbonisation (GHG emissions), with the wider

environmental topics such as toxicity and biodiversity being considered in the later years.

Key takeaways 2024:

- In total we have conducted engagements with 14 of the largest chemicals companies globally during this project. We engaged the 3 global industrial gas companies (**Linde, Air Liquide, Air Products & Chemicals**) as well as some of the largest industrial coatings manufacturers globally – **PPG Industries** and **Sherwin-Williams**. We also engaged with some of the other large chemicals producers across the US (**Dow, Ecolab, DuPont**), EU (**Lyondellbasell, DSM, Givaudan**), Japan (**Shin-Etsu**) and Korea (**LG Chem**).

- Throughout the course of the project, we have been pleased to observe milestones with project companies setting new emissions targets or improving their ambition, including the US-American **Air Products & Chemicals** which first expanded its “Third by 30” emissions goal to include scope 3 emissions categories in 2022. The company then adjusted the baseline year forwards for this year from 2015 to 2023, effectively increasing its level of ambition.

Conclusion:

Receptiveness to our engagement has been, overall, positive. As the third-highest industrial emitter of carbon dioxide in the world, the chemicals sector is working hard towards managing its GHG emissions profile. We observed many companies experiencing large structural changes, including new management and mergers, however these disruptions did not hinder companies from meeting their ambitions.

After running for 3 years, this project will be folded into our broader engagement program. We aim to continue monitoring companies on their progress towards meeting emission reduction targets and encourage additional transparency around product stewardship efforts.

Case study:

- **PPG** was the first US based coatings manufacturer to receive validation of targets from the SBTi over scope 1&2 emissions (50% reduction by 2030 vs 2019) and scope 3 (30% reduction 2030 vs 2019). We had engaged with the company as part of this project, making clear our expectation of achieving Net Zero GHG emissions across the value chain.

PPG clarified that from an emissions management perspective, its approach was three-pronged: 1) Improved energy efficiency of sites; 2) Enhance usage of renewable energy; 3) Asset electrification, where it makes sense.

PPG explained that work was ongoing to understand the scope 3 emissions inventory as it looks to focus on what it can do to influence and impact reductions. The most material categories are purchased goods and services (upstream), and customer use of goods sold and end of life (downstream). Discussions are ongoing with larger suppliers about getting product specific carbon footprint data given that current data is not precise and can rely on industry averages in some cases.

We discussed product stewardship in detail to understand how the company defines its “sustainably-advantaged” products. PPG’s approach to evaluating and monitoring its hazardous chemicals appears sound, although concerns remain over the number of these chemicals present within their portfolio.



Deforestation

SDG goal(s):

Project duration:
2 years



Project summary:

Deforestation is a major driver of the twin crises of biodiversity loss and climate change. The destruction and fragmentation of forests is the biggest driver of extinctions across the world, and the deforestation and forest degradation contribute up to 15% of the carbon dioxide emissions caused by human activity. This is primarily linked to the production of commodities including palm oil, soy, cattle products, timber, cocoa, coffee and rubber. We launched our deforestation project at the start of 2023 by prioritizing issuers for engagement using a bespoke tool that we have developed to appraise the quality of deforestation management of issuers involved in soft commodity value chains. In 2024 we focused on corporate readiness for the EU Deforestation Regulation (EUDR), particularly around the traceability and geolocation requirements which some issuers are finding particularly challenging. We also continued to

evolve from an issuer-focused approach to a more systematic engagement approach, engaging with different issuers within the supply chain, financiers, and regulators.

Key takeaways 2024:

- We have conducted multiple engagements with issuers on deforestation and have seen several companies improve their deforestation management. We saw good improvements at Irish-American supplier of paper-based packaging **Smurfit Westrock** and **Mondi**, a global integrated packaging and paper group, who are now able to trace 100% of their pulp supply to the point of production, and we were encouraged by Brazilian bank **Banco do Brasil**'s step forward on its deforestation due diligence efforts.

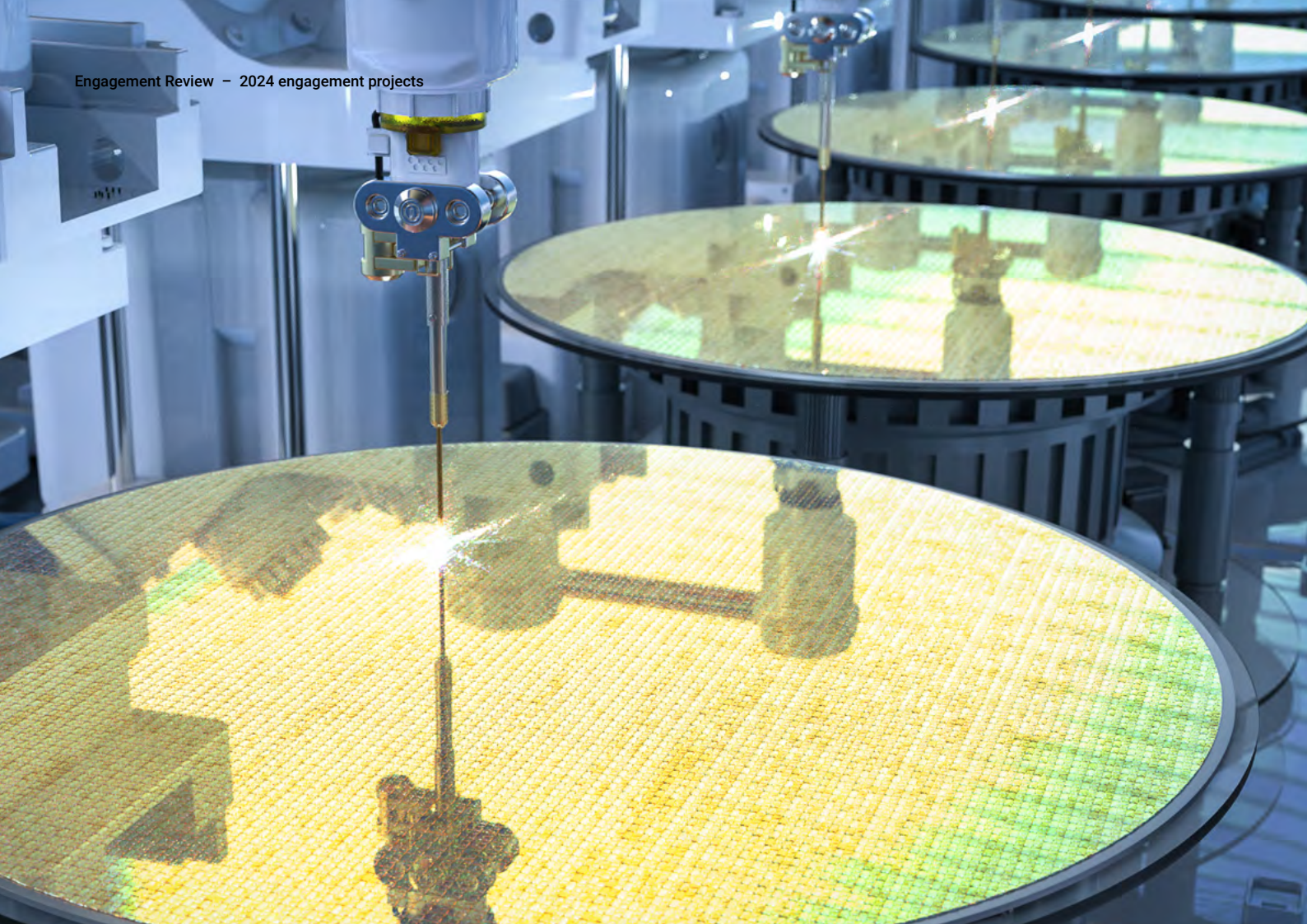
- Over the last two years we have been active participants in the Investor Policy Dialogue on Deforestation (IPDD) in both the Brazil and consumer countries working groups. In April 2023 we took part in an IPDD delegation visit to Brazil to engage with the new Lula administration and push for reform, and in October 2024 we helped draft a letter that the consumer countries group sent to the UK Government asking for clarity on its deforestation due diligence policy.
- We continue to lead the Investor Working Group for a Deforestation-Free Automotive Industry, and work closely with NGOs including Rainforest Foundation Norway, Zoological Society of London and Tropical Forest Alliance on deforestation.
- Regarding our engagement of companies on their readiness for the EU Deforestation Regulation (EUDR), we found that companies were better placed to fulfil these regulatory requirements.

Conclusion:

As this project has reached its conclusion, we will be including research and engagement on deforestation in our broader engagement program as deforestation and its impact on environmental factors remain in focus for us in relevant sectors. We will continue our analysis of soft commodity supply and prices given their exposure to environmental risks and engaging to understand how companies along the value chain are mitigating these risks. We will continue monitoring adherence to regulations and remain active in our work with policy makers and initiatives where beneficial to do so.

Case study:

- In an engagement with the Irish company **Adient's** sustainability team the company outlined how it is improving control over deforestation-related risks in its leather supply chain. Adient has stepped up its work on deforestation over the last year but is still unwilling to make a deforestation/conversion free commitment. We encouraged the company to consider this, as several peers have made this commitment, and otherwise Adient is exposed to enhanced risk. Adient has improved its traceability of leather volumes by engaging 100% of its direct leather suppliers last year, and the company is starting to use these responses to influence procurement scoring. We wanted to encourage Adient to strengthen its due diligence activities as traceability has improved. Adient has also proactively initiated conversations on leather sourcing with fourteen automaker customers to improve alignment, which we were pleased to note.



Responsible governance of artificial intelligence

SDG goal(s):

Project duration:
3 years



Project summary:

Artificial Intelligence (AI) has no doubt been transformative for society and there are no signs of it slowing down. It is expected that generative AI alone could add USD2.6 - 4.4 trillion to the global economy per annum by supporting accelerated innovation and productivity. The increase in AI use cases had led to emergent risks such as human rights, bias and discrimination. As a result, we believe that companies demonstrating that they uphold ethical standards will be key to maintaining trust and ultimately large-scale adoption. Through this project, we engaged to understand the industry's approach to AI, what best practice looks like and to encourage companies to publicly commit to and adopt responsible AI principles in their operations.

Key takeaways 2024:

- In the US, a lack of specific federal guidelines has led to divergent timings and approaches to Responsible AI, leading to differences in risk exposures and growth opportunities. As a result, we have observed various approaches to Responsible AI being taken by companies, for example US-American **Amazon** has adopted a segment specific approach with a comprehensive set of Responsible AI policies and principles for Amazon Web Services. However, it remains reluctant to disclose an organisational level governance and oversight approach to the responsible use of AI, and how this is implemented in practice, providing insufficient disclosure around risks and opportunities in a host of its other AI use cases ranging from personalized product recommendations, Alexa voice shopping, logistics and warehouse optimization.

- In contrast, Asian tech company **NAVER Corp** has adopted a more collaborative approach, leveraging partnerships with national policy makers and thinktanks to develop AI Ethics Principles early on. From our perspective, this has enabled them to achieve leadership in the implementation of Responsible AI.
- Software developers such as **Adobe** and **SAP** have been ahead of the curve on Responsible AI, which we believe presents a revenue opportunity, competitive advantage and demonstrates proactive risk mitigation.
- Financial services companies such as **Visa Inc** that have been using predictive AI technologies for several years are now diving into Generative AI technologies to improve process efficiencies and customer service. Improving predictive AI models to eliminate lending bias and tightening data privacy and security measures in line with Responsible AI guidelines have been key priorities for the company.
- Similarly, big consulting companies like **Accenture** are leveraging growth in Generative AI to claim more projects on building data readiness, which is at the core of responsible use of AI. While Accenture is not exposed to high risks from use of AI, we believe that the responsible governance and oversight of their AI strategy could lead to new revenue opportunity streams as well as cost savings.

Conclusion:

At its outset, this project sought to engage companies that did not have a commitment to ethical AI principles as assessed in the 2021 findings of the Digital Inclusion Benchmark and we were pleased to note progress with a more than doubling of the number of companies in the benchmark having adopted ethical AI principles. Going forward, we aim to continue examining how companies identify, assess and mitigate the risks they have access to as well as operationalise their responsible AI principles. We will continue monitoring the evolving AI landscape, including AI regulations across markets to determine our approach as part of our broader engagement program.

Case study:

- We have observed several milestones from companies in this space during 2024. US-American technology company **Apple**, for example, signed on to the voluntary guidelines on Responsible AI put forward by the Biden administration for Apple Intelligence. This involves development of a safety taxonomy that identifies and mitigates risks in Generative AI features and its integration into AI development. It follows on from our engagements since 2023 linked originally to a shareholder proposal around transparency on its responsible use of AI in early 2024. While this is a welcome first step, Apple remains behind the curve relative to peers on the publication of these principles. Furthermore, we believe more is needed in terms of the operationalization and validation of effectiveness of these principles.
- Other technology companies such as **Meta** have disclosed their Responsible AI guidelines and oversight processes for the development of different AI products and use cases, largely in response to public pushback surrounding the potentially harmful impacts of these technologies on user privacy & security, election integrity, and kids' & teens' health & safety. Although Meta has continuously released a host of controls and mitigation measures to prevent infringement of data privacy and security, improved disclosure around the effectiveness of these measures remains lacking.
- We have also seen large companies including Chinese **Alibaba** establish Technology Ethics Working Groups. These groups are intended to guide AI management and work protocols, formulate AI strategy and mitigate risks across three stages of Large Language Model cycles. It will be useful to monitor the progress of these working groups going forward.

Independent board evaluations

SDG goal(s): N/A

Project duration:
3 years

Project summary:

High quality board evaluations are conducted by independent third-party facilitators. Such facilitators assess the strengths and opportunities of a board within the context of existing skillsets, interplay with the management team, the company's strategic priorities, their strategic peers, and regional governance best-practices. These evaluations should assess oversight practices, processes, and behaviours of the full board and its committees. This type of independent board evaluation reaps numerous benefits for the company and its shareholders; in particular, unlike many other tools, it helps quantify whether the board is effectively executing their duties on behalf of shareholders. We request that issuers commit to such a process and enhance their disclosure concerning general strengths, opportunities, and outcomes identified in the process e.g., among others, revised succession plans, board skill priorities, boardroom and management communication practices. As this can be a laborious undertaking, especially for board and management leadership, we will recommend that one be conducted triennially.

Key takeaways 2024:

- As a result of multiple engagements with issuers under this project, we have concluded that independently conducted board evaluations are not enough. In our view, these evaluations must also include the critical matter of individual director evaluation and feedback. Across the S&P 500, only 50% of board evaluation disclosing companies in 2024 noted evaluating individual directors. While this is a slight increase on the 48% seen in 2023, in our view it shows that more needs to be done.
- 24% of board evaluation disclosing companies in the S&P 500 reported that their board evaluations are led by an independent board leader (such as the lead independent director, board chair, or a committee chair); in 2023, 38% were led by an independent board leader. This is a concerning trend.

Outlook for 2025:

Considering the decline in the proportion of companies undertaking independent board evaluations, we will continue to engage on this topic and encourage increased independence as well as the incorporation of individual director evaluation and feedback.

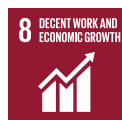
Case study:

- We had a constructive meeting with US-American Insurance company **MetLife** to discuss independent board evaluations among other topics including board quality and management transitions. Regarding board quality, we discussed succession planning (provided 5 directors are within a few years or less of meeting the retirement age cutoff, 3 of whom are in leadership roles). The Governance and Corporate Responsibility Committee appears to be managing such overturn and the impact on board dynamics and skill sets thoughtfully. As to management transitions, we noted that, after digging into SEC filings, it appeared the former CIO, who retired at the end of August, had not been replaced. The company confirmed our analysis and noted the responsibilities had been delegated and split between the CFO, General Counsel and Chief Risk Officer. Finally, we suggested improvement opportunities to their board evaluation and board skills disclosure, providing an exemplary peer comparison.

Improving board gender diversity in Asia

SDG goal(s):

Project duration:
3 years



Project summary:

This project continued its focus on the largest issuers in Asia which still have an all-male board. Research demonstrates that an inclusive and diverse company – especially at the highest leadership level – often outperforms other less diverse peers (we are taking gender as one proxy option for diversity in this case). The global average female representation on the board in 2022 was 19.7%, while Asia only had 11.7% female representation, with all-male boards still common. Having engaged 26 companies in the project on this topic across 41 engagement activities in 2023, we observed 15 companies adding a female director to their all-male board in 2023 and 5 more companies in the first half of 2024. While regulators such as Malaysia, India, Taiwan, and Hong Kong have applied pressure to eliminate male-only boardrooms, we believe there is still room for improvement at a swifter pace which we will encourage through our engagement.

Key takeaways 2024:

- Building on the activities undertaken in 2023, we engaged in 2024 with multiple companies to express our expectations and the global trend towards increasing board gender diversity. We highlighted the benefits of having a diverse board, as analysis has shown it may help reduce the idiosyncratic risk, increase managerial diversity, and improve the group dynamic on the board. We also stated the gender diversity ratio and regulatory requirements in other markets, such as the UK, the US, Australia, Malaysia, Korea, Hong Kong, and India. Finally, we invited the company to have a dialogue before the next board election.
- We witnessed significant improvements in the gender diversity ratio at some companies in Asia including the Chinese technology company **Tencent** increasing female representation from 12% to 25%, Taiwan Semiconductor Manufacturing (**TSMC**) shifting from 10% to 20% and the Japanese company **Lasertec** increasing from 11.1% to 25%.
- While we acknowledge that progress has been made, many companies still fall below our expectations of a 13.5% minimum gender diversity threshold.

Outlook for 2025:

There has been some progress made over the first two years of this project with many companies increasing their gender diversity ratios at board level.

However, we are aware that changes to board composition do not happen overnight. Therefore, as regulatory deadlines approach for appointing female directors to the board, we will continue to encourage companies to demonstrate their intentions and strategy to address this topic through time.

Case study:

- **Lasertec Corp** is a Japanese IT company that engages in the design, manufacture, sale and related services of semiconductor-related and other inspection and measurement equipment. We engaged the company both in 2023 and 2024 after their board gender diversity ratio fell below 13.5% due to the addition of three male directors in 2023. We explained our approach to board gender diversity through our voting policy which encourages at least 13.5% gender diversity on the board. We invited the company to provide a broad timeframe by which they intended to increase their board gender diversity ratio so that it could be incorporated into our voting recommendation. Subsequently, the company informed us it will improve its board gender diversity from 11.1% to 25% (after the September 2024 AGM) which is significantly above our 13.5% threshold.



Responsible water stewardship

SDG goal(s):

Project duration:
2 years



Project summary:

Our water stewardship project focuses on engaging companies across high-risk sectors – such as Mining and Semiconductors – to evaluate their strategies for managing increasing water stress and scarcity. Water-related risks are becoming increasingly material, with severe droughts and changing precipitation patterns threatening operations, particularly in regions that are important for mining, like Chile's Atacama Desert, and agriculture like the American Southwest.

Key takeaways 2024:

- In 2024 we engaged 12 companies as part of this project for a total of 19 engagements. In the semiconductor sector, we have seen encouraging progress from companies like US-American company **Intel**, which has set ambitious targets to become net water positive by 2030. Their multi-pronged approach includes water reclamation, improved efficiency in ultra-pure water conversion, and external restoration projects. However, companies like the Korean **SK Hynix** face challenges, with their new fabs in Yeosu, South Korea projected to triple water consumption by 2027.

- In the mining sector, water scarcity is a critical operational risk. In Chile, **Antofagasta** is targeting over 90% of water use from recycled or sea sources by 2025, while US-American **Albemarle** is investing more than \$100 million in water treatment technologies to reduce freshwater usage intensity by 25% in high-risk areas by 2030. However, securing water rights for expansion projects remains challenging, particularly in drought-prone regions like Chile's lithium areas. Companies like US-American **Arcadium Lithium** are implementing sustainable withdrawal limits and conducting third-party validation studies to address community concerns.
- Adding to water woes, we have seen community engagement emerging as a crucial theme, with several companies facing project delays or legal challenges related to water access which are driven by community concerns. **Arcadium's** recent experience in Argentina's Catamarca region, where new environmental studies were mandated following indigenous community concerns, highlights the growing importance of maintaining a social license to operate.

Outlook for 2025:

The importance of water risk assessment tools is growing, with companies like Albemarle using the World Resources Institute's Aqueduct tool to identify high-risk areas. However, many companies still lack clear corporate and site-level targets for water use and consumption. Forward-looking climate risk assessment to stress test water availability impacts remains limited across the sector. Looking ahead to 2025, we will encourage companies to develop more robust water risk management strategies, including specific targets and alternative source planning. This additional focus is driven by increased investor interest/focus on the increasing impacts of climate change, which are altering the hydrological cycle.

Case study:

- **Intel** is a leading US semiconductor manufacturer. We met with the company to discuss water risk in semiconductor manufacturing, focusing on their water stewardship strategy where we believe Intel is a forward-thinker. Due to decades of experience operating in one of the driest regions of the world (Arizona, Israel), Intel has public goals on being net water positive by 2030. The company shared its multi-pronged approach to water management including reducing freshwater withdrawals through reclamation and reuse, improving conversion efficiency of tap water to ultra-pure water (90%) to reduce consumption, external water restoration projects and developing strong community and state relations to help minimize larger impacts of water use. We were impressed by the company's approach and believe it is well-prepared to manage water related risks in the longer term.



Sustainable critical mineral supply chains

SDG goal(s):

Project duration:
3 years



Project summary:

Our critical minerals project aims to engage both the demand side (automakers and utilities) as well as the supply side (mining) to evaluate their strategies to mitigate risks from minerals that may become supply constrained over different timeframes. Such supply shortages may have material impacts on efforts to reduce emissions, one study on the US electric vehicle (EV) transition found that shortages in critical battery materials might halve the deployment of EVs between 2027 and 2032, resulting in 60 million tons of CO₂e in lost lifecycle emissions benefits.

Key takeaways 2024:

- In 2024 we engaged 18 companies as part of this project for a total of 27 engagements. On the demand side, we have been encouraged by several automotive companies strengthening their environmental and social due diligence processes for critical minerals. German automaker **Mercedes** has aligned with the sourcing standards of the Initiative for Responsible Mining Assurance (IRMA) – a coalition across miners, NGOs, trade unions and affected mining communities. German automaker **Volkswagen** also pushes for IRMA certification from the mines it sources from, but if this is unfeasible for a particular country or mine, VW is pragmatic and looks for equivalence wherever possible. Japanese automaker **Toyota** has notably weaker environmental and social risk management for its purchased minerals, this will be an engagement focus area in 2025. We

have uncovered a geographic split in critical mineral sourcing amongst the automakers, with US and Chinese automakers far more advanced in securing critical mineral volumes than European and Japanese automakers.

- On the supply side this year made clear that mining companies are facing increasing challenges in maintaining their social and environmental licenses to operate. The US-American Materials company **Freeport-McMoRan** has acknowledged this trend and is focusing on brownfield expansions rather than new projects. The Swiss company **Glencore**'s recent acquisition of Teck and focus on copper and other energy transition metals suggests major miners are positioning themselves for increased demand, while acknowledging that environmental concerns could constrain new project development and potentially impact the pace of the energy transition. Miners like **Albemarle** are pursuing the Initiative for Responsible Mining Assurance (IRMA) certification as the gold standard for responsible mining, with the goal to illustrate best practices to its customers as well as build community trust. Building trust across the sector was a key theme at the OECD Critical Mineral Forum which we attended in 2024, where several miners report that cross-industry collaboration is key to finding ways to solve for the miners societal "trust deficit".
- Finally, the geopolitical dynamics of critical mineral supply chains are becoming more complex, with major miners like Albemarle noting how the US and EU are working to reduce dependence on China, this trend towards critical supply chain security and onshoring is one we see persisting into 2025.

Outlook for 2025:

Moving forward we will be focusing more on automaker critical mineral procurement planning, as we foresee potential trade disruption from a second Trump presidency raising the importance of this theme for the EV transition. In addition, we want to explore future EV technologies and how these might create supply chain bottlenecks for additional critical minerals – such as graphite.

Case study:

- **Volkswagen (VW)** is Germany's largest automaker. We have engaged with the company multiple times over the duration of this project, including site visits, as part of our approach to assessing the demand side strategies to mitigate risks from minerals that may become supply constrained over different timeframes. We appreciated VW walking us through its strategy for cutting battery electric vehicle (BEV) production costs, which we believe is key to the company achieving its decarbonization targets and BEV penetration target for 2025. While we have some concerns around VW's approach to critical mineral sourcing, which lags peers particularly on lithium sourcing, we were impressed with the degree to which VW has aligned with the Initiative for Responsible Mining Assurance (IRMA) sourcing standard.



Sustainable food systems

SDG goal(s):

Project duration:
3 years



Project summary:

The food and beverage industry is facing a number of social and environmental risks, while needing to provide food for a growing population. Through this multi-year project, we aimed to take a systemic approach to challenges including addressing plastic pollution, reducing GHG emissions, managing water stress and soil depletion, securing working conditions in operations and supply chains, and eliminating deforestation in raw material sourcing. We view these as particularly material to the industry given the regulatory and operational environment. For example, the Global Biodiversity Framework and the developing UN Treaty on Plastic Pollution is likely to put more pressure on sectors that are heavy users to reduce usage. Engagement to understand the industry's approach to these issues, what best practice looks like and how companies are performing relative to that will be the focus of this multi-year project.

Key takeaways 2024:

- The issue of degrading natural capital is a highly material topic as reducing climate and nature impacts are increasingly being seen as competitive advantages by companies.
- Generally, companies believe they have sufficient visibility of nature and climate risks to raw materials. However, this is a moving issue and there is recognition that climate impacts are changing. Companies like French food company **Danone** have a three-year assessment cadence but will conduct assessments more frequently where needed.
- It was interesting to note Swiss **Barry Callebaut AG's** description of the EU Deforestation Regulation (EUDR) as "a revolution" aligning sustainability with physical product flows – something which customers are increasingly asking for.

- Growers may often be undercapitalised and lack financial resilience in cases of yield downturns while transitioning to more sustainable practices. Some issuers such as the British company **Cranswick Plc** referenced longer contract timespans and more favourable payment terms as ways of supporting growers. In the West Africa cocoa sector, some issuers are extending direct support to growers to increase pre-harvest investments as a necessary intervention to secure long-term supply.
- Some issuers referred to a paradox of data overflow while still being unclear on which metrics are most practical and effective to evaluate risks. However, some are more optimistic and believe that a pragmatic approach such as data sampling provides adequate coverage to track effectiveness of sustainability interventions.

Outlook for 2025:

In this next project phase, we will be addressing sustainable food systems along a dual-track approach. We will be examining corporate approaches to climate resilient agriculture as well as shifting plastics and packaging demand.

Agriculture faced severe climate impacts in 2024, including Brazilian droughts, Mediterranean wildfires, and Caribbean hurricanes, driving up prices of key commodities like cocoa and coffee. With agriculture representing c12% of EU carbon emissions and 900 food companies setting climate targets under the science-based targets initiative, the sector faces pressure to reduce its environmental impact. Three key technologies that we believe show promise in building agricultural resilience: precision agriculture software/hardware, biostimulants and bio-based pesticides, and genetic seed breeding. Our research and engagement efforts will focus on these technologies' development, identifying leading companies, and understanding deployment barriers including policy, regulation, and farmer adoption patterns.

Regarding plastics and packaging demand, we are aware that consumer brands face increasing pressure from regulations and sustainability goals to reduce plastic waste, driving demand for recycled materials. While recycled plastic commands price premiums and spurs investment in new technologies like chemical recycling, companies must navigate regulatory challenges and rising packaging costs. This project track will assess how plastic producers and packagers are adapting to shifting demand between virgin, recycled, and alternative materials. Our activities will focus on emerging technologies, waste management companies' capital expenditure plans, and how businesses are managing brand risks and cost implications from Extended Producer Responsibility schemes.

Case study:

- Swiss **Nestlé** is the world's largest food and beverage company. We spoke with them to better understand the effectiveness of the company's cocoa sourcing sustainability interventions in West Africa. The recent cocoa supply chain challenges have shown that erratic weather and blight, exacerbated by climate change, can have a dramatic impact and that growers need to increase resilience where possible.

As alternative sourcing locations cannot provide adequate supply, Nestlé is investing in West Africa to address the interlinked social and environmental challenges. The intention is to shift existing growers towards more sustainable practices and the use of more resistant cocoa tree strains. Nestlé is scaling up both environmental and social action to address root causes of negative outcomes including persistent poverty and risk-aversity among growers. This also helps secure against deforestation risk which is increasingly in focus due to recent legislation like the EU Deforestation Regulation.

We are encouraged by the company's approach to addressing root causes and assessing effectiveness and will aim to follow up on developments.

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