

Revenue at risk:

Why addressing deforestation is critical to business success

Written on behalf of 365 investors with US\$22 trillion in assets



About this report

CDP's forests program acts on behalf of institutional investors, who use CDP data to engage with portfolio companies, inform investment decisions and catalyze change. In 2016, 365 investors with US\$22 trillion in assets were signatories to the program.

On behalf of these investors, this year we asked 821 global companies to provide information about how they are managing and mitigating the risk associated with the sourcing or production of the four commodities most responsible for deforestation – timber products, palm oil, soy and cattle products. In total, 201 companies responded to our 2016 investor-backed request, a 10% increase from last year.

Companies were selected based on economic and environmental criteria. CDP's forests program has used the MSCI ACWI All Cap Index, together with CDP research and GCP's Forest500 list to identify and prioritize the largest and most impactful companies in relation to deforestation risk.

This report summarizes and analyzes the disclosures made through the 2016 information request of 187 companies that responded before August 2, 2016. It is aimed at companies facing commodity-driven deforestation risks, and the opportunities that sustainable sourcing of these commodities bring. The report will also be a good resource for investors seeking to better understand how the issue of deforestation might impact their portfolios.

In particular, this year's report and the underlying data analysis aim to further highlight the business case for action on deforestation and what is at stake – from company revenues to the delivery of international commitments – if this action is not accelerated and cascaded through supply chains.

Reducing deforestation and restoring the world's degraded forests is critical to meeting the targets under the Paris Agreement and the Sustainable Development Goals. By acting on deforestation, companies will not only increase the resilience of their supply chains but also play a key part in the solution.



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To read 2016 company responses in full, please go to <https://www.cdp.net/en/responses>

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Paul Simpson

Chief Executive Officer, CDP



The choice facing companies and investors has never been clearer: seize the opportunities presented by this new world and lead the way in shaping our transition to a sustainable economy; or continue business as usual and face serious risks.

The Paris Agreement and the adoption of the Sustainable Development Goals (SDGs) have clearly set the direction of travel for the world. Decarbonization and concerted efforts to address the challenges of sustainable development, including deforestation, are set to transform the global economy – and business will be at the center of this revolution. Addressing deforestation will be crucial to delivering a sustainable post-2020 economy.

Deforestation leads to some 15% of global GHG emissions. Protecting the world's forests will help underpin economic development for hundreds of millions of people around the world. It will help ensure that companies relying on the commodities that contribute most to deforestation – cattle products, palm oil, soy and timber products – have access to robust and sustainable supply chains in the future.

The choice facing companies and investors has never been clearer: seize the opportunities presented by this new world and lead the way in shaping our transition to a sustainable economy; or continue business as usual and face serious risks – from regulation, shifts in technology, changing consumer expectations and climate change itself. CDP's data shows that companies are starting to work towards more resilient supply chains, but many are yet to grapple fully with this shift and the associated opportunities it brings.

Investors are poised to capitalize on the opportunities that await. Some of the biggest index providers in the world, including S&P and STOXX, have created low-carbon indices to help investors direct their money towards the sustainable companies of the future. Investors see opportunities in sustainably managed timberland, and are beginning to direct funding to innovative approaches to protect forests, such as REDD+ credits.

Conversely, they are also increasingly mindful of the risks that companies face from deforestation, and therefore how these risks will come to impact their portfolios. An incrementally growing number of investors, including UBS and Société Générale, are establishing investing and lending policies referencing deforestation. Information is fundamental to their decisions. This year, 365 institutional investors with assets of US\$22 trillion have asked companies to disclose how they are managing the direct and indirect risks posed by deforestation. This disclosure is helping to inform investment decisions and corporate engagement with companies, including the filing of shareholder resolutions.

The glass is not as full as it should be on forest disclosure. Despite the program having had a six-fold increase in the number of respondents since its inception in 2009, the response rate is still at relatively low levels – only 21% of requested companies responded to the forests information request, leaving potential risks unrevealed.

Now, we are poised to fill the glass. We welcome the FSB's new Task Force on Climate-related Financial Disclosures, building on CDP's work and preparing the way for mandatory climate-related disclosure, including on deforestation¹, across all G20 nations. We look forward to integrating the Task Force recommendations into our tried and tested disclosure system and working together to take disclosure to the next level.

We know that business is key to enabling the global economy to achieve – and exceed – its climate and sustainable development goals. This report is intended to help inform how companies are understanding and addressing deforestation risks in their operations, and in those of their suppliers. It is intended to help ensure that the commitments many of them have made to eliminate deforestation from their value chains are met.

Measurement and transparency are where meaningful action starts and as governments work to implement the Paris Agreement, CDP will be shining a spotlight on progress.

The Paris Agreement and the SDGs are the new compass for business. Companies across all sectors now have the chance to create this new economy and secure their future in doing so. High-quality information will signpost the way to this future for companies, investors and governments – never has there been a greater need for it.

Paul Simpson
CEO, CDP



Reimagining Disclosure – sector strategy and TCFD recommendations

Our 2017-2020 strategy is to build on the momentum of the Paris Agreement to fulfill our mission to incorporate environmental stewardship into the economic system. CDP has been the catalyst for global disclosure over the past 15 years. We want to continue to drive the future of meaningful disclosure to help companies and investors better understand environmental risk and accelerate the transition to a more sustainable economy.

To deliver this, we have launched our Reimagining Disclosure initiative to work in consultation with you and our other key stakeholders. Our aim is to produce a step change in benefits for disclosers and users of disclosure information.

We are pleased to announce that the first deliveries from this initiative will be implemented by Q4 2017. We are evolving our climate, water and forests questionnaires to be more sector specific, and to implement the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Our sector work will focus initially on the high-impact sectors in Energy, Transport, Materials and Agriculture.

We look forward to partnering with you on our Reimagining Disclosure initiative to increase the efficiency and relevance of our disclosure process. This way, we will continue to ensure we are the go-to disclosure platform for data and analysis to manage environmental risk, and to drive financial decision-making.

Executive summary

On average

24%

of company revenues depend upon disclosed commodities

For any company active in the global trade in soy, palm oil, timber products or cattle products, deforestation has become a critical business issue. The production of these forest-risk commodities can contribute to habitat loss, greenhouse gas emissions and social conflict – resulting in direct and supply chain exposures for suppliers and customers alike.

Addressing these environmental and social impacts has become a priority for policymakers, with the forging of the Paris Agreement on climate change and the UN Sustainable Development Goals.

As a result, a growing number of investors want to know what companies are doing to address this major business challenge. This year 365 investors, over a fifth more than in 2015, with a total of US\$22 trillion in assets asked companies to disclose information via CDP about how they are managing deforestation risk linked to these four commodities – responsible for the majority of tropical deforestation globally.

Responses were received from more than 200 companies, up from 180 in 2015, including three of the four so-called 'ABCD' global commodity trading giants², the three largest slaughterhouses in Brazil and big-name brands from Nestlé to Starbucks.

We have analyzed the wealth of data³ with the following questions front of mind: Are companies on course to remove deforestation from their supply chains? Have companies identified a sustainable and secure supply of key commodities, the building blocks of their business, to meet their future needs in the light of shifting regulatory and investor expectations? Is there evidence they are sufficiently engaged across their supply chains to meet these needs?

The analysis finds that:

A substantial share of company revenue is dependent on commodities responsible for deforestation.

- ▼ Companies report that, on average nearly a quarter of company revenues depend upon the commodities they reported on; and
- ▼ The total annual turnover at risk for publicly listed companies is estimated to be up to US\$906 billion.

Companies believe they will be able to access a secure and sustainable supply of forest-risk commodities in the future.

- ▼ 72% of companies report that they have identified sufficient future sustainable supply across all forest-risk commodities.

But this confidence may be misplaced, given existing commodity-related impacts and potentially inadequate forward planning.

- ▼ 81% of companies in the Agricultural Production sector, which sits at the top of global commodity supply chains, have experienced impacts related to forest-risk commodities that have resulted in substantive changes to operations, revenue or expenditure in the past five years;
- ▼ Despite these impacts, only one in five companies assess risks associated with deforestation beyond a six-year horizon across commodities; and
- ▼ Fewer than half (42%) of companies have evaluated the impact of the availability or quality of key forest-risk commodities on their growth strategies over the next five or more years.

The key barriers companies report to face in addressing these risks are: inadequate traceability systems, weak governance (and compliance enforcement) of national deforestation policies, and limited availability of certified materials and their costs.

- ▼ These most frequently cited challenges have not changed since 2013. As we approach 2020, when many corporate deforestation goals and commitments are due to be met, we need to see bolder corporate action if revenues, resilience and the future growth of the companies involved are not to be put at risk.

² The Archer Daniel Midlands Company, Bunge, Cargill and Louis Dreyfus Company

³ The analysis of this report is based on responses from 187 companies that disclosed before August 2, 2016.



81%

of Agricultural Products companies report impacts related to deforestation that have generated a substantive change in operations, revenues or expenditure over the past five years.

To ensure their future growth, companies need to improve their internal processes, move the responsibility for deforestation risk management into the boardroom, work with their supply chains and collaborate with their peers.

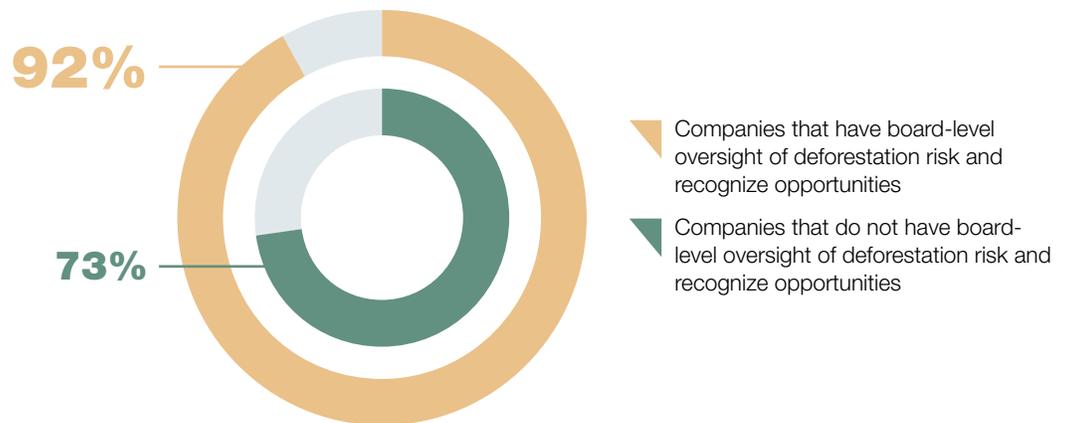
- ▼ More than a third (34%) of reporting companies do not have board-level responsibility for deforestation risk management;
- ▼ Fewer than half (47%) of companies have considered deforestation as part of a comprehensive, company-wide risk assessment for their full supply chain across commodities;
- ▼ Fewer than half (44%) of manufacturers and retailers with procurement standards in place monitor compliance with these standards and audit their suppliers across commodities. This is

despite the need for supply chain alignment to allow companies to meet their zero-deforestation commitments; and

- ▼ There are benefits for companies that implement these actions. Manufacturers and retailers that work with their suppliers report far greater levels of traceability and are significantly more likely to identify business opportunities. Similarly, companies with board-level responsibility for deforestation risk identify 19% more opportunities than those that do not.

Companies also need to embrace more advanced approaches to commodity sourcing, which aim to tackle deforestation at the landscape or jurisdictional scale, and work with governments to ensure enabling regulatory environments are in place.

Board-level oversight is linked to more opportunities related to the sustainable production or sourcing of forest-risk commodities



Call to action

The will exists to address these challenges. We have seen an increasing level of investor concern regarding deforestation, corporate commitment to address the issue, and political momentum at the international level and within some jurisdictions. We believe that, to meet the challenge posed by deforestation, companies should:

- ▼ **Ask for transparency and disclosure from suppliers.** The biggest risks and greatest opportunities are to be found in the supply chain. Companies should ask their suppliers to disclose relevant information, and collaborate with them to implement change at scale;
- ▼ **Bring deforestation to the board room.** Board-level oversight of this issue varies around the world. Risk assessments that are comprehensive and company-wide will ensure that the issue of deforestation risk reaches the very top; and
- ▼ **Work cross-sectorally to find solutions.** Addressing the barriers to securing sustainable, deforestation-free commodities will involve working across sectors, and with customers, governments and civil society.

A sustainable post-2020 economy

In the last 18 months, two crucial international agreements have sketched out the framework for a global economy that is more environmentally and socially sustainable. The Sustainable Development Goals (SDGs), agreed in September 2015, and the Paris Agreement on climate change, struck three months later, represent a step change in the efforts to address the profound sustainability challenges the world faces.

The SDGs are a universal set of goals, targets and indicators that UN member states will be expected to use to frame their agendas and political policies over the next 15 years. They therefore clearly signal to businesses and their investors and lenders what a sustainable global economy will look like, and which sorts of corporate strategies are likely to be successful.

The 17 SDGs cover social concerns such as poverty, healthcare and employment, as well as environmental issues.

Goal 15, on Life on Land, requires UN member states to “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.” Target 15.2 calls for, by 2020, the sustainable management of all types of forests, including a halt to deforestation.

The Paris Agreement, meanwhile, commits the international community to hold the rise in average global temperatures to well below 2°C above pre-industrial levels, with an aspiration to a lower ceiling, of 1.5°C. It, too, specifically references forests, calling on parties to “take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1(d), of the Convention, including forests.” It also includes provisions, already included in earlier climate treaties under the UN Framework Convention on Climate Change, that create financial incentives for forest conservation.

Business has a crucial role to play

The private sector will be central to meeting the objectives of both the SDGs and the Paris Agreement. The SDGs were crafted with input from the business community; unlike their predecessors,

the Millennium Development Goals, it is anticipated that the private sector will be instrumental in helping to deliver them.

Planning by governments to meet their obligations under the Paris Agreement is only really beginning in earnest, but two things are already clear. First, since companies are responsible for a large percentage of global greenhouse gas emissions, they will be responsible for delivering many of the necessary reductions. Second, the pledges made by governments in the run-up to Paris will lead to warming of 2.7°C, meaning that greater efforts will be needed. According to the UN Environment Programme, the 1.5°C limit will be out of reach by 2020, without additional action⁴.

The number of companies committing to addressing deforestation continues to increase, although the majority of these commitments have been made for palm and timber-based products, while less attention has been paid to soy and cattle commodities⁵. If implemented, such commitments could have an enormous impact. According to CDP and We Mean Business, the business community could deliver emissions reductions equivalent of 3.2-4.2 billion metric tons of carbon dioxide by 2030 – equal to 7-9% of global emissions in 2010 – of which 0.5-1.2 billion metric tons would be delivered by eliminating deforestation⁶.

⁴ The Emissions Gap Report, UNEP, 2016

⁵ Progress on the New York Declaration on Forests. Eliminating Deforestation from the Production of Agricultural Commodities, Climate Focus, 2015

⁶ The business end of climate change, We Mean Business, 2016



A sustainable post-2020 economy

On average

24%

of company revenues depend upon disclosed commodities

Companies are confident but progress is slow, putting forests and revenues at risk

Scrutiny of companies' deforestation risk management activity is growing. This year, investor group Ceres tracked five shareholder resolutions calling for reporting around deforestation impacts⁷. Financial institutions, such as Morgan Stanley and UBS, which signed up to the CDP forests program this year, are concerned because the very real business risks involved have become clearer. Meanwhile, the value of forests and climate-smart agriculture is becoming more tangible to investors, as is illustrated by the issuance this October of a forest carbon bond, by the World Bank Group. The first-of-its-kind bond raised US\$152 million, which will be used to prevent deforestation in emerging markets⁸.

Companies report that, on average nearly a quarter of company revenues depend upon the commodities they reported on. The total annual turnover at risk for publicly listed companies that disclosed is estimated to be up to US\$906 billion. Given the sums at stake, future growth is in jeopardy if companies do not establish a clear plan to source commodities securely and sustainably now and in the future.

Specifically:

- ▼ Only 42% of companies report that they evaluate the impact of the availability of key forest-risk commodities on their growth strategies over the next five to 10 years;
- ▼ Only one in five companies assess the risks associated with deforestation beyond a six-year horizon across commodities⁹; and
- ▼ Barely half (56%) of manufacturers and retailers, across commodities, work beyond the first tier of their supply chain.

As we have seen with previous disclosure to CDP, company progress in addressing risks relating to traceability and certification of forest-risk

commodities, and engaging with supply chains does not appear to be at the pace needed to meet 2020 goals and commitments. For example, the number of manufacturers and retailers carrying out joint projects with their suppliers only increased by one percentage point since last year.

In recent years, many of the largest companies that produce or consume forest-risk commodities have made public commitments to drive deforestation out of their supply chains, or have otherwise set quantified targets for obtaining these commodities from sustainable sources. For example, consumer goods giant **Unilever Plc** has brought forward its commitment to source 100% physically certified palm oil from 2020 to 2019. It already purchases 100% RSPO segregated palm oil for its European and Australian foods businesses, and has started sourcing RSPO certified mass balance volumes for its Latin American and North American markets.

In fact, a high percentage of reporting companies say that they are confident that they will be able to source commodities securely and sustainably in the future. Nearly three quarters (72%) of companies report that they have identified sufficient future sustainable supply across all forest-risk commodities.

However, it is not clear, at this point, that sufficient supplies of sustainable commodities will be available to meet all of these targets, raising risks that some companies will be in breach of their commitments, or will otherwise face spiraling costs as demand races ahead of supply.

This year has given a foretaste of the future if potential supply constraints are not addressed. The temporary withdrawal of sustainability certification from IOI Corporation, a large palm oil producer and trader, and a suspension in sustainable palm oil supply from Felda, another large palm oil group, sent prices rocketing. The premium for sustainable over conventional palm oil jumped from US\$25/metric ton to US\$30-35, while that on palm kernel oil doubled, from US\$80-100/metric ton to more than US\$200¹⁰.

US\$906 billion

The total annual turnover at risk for publicly listed companies is estimated to be up to US\$906 billion

7 See Ceres's online Shareholder Resolutions database: <http://www.ceres.org/investor-network/resolutions>. Accessed 15 November 2016

8 IFC Issues Innovative \$152 Million Bond to Protect Forests and Deepen Carbon-Credit Markets', Press release, IFC 31 October, 2016

9 The forests questionnaire asked companies if they had evaluated how the availability or quality of commodities could affect a company's growth strategy over one, five or ten years. Companies were also asked in what future time frames they considered risk: up to one year, one to three years, three to six years, and beyond six years.

10 "Palm oil buyers refuse to mend IOI ties as supply squeeze goes on", Financial Times, 17 August 2015, Emiko Terazono

72%

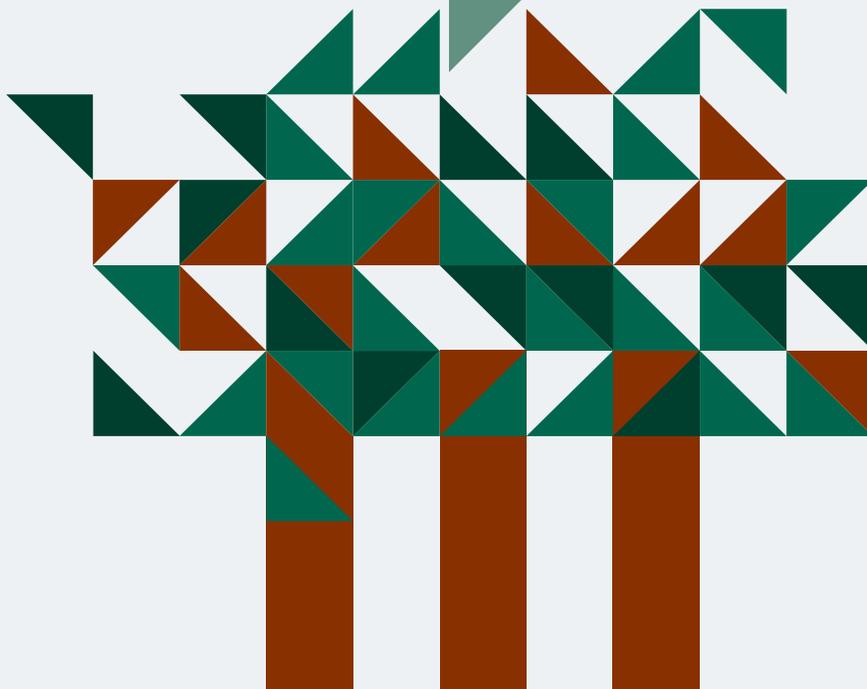
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Commodity supply chains:

At risk of a domino effect

Sustainability risk within commodity supply chains is real, and is having an impact on company performance. For example, 81% of Agricultural Products and 45% of Food and Staples Retailing companies report impacts related to deforestation that have generated a substantive change in operations, revenues or expenditure over the past five years. Indeed, companies anticipate that these impacts will continue to be felt. More than two-thirds (68%) of producers, processors and traders recognize risks that could impact their business within the next six years, as do 65% of manufacturers and retailers.

These impacts include the physical effects of climate change on commodity supply and prices, the effects on supply of regulatory moves to protect forests, suppliers breaching agreements to halt deforestation, or illegal material entering supply chains. All of these can have knock-on reputational impacts, manifesting themselves as consumer boycotts, community opposition, and increased regulatory scrutiny.

Companies report specific supply chain risks and impacts including:

- ▼ Potential rise in operational costs and disruption of supply of eucalyptus timber from Brazil due to changes in precipitation if the Amazon is deforested, as disclosed by manufacturer **Kimberly-Clark**;
- ▼ Potential climate-related increases in plant diseases or pests, cited by Indonesian pulp and paper giant **APP**;
- ▼ Impacts to brand value as consumers increase demands for sustainable, deforestation-free products, as reported by both **Archer Daniel Midlands** and **Wilmar International**;
- ▼ Damage to the brand of French retailer **Delhaize Group** caused by a Greenpeace campaign against deforestation; and
- ▼ Reduced fruit production at **Golden-Agri Resources** as a result of the haze from Indonesia's forests fires.

Our analysis shows that, while deforestation is recognized as a risk, it is too often considered in isolation rather than as part of a comprehensive risk assessment, meaning that its potential full

impact on a company is underappreciated. For example, while 47% of companies have considered deforestation as part of a comprehensive, company-wide risk assessment for their full supply chain across commodities, just 31% of Food, Beverage and Tobacco Processing companies do so.

A role for risk management

Companies often adopt a mixture of approaches to address the risks they face, including using certification and traceability systems. Companies should also consider putting in place a supply chain performance plan, as set out in last year's CDP Global Forests Report¹¹. Such a plan involves turning commitments into clear and strong procurement standards, communicating expectations, tracking progress, collaborating and undertaking a review process.

Production and procurement standards

establish the expectations that suppliers should meet. Across the four commodities CDP tracks, two thirds (64%) of producers, processors and traders have environmental standards. However, of these, 39% are not explicitly related to deforestation. Downstream, three quarters of manufacturers and retailers have procurement standards that relate to the sourcing of forest-risk commodities. In both cases, significant minorities lack the standards required to keep deforestation-linked commodities out of their global supply chains.

Certification systems can go some way in providing assurance that purchased commodities are deforestation free. Companies view certification as providing tangible business benefits. In its disclosure to CDP, Brazilian pulp and paper company **Fibria Celulose SA** says that by "having all the products

¹¹ Realizing zero-deforestation: Transforming supply chains for the future. CDP, 2015

certified by [the Forest Stewardship Council], the company reduces risks, increments transparency and increases consumer confidence by selling certified deforestation-free products.”

The vast majority (82%) of companies rely on certification for at least one of the forest-risk commodities they consume. However, current levels of commodity volumes not mixed with uncertified material are low across all commodities. For example, for palm oil, fewer than half (43%) of producers, processors and traders report that they use some segregated or identity preserved palm oil.

While certification entails a degree of **traceability**, systems in place are imperfect. Although a minority (40%) of manufacturers and retailers report that they can trace more than 90% of their consumption across commodities to some extent, only 30% can trace those commodities all the way back to the point of origin. While this may be a tall order for retailers, which may stock thousands of products containing forest-risk commodities, they should be able to trace back to the country or region of origin. Nonetheless, one-quarter are unable to do so, weakening their ability to manage associated supply chain risks.

Impacts have already been felt, and more risks are recognized

Companies reporting impacts related to deforestation that have generated a substantive change in operations, revenues or expenditure over the past five years.



Companies reporting risks that could impact their supply chains within the next six years.



Commodity supply chains:

At risk of a domino effect

The need for supply chain alignment

Commodity supply chains are complex, involving a large number of different actors. Companies at various points along global commodity supply chains disclose to CDP. This year, producers and processors such as **Minerva S.A.**, trading giants including **The Archer Daniels Midland Company** and **Bunge Ltd**, manufacturers such as **Kraft Heinz Company** and retailers such as **Starbucks Corporation** have all disclosed to CDP for the first time regarding deforestation risk.

Supply chains are like rows of dominoes: if unsustainable commodities enter the top of a supply chain, the effects can cascade throughout. As **Associated British Foods Plc** notes in its disclosure to CDP, “In the commodity world, segregated supply chains are physically challenging and become commercially challenging when the next supply chain player has a slow awareness of the issues at play.”

Conversely, failures downstream in terms of weak procurement or lax standards can have ripple effects higher up the supply chain, by removing incentives for producers, processors and traders to ensure the sustainability of their operations or immediate suppliers. As **Dunkin’ Brands Group, Inc.** says, “by requiring our palm oil suppliers to comply with our sustainable palm oil sourcing guidelines, we are helping influence the market and demand for sustainable palm oil.”

No matter how rigorous any one company’s policies and procedures are, companies working in isolation cannot expect to assure adequate supply of deforestation-free commodities. In order

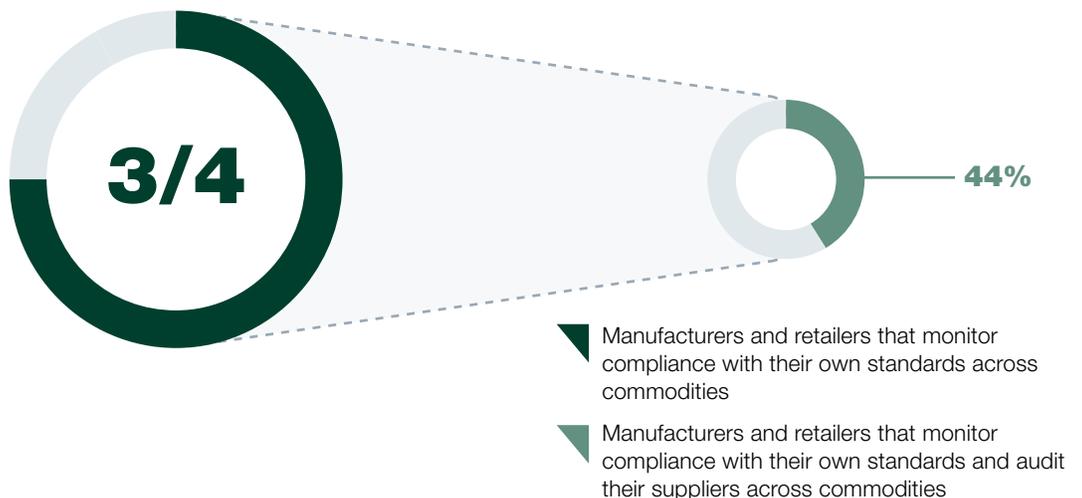
for companies to meet their zero-deforestation commitments, supply chain alignment is critical, based upon monitoring and capacity building. While three quarters of manufacturers and retailers monitor compliance with their own standards across commodities, only 44% of those report that they audit their suppliers (Figure 1).

Collaboration is therefore fundamental to achieve deforestation-free supply chains. There are some encouraging findings from CDP’s data. Those manufacturers and retailers that work with their suppliers report that 62% of their consumption is traceable, compared with just 30% for those that do not. Similarly, 94% of the former have identified opportunities related to producing, marketing, or sourcing commodities sustainably, versus 35% of the latter (Figure 2).

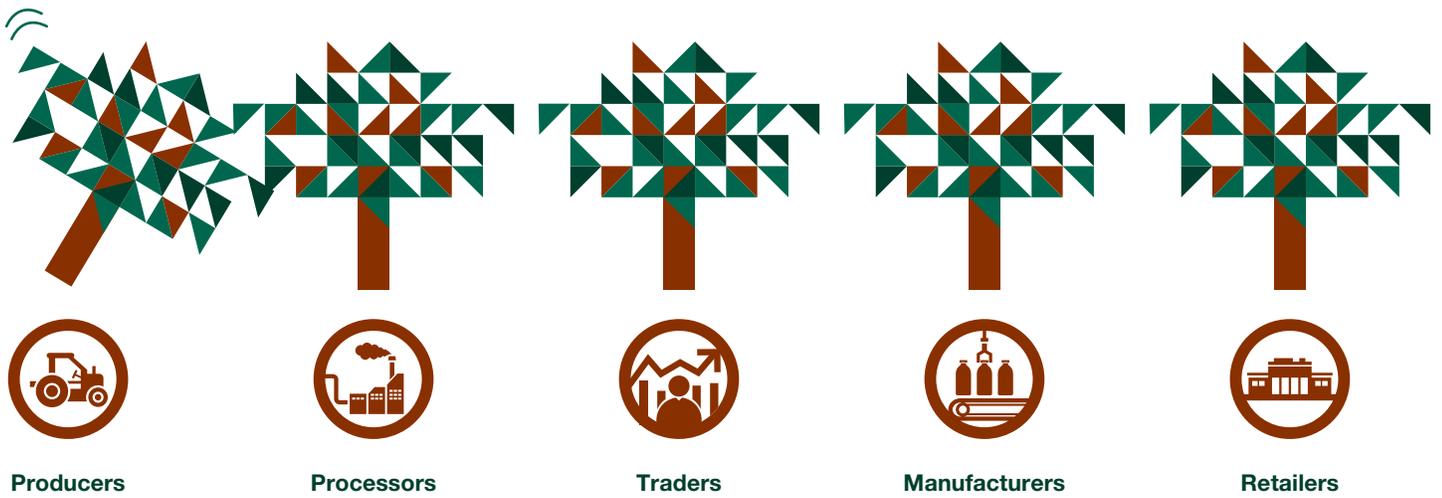
However, generally speaking, supply chain collaboration is lacking. Only 46% of companies in the Consumer Durables, Household and Personal Products sector provide workshops and training on palm oil, as do only 36% of companies in the Food and Staples Retailing sector.

Supply chain alignment depends upon the transmission of sufficiently strong market signals from consumers regarding the value of the sustainably sourced commodities. Too often, producers complain that these are lacking. Australia-based packaging company **Ancor Limited**, for example, notes that one of the challenges in developing a sustainable supply chain is the “perception of value of sustainable products downstream of the supply chain, which impacts whether customers are prepared to pay an increased cost for these commodities.”

Figure 1: Enforcement of standards that impact the sourcing of forest-risk commodities



Supply chains are like rows of dominoes: if unsustainable commodities enter the top of a supply chain, the effects can cascade throughout.



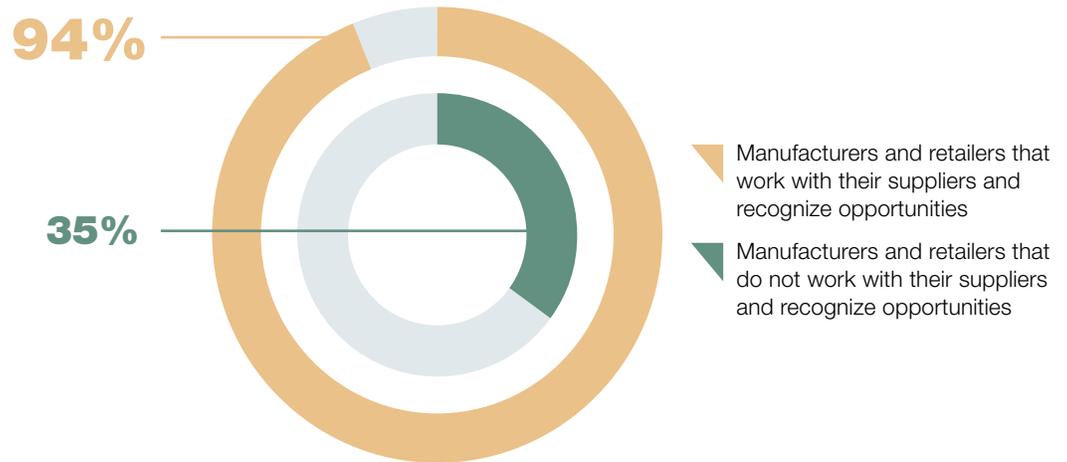
Conversely, failures downstream in terms of weak procurement or lax standards can have ripple effects higher up the supply chain.



Commodity supply chains:

At risk of a domino effect

Figure 2: Manufacturers and retailers reporting opportunities related to the sustainable production or sourcing of forest-risk commodities by their level of supplier engagement



Disclosure through CDP's forests program is another step toward increasing transparency as we execute our policies to establish traceable, responsible supply chains. This is a critical issue for all of our stakeholders, from shareholders to customers, and we are committed to continuing to identify and address supply chain risks.

**Ismael Roig,
Senior Vice President
and Chief Sustainability
Officer at ADM**

The most influential letters of the commodity supply chain alphabet

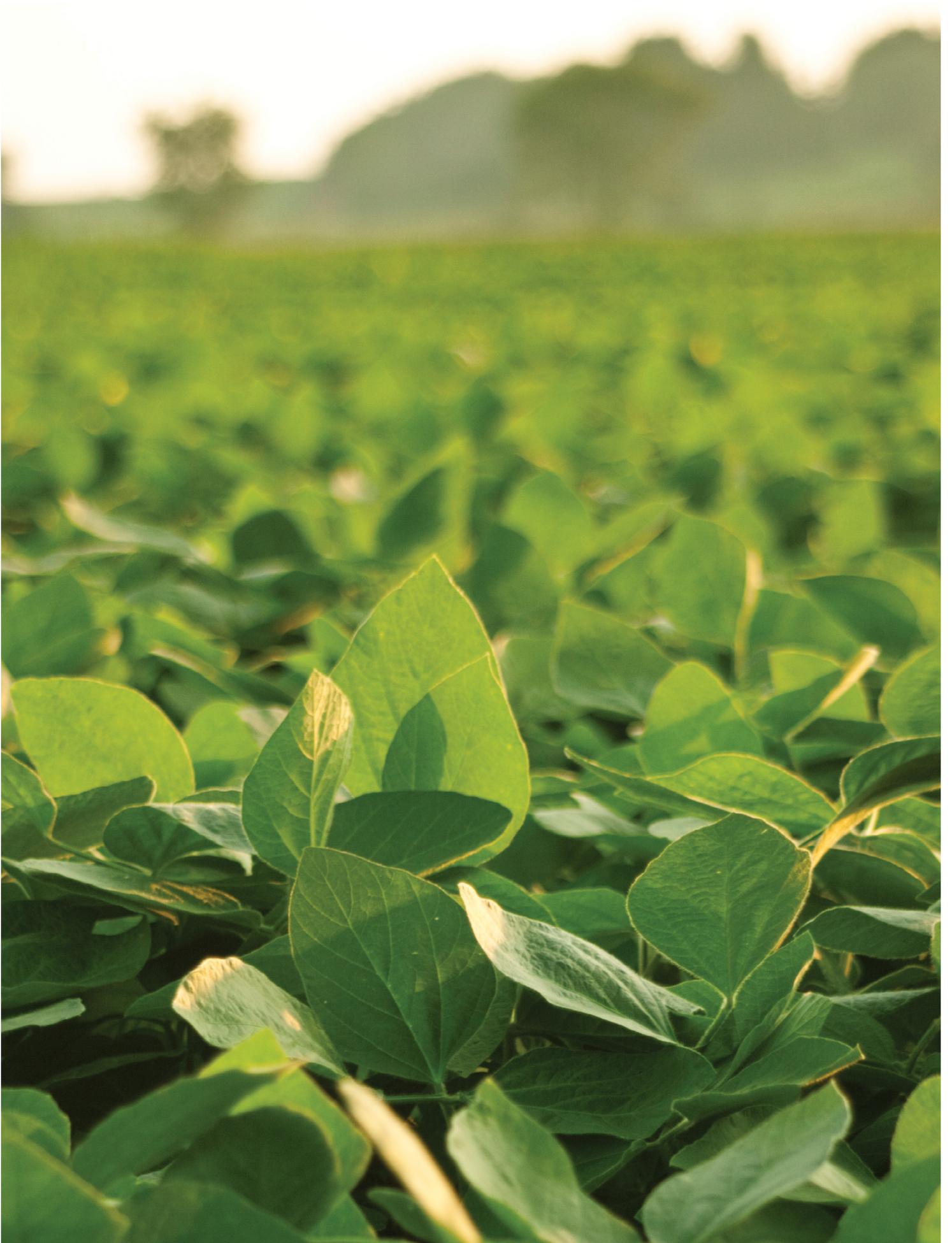
The ABCD (The Archer Daniels Midland Company (ADM), Bunge, Cargill and Louis Dreyfus Company) trader companies have a large impact on countless commodity supply chains. For example, they represent up to 90% of the global grain trade¹². With a wide array of clients that go from Nestlé to McDonald's, their role in managing deforestation risk is crucial.

Sitting at the middle of the value chain, agricultural commodity traders are exposed to risks from both ends of it. If the producers they source from are not growing sustainably, they could see their future supply affected. And, on the other end, if they do not take measures to ensure the commodities they source and sell are deforestation free, not only could their customers sever ties with them, but also their lenders and investors.

This strategic position allows them to control what reaches the wider market, holding the key for transformation of the global commodities trade. The four companies are taking steps to begin this transformation, with commitments and policies related to removing deforestation from their supply chains. However, public scrutiny is still high and annual reporting is increasingly expected by the investor community. In 2015, shareholder resolutions were filed against ADM and Bunge to disclose their progress towards their deforestation goals. Both ADM and Bunge acted on the request and have joined Cargill, a participant since 2014, in reporting to CDP's forests program this year.

We encourage Louis Dreyfus to join the ranks of commodity traders reporting on their work towards a sustainable and transparent global trade in 2017.





Removing barriers to change and ensuring sustainable growth

Companies dependent on secure supplies of forest-risk commodities need to look both within themselves and to the external enabling environment to ensure their future sustainable growth. They need to ensure that their internal policies, processes and procedures are able to manage existing and potential commodity-related risks, but they also need to work with external stakeholders to ensure commodity supply chains are fit for purpose.

The external environment in which companies operate will influence the success, or otherwise, of their efforts to remove deforestation from their supply chains. Analysis of the most significant barriers and challenges reported by disclosing companies illustrate this point. The three most frequently cited issues are: inadequate traceability systems, weak governance (and compliance enforcement) of national deforestation policies, and limited availability of certified materials and their costs. These reported challenges have not changed since 2013.

For example, French retailer **Carrefour** reports that it struggles to source sufficient segregated, traceable palm oil in various markets, and that it is difficult to source products derived from palm oil that are sustainably certified. South African forestry firm **Mondi Plc.** warns that there is insufficient certified material to meet its growing demand. Meanwhile, UK retailer **Marks & Spencer Plc** notes that uneven regulation and patchy enforcement by government hinders corporate deforestation efforts.



Internal processes

Companies need to ensure that governance and risk assessment are equal to the challenge of meeting deforestation commitments. Disclosure to CDP suggests that many companies are falling short of minimum standards.

Governance

More than a third (34%) of reporting companies do not have the board of the company as the highest level of responsibility for deforestation risk management. As well as reducing deforestation-related risk, there is a positive business case for such oversight: companies with board-level responsibility identify 19% more opportunities than those that do not (Figure 3).

Risk assessment

Some companies are attempting to take a long view of commodity sourcing. Brazilian palm oil producer **Agropalma SA** has developed production forecasts stretching out 25 years, which are integrated into its replanting program to ensure adequate sustainable, certified supply.

However, fewer than half (42%) of disclosing companies have evaluated how the availability or quality of forest-risk commodities could affect their organization's growth strategy over the next five or more years.

And almost half (46%) of companies have not assessed the risks that changes in availability and quality of forest-risk commodities can pose to their business in the future.

Figure 3: Companies that report opportunities related to the sustainable production or sourcing of forest-risk commodities by their level of oversight of deforestation risk





Supplier relations

Companies also need to work more closely and effectively with their suppliers. For example, German consumer goods giant **Henkel AG** reports that it is providing targeted support to palm plantations and smallholders to promote sustainable farming practices, to improve livelihoods and to ensure that sufficient volumes of sustainable oil are available on the market.

Transparency at each stage of a supply chain is critical for meeting zero-deforestation commitments, yet fewer than half of companies audit their suppliers. Further, if monitoring and supplier selection is not followed up with audits, reviews, and improvement plans, for example, there is no guarantee that these internal practices will have the anticipated external effects. Audits can help embed best practice throughout supply chains. Finnish pulp and paper company **UPM-Kymmene Corporation** subjects second-tier suppliers to supplier audits, which it describes as “an excellent training opportunity”.

Lack of supplier disclosure and transparency can lead to missed opportunities as well as hidden risks. CDP’s Supply Chain Forests program provides a means for companies to enhance supplier transparency, helping them to deliver their deforestation commitments.



Peer co-operation

Companies working together to address market-wide issues that they struggle to address individually will accelerate efforts to drive deforestation out of commodity supply chains.

The Consumer Goods Forum shows how progress can be made by competitors working together in ‘pre-competitive’ spaces. The forum, which has identified deforestation as one of the key challenges it is seeking to address, gathers CEOs, providing crucial leadership for its work. However, the challenge then is ensuring that this leadership is effectively transmitted throughout the organizations involved¹³.

Similarly, the Tropical Forest Alliance 2020 (TFA 2020) brings together companies, governments and civil society groups to reduce deforestation associated with the production and sourcing of forest-risk commodities.

Examples of peer co-operation from disclosing companies include UK publisher **Pearson Plc** working with three of its North American competitors in the SFI Forest Partners Program, which works with smaller landowners to increase the acreage of certified forestland. And French retailer **Carrefour** has worked with Brazil-based food processing firm **Marfrig Global Foods S.A.** to establish the ‘Alianza dal Pastizal’, through which beef suppliers commit to animal welfare and environmental protection standards that go beyond regulatory requirements.



Landscape approaches

In addition, some companies are attempting to tackle deforestation through landscape or jurisdictional approaches. Both have the potential to address a number of challenges identified with regards to the sourcing of sustainable forest-risk commodities.

Landscape approaches aim to meet the needs of the different stakeholders within a landscape by moving away from the sectoral approach to land management, by seeking to address competing social, economic and environmental objectives simultaneously. A jurisdictional approach is a type of landscape approach that uses government administrative boundaries (usually sub-national) to define the scope of action and involvement of stakeholders – which can include companies operating and sourcing from the jurisdiction.

An increasing number of companies are interested in exploring these approaches to sourcing certain commodities. For example, **Unilever Plc** has announced that it is to prioritize commodity sourcing from areas that are pursuing comprehensive forest climate programs, under what it describes as ‘production protection paradigms’. Such approaches allow the company to improve the security of the supply chain within specific landscapes while making monitoring and verifying environmental and social impacts more straightforward, compared with monitoring each plantation individually¹⁴.

¹³ For more detail, see *Turning Collective Commitment in Action: Assessing progress by Consumer Goods Forum members towards achieving deforestation-free supply chains*. GCP & CDP, 2016

¹⁴ Acting on climate change by eliminating deforestation, Unilever, 2016

Removing barriers to change and ensuring sustainable growth



Political momentum

Companies are also, in many cases, seeing an encouraging response from policymakers. Political momentum at the international level has provided greater certainty and, while governance issues persist in many countries, some governments are using bilateral agreements to tackle the issue of illegal timber and are starting to realize results. For example, we welcome the 2016 issuance of the first EU Forest Law Enforcement Governance and Trade licenses for timber resulting from the EU and Indonesia Voluntary Partnership (VPA), a participatory process that prioritized improvements to regulatory governance.

Voluntary action by companies can be accelerated and increased to the necessary pace and scale when governments provide enabling policy environments. A 'virtuous circle' can be created where governments encourage companies to act, companies respond to policy signals and take action, and this in turn enables governments to set more ambitious timeframes for reducing deforestation.



The challenge and opportunities we face

Such progress notwithstanding, a real danger exists that, as the 2020 target date for many corporate deforestation commitments approaches, we find that many of the existing issues and challenges identified by CDP's forests program remain unresolved. The commitment is there, the political stage is set, but too few companies are grasping the extent of the risks they face – or the opportunities that exist to build more resilient businesses and differentiate themselves from their competitors.

These opportunities include the generation of additional business and more loyal customers, as cited by UK construction company **Interserve Plc.**; building stronger relationships with supply chain partners that can stimulate new revenue streams, mentioned by UK fashion firm **Burberry Group Plc**; and an increase in brand value, shown in the €2 billion growth in market cap cited by **UPM-Kymmene Corporation**. They also include improved staff retention, believes Swedish fashion retailer **H&M Hennes & Mauritz**, and a general increase in stakeholder trust, says **Dunkin' Brands Group**.

There are steps that companies can take now to start to take advantage of these opportunities, mitigate the very real business risks that exist, and deliver on their commitments to protect the world's forests. We call on companies to:

Ask for transparency and disclosure from suppliers

Companies' supply chains present the biggest deforestation risks, and the largest potential opportunities. However, without adequate transparency, companies are in no position to assess these risks or identify opportunities. Major companies should request – and then require – that their suppliers disclose information about deforestation risks and opportunities. Such transparency should be a first step in collaboration to address problems and seize opportunities. In doing so, companies can implement the necessary change at scale. To this end, CDP has established a platform to enable high-impact purchasing companies to engage their suppliers on deforestation risk: CDP Supply Chain – Forests.

Bring deforestation to the board room

Leadership from the very top is necessary both to change corporate behavior, and to send a clear message to suppliers and customers about the importance of tackling deforestation. However, board-level oversight of deforestation risk varies globally. Risk assessments that are comprehensive and company-wide will ensure that deforestation risk reaches the very top.

Work cross-sectorally to find solutions

To address the barriers to securing sustainable, deforestation-free commodities will involve working across sectors and with customers, governments and civil society. This means making the most of existing pre-competitive platforms, exploring new collaborations and innovative approaches linking commodity production and forest protection and entering into public-private partnerships. For example, companies might consider becoming a partner of the Tropical Forest Alliance 2020, such as Mars and Sime Darby, to connect with governments and civil society groups from demand and producer countries to work pre-competitively on specific initiatives.

There is enormous potential for business to act decisively to address deforestation, generating profound environmental and social benefits, in ways that confer tangible business benefits. This year's disclosures to CDP's forests program once more illustrate the efforts and innovation underway to drive deforestation risk out of corporate supply chains. The challenge now is to double down on these efforts and work with suppliers, customers, governments and other stakeholders to halt deforestation in its tracks.



Manage deforestation risk with CDP Supply Chain - Forests

What current CDP Supply Chain members say



We encourage our suppliers to measure, reduce and report their climate change and water-related impacts and strategies through CDP. A factor of our success in driving supplier performance and ambition in these areas is that it is no longer solely our environmental experts who discuss these issues and areas for improvement with suppliers; purchasers trained in this area have now also become ambassadors.

L'Oréal



Supplier disclosure provides the building blocks for organizations to manage and reduce their exposure to deforestation risk at scale. Now, for the first time, CDP is offering companies the opportunity to gather supplier information in a standardized and comparable format on the risks of producing or sourcing timber products, palm oil, soy and cattle products.

We go beyond simply collecting data and provide active support to help manage and reduce exposure to deforestation issues. Purchasing organizations can use their authority to illuminate supply chain blind spots and, through this, reduce the operational, regulatory and reputational risks associated with deforestation.

Currently 89 member organizations are working with over 4,000 suppliers on climate change and water security. Building on CDP Supply Chain program's proven record of positive results in these areas, Supply Chain – Forests will lead both purchasing organizations and suppliers on a journey towards deforestation-free supply chains.

CDP Supply Chain - Forests offers:

▼ A framework and platform through which your suppliers disclose deforestation risk information in a standardized way;

- ▼ Translation of goals and ambitions with regards to deforestation into measurable metrics;
- ▼ An online dashboard highlighting trends per sector and commodity information;
- ▼ Custom reports on suppliers already disclosing to kick-start strategic thinking;
- ▼ Guidance and support for suppliers throughout the disclosure process;
- ▼ Feedback to suppliers to improve how they manage deforestation risk after disclosure;
- ▼ Engaging capacity-building activities;
- ▼ A suite of tools for analysis and specialized products helping you explore your data;
- ▼ Reduction of reporting burden for both you and your supplier; and
- ▼ The opportunity to help drive development of the program from its inception.

For more information on membership and subscription options, or any other questions regarding the program; please contact matthew.slate@cdp.net



Commodity snapshots

Timber products in 2016



At Pearson we have found CDP to be an important ally for the sustainability team. CDP provides an efficient and respected mechanism to share our forest management performance with investors as well as to raise awareness with executive management.

**Peter Hughes,
Director of
Sustainability at Pearson**



What is at stake?

Companies report that, on average **39%** of company revenue is dependent upon timber products.

For publicly listed companies, the revenue dependent on timber products at risk is estimated to be up to **US\$620 billion**.

Risks

% of companies reporting on timber that recognize operational, reputational and regulatory risks in the supply chain with the potential to generate a substantive change in business operations, revenue or expenditure.

Operational



“As resources are limited, we believe that a stable supply of forest resources exerts a significant impact on business. Physical risk factors emanating from forest resources are various, including temperature and precipitation patterns, and the frequency of occurrence makes forecasting impossible.”

Dai Nippon Printing Co. Ltd

Reputational



“Forests fires started by third parties, such as community or land speculators using slash-and-burn methods to clear land, have negatively impacted our brand in the international market due to the resulting haze problem that impacted neighbouring countries.”

APP

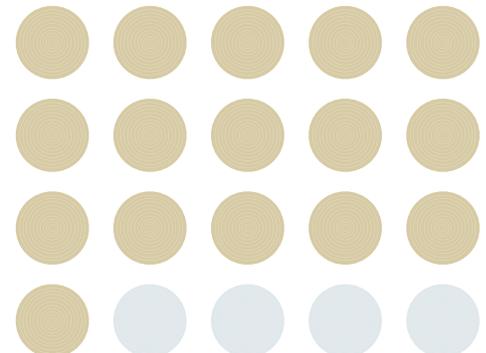
Regulatory



Illegal logging continues to be a problem globally. For example, the US government has found that 90% of timber imported from Peru is illegally sourced due to deficiencies in the implementation of Peruvian forestry laws¹⁵, posing a risk to both Peruvian producers and US consumers as the supply of timber is jeopardized.

Confidence in future commodity supply

80% of companies reporting on timber have identified there to be sufficient sources of sustainable material to meet future operational needs.



¹⁵ Statement Regarding July 2016 Timber Verification Report from Peru, Interagency committee on trade in timber products from Peru, US Government, 2016



The long-term robustness of any wood fibre traceability system depends on the paper suppliers providing the necessary data. Without this, all elements of the supply chain are exposed to the non-participation of some suppliers. There is a structural challenge in this reality.

DS Smith Plc.



Actions towards a deforestation-free supply chain

- 77% of companies reporting on timber use certification schemes.
- 45% of manufacturers and retailers reporting on timber are able to trace back their production or consumption of timber products to the point of origin; 54% have over 90% traceability of their production or consumption.
- 86% of manufacturers and retailers report to work with their direct suppliers. 45% audit them, 27% run workshops and training for them, 16% do joint projects and 3% offer technical support.



- Supplier audits
- Joint projects
- Workshops and training
- Technical support

Opportunities

- 86% of companies reporting on timber recognize opportunities related to the sustainable production or sourcing of this commodity; 54% have already experienced some.

Leadership level for timber products

A Score

Hewlett-Packard
Inditex
L'Oréal
Mondi PLC
SCA
TETRA PAK
Unilever
UPM-Kymmene Corporation

A- Score

BillerudKorsnäs
Crest Nicholson PLC
Dai Nippon Printing Co., Ltd.
DS Smith Plc
FIBRIA Celulose S/A
Holmen
JBS S/A
KAO Corporation
Kimberly-Clark Corporation
Kimberly-Clark de México S.A.B. de C.V.
Kingfisher
Klabin S/A
Marks and Spencer Group plc
Mazda Motor Corporation
Metsä Board
Nestlé
News Corp
Obrascon Huarte Lain (OHL)
Oriflame Cosmetics AB
RELX Group
Reynolds American Inc.
Royal BAM Group nv
Sappi
Sodexo



Commodity snapshots

Palm Oil in 2016



We evaluated the disclosure value for our business and also for our stakeholders that would be obtained from various disclosure platforms, and CDP scored highly for us. This led us to our decision to report through CDP.

**Lim Shu Ling,
Head of Sustainability
Communications at
Golden Agri-Resources Ltd**



What is at stake?

Companies report that, on average **24%** of company revenue is dependent upon palm oil.

For publicly listed companies, the revenue dependent on palm oil at risk is estimated to be up to **US\$217 billion**.

Risks

% of companies reporting on palm oil that recognize operational, reputational and regulatory risks in the supply chain with the potential to generate a substantive change in business operations, revenue or expenditure.

Operational



Research shows that by not meeting buyers' 'No Deforestation, No Peat, No Exploitation' policies, palm oil growers are losing revenue while putting future operations at risk due to the loss of contracts¹⁶.

Reputational



"The environmental and social impacts of palm oil are well publicised as drivers of deforestation, loss of biodiversity and climate change. If Burberry's products were found to contain unsustainable palm, this would have a negative impact on Burberry's reputation and reduce revenue."

Burberry Group

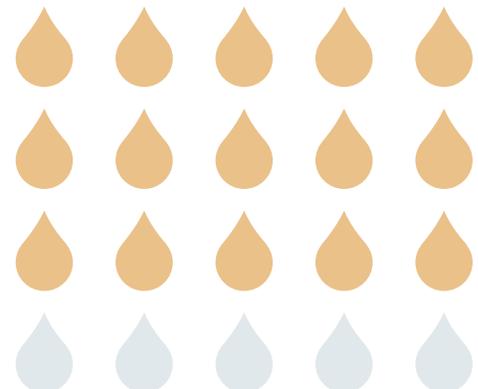
Regulatory



The government of Indonesia's recent pledge to blend 25% palm oil in their diesel fuel by 2020 is likely to lead to competing interests for palm oil¹⁷, boosting demand resulting in lower quantity available for export. This is an important transition to be considered by palm oil buyers when planning a long-term, sustainable supply of palm oil.

Confidence in future commodity supply

75% of companies reporting on palm oil say they have identified sufficient sources of palm oil for future operational needs.



¹⁶ Palm oil revenue at risk, Chain Reaction Research, 2016
¹⁷ Will Indonesia's new palm oil subsidy undermine no-deforestation push? Mongabay, 2015



Reducing deforestation risks in our palm oil supply chain is an opportunity for differentiation, enhanced reputation and reinforcement of partnerships with suppliers and stakeholders. This is a company-wide opportunity, and leads to an increase in our brand value.

Jerónimo Martins SGPS



Actions towards a deforestation-free supply chain

- 77% of companies reporting on palm oil use certification schemes; 56% of those use GreenPalm certificates. 43% of companies use RSPO segregated or identity preserved certification.
- 45% of manufacturers and retailers are able to trace back their production or consumption of palm oil to the mill or plantation; only 26% can trace over 90% of their production or consumption.
- 87% of manufacturers and retailers report to work with their direct suppliers. 37% audit them, 31% run workshops and training for them, 17% do joint projects and 9% offer technical support.



By involving our oleochemical's suppliers in a traceability investigation, we are able to break the opacity of the market among suppliers. Increasing transparency along the supply chain and working with committed suppliers allows us to optimize the number of traders and direct suppliers, therefore increasing the efficiency of our business processes.

L'Oréal



- Supplier audits
- Joint projects
- Workshops and training
- Technical support

Opportunities

- 85% of companies reporting on palm oil recognize one or more opportunities related to the sustainable production or sourcing of this commodity; 48% have already experienced some.

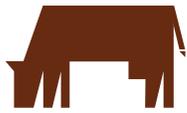
Leadership level for palm oil

A Score

L'Oréal
Unilever

A- Score

Ajinomoto Co. Inc.
Cargill
Croda International
Delhaize Group
General Mills Inc.
J Sainsbury Plc
Jerónimo Martins SGPS SA
KAO Corporation
Kellogg Company
Marks and Spencer Group plc
Neste Corporation
Nestlé
Sodexo
Wilmar International Limited
Woolworths Holdings



Commodity snapshots

Cattle Products in 2016



Brazilian environmental legislation is one of the most advanced in the world, but enforcement is still an obstacle so it can be effectively fulfilled. The issues about areas of environmental reserves and indigenous land in Brazil is also a challenge given the constant changes in boundaries and conflicts between producers and local populations. There is still difficulty in updated information and accurate data collection in both government and civil entities to support and plan future actions.

Minerva Foods



What is at stake?

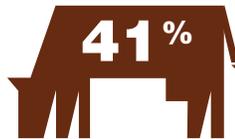
Companies report that, on average **18%** of company revenue is dependent upon cattle products.

For publicly listed companies, the revenue dependent on cattle products at risk is estimated to be up to **US\$137 billion**.

Risks

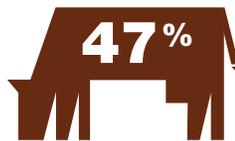
% of companies reporting on cattle products that recognize operational, reputational and regulatory risks in the supply chain with the potential to generate a substantive change in business operations, revenue or expenditure.

Operational



The deforestation in the Cerrado region is estimated to have released 1,449 million metric tons of carbon dioxide between 2003-2008¹⁸, which is perpetuated heavily by deforestation as a result of cattle ranching. The alarming rate of deforestation threatens the future supply of a company's commodity if sourced from these regions.

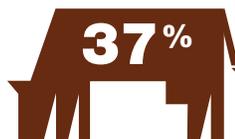
Reputational



"There is a risk of reputational damage if we did not have strict sourcing policies that provide a degree of protection against global/national food traceability incidents, such as the horse meat scandal in recent years. We rely on our sourcing and traceability policies to mitigate this risk."

Eurostar

Regulatory

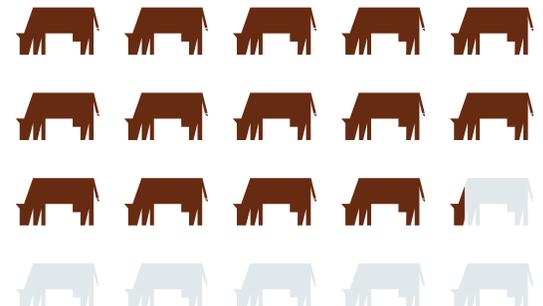


"The implementation of the Brazilian Forest Code and the requirement for farmers to officially register their land poses a regulatory risk. Farms which do not register will face challenges raising finance and could potentially be prevented from supplying the market, hence this will affect their production."

J Sainsbury Plc

Confidence in future commodity supply

71% of companies reporting on cattle products say they have identified sufficient sources of sustainable material to meet future operational needs.





We are able to increase our brand value through acting towards third party certification and stakeholder consultation: through these discussions, we have the opportunity to push large suppliers to adopt the same policy as Carrefour, and then to enable the development of products compliant with our ambitious policy which in turn increases our brand value.

Carrefour



Actions towards a deforestation-free supply chain

- ▼ **8%** of companies reporting on cattle products use certification schemes.
- ▼ **53%** of manufacturers and retailers are able to trace over 90% of their cattle products they source or produce; while only **20%** have traceability back to the farm.
- ▼ **78%** of manufacturers and retailers report to work with their direct suppliers. **38%** audit them, **29%** run workshops and training for them, **7%** do joint projects and **2%** offer technical support.



- ▼ Supplier audits
- ▼ Joint projects
- ▼ Workshops and training
- ▼ Technical support

Opportunities

- ▼ **69%** of companies reporting on cattle products recognize one or more opportunities related to the sustainable production or sourcing of this commodity; **43%** have already experienced some.

Leadership level for cattle products

A Score

Unilever

A- Score

Inditex

JBS S/A

Kering

Marfrig Global Foods S/A

Marks and Spencer Group plc

Nestlé

Sodexo

Case study: JBS

Traceability and collaboration to secure deforestation-free supply



We frequently sit down with Greenpeace, and our competitors, to discuss how we can make the [Cattle] Agreement more robust, and how we can bring together the rest of our value chain.

**Márcio Nappo,
Director of
Sustainability at JBS**



For Brazil-based JBS, the world's largest meat processor, its cattle sustainability strategy has two related objectives: ensuring that it isn't sourcing any of its raw materials from deforested land or from suppliers breaching the labor rights of their employees; and working with its suppliers to help guarantee sufficient volumes of sustainable raw material.

The company's efforts in this area date back to the so-called 'Cattle Agreement' with Greenpeace to not source from farms linked to deforestation in the Amazon biome or using slave labor after 2009. To do so, JBS has developed a social and environmental monitoring system that allows it to monitor the regulatory status of some 70,000 cattle ranchers daily. "We verify, every single day, that our suppliers are in compliance," says Marcio Nappo, the company's São Paulo-based corporate director of sustainability.

That system cross-references suppliers against government lists of employers fined for breaking slave-labor laws and areas of illegal deforestation. It then overlays geo-referenced maps provided by the ranch manager or by Brazil's CAR (Rural Environmental Registry), on deforestation satellite images or maps from public agencies such as INPE (the National Institute of Space Research). This allows JBS to confirm they are not responsible for deforestation or encroaching on indigenous land.

For those without digital maps of their property, JBS runs a program to generate one, at no cost to the supplier. Its Easy Map system involves a short session with a JBS employee in which the rancher traces their property boundary on a tablet.

Another element of the support that JBS provides is its Legal Supplier Program. The company has created a network of environmental consultants that can offer low-cost, quality-assured help to ranchers to ensure they meet government requirements around land-use disclosure. "JBS works as a channel to bring together suppliers who need technical assistance, and the environmental consultants who can provide it," says Nappo.

An important element of JBS's sustainability supply strategy is its participation in the Novo Campo – or 'New Field' – program. This initiative, launched in 2013 by Brazilian not-for-profit Instituto Centro de Vida (ICV), encourages ranchers to adopt sustainable practices with a view to increasing productivity and

quality, thus reducing the need for additional grazing land. It also helps ranchers reforest degraded land, ensuring they meet the requirements of the Forest Code.

The program generates significant benefits for suppliers. A pilot scheme, covering just 5-10% of the land of six farms, cut methane emissions in half across the entire farm, reduced the slaughtering age, and doubled productivity, leading to increases in annual gross margin from R\$0-100 to R\$600 per hectare.

JBS's participation in the program has also had tangible benefits to its own business: this year, McDonald's partnered with JBS to produce a verified sustainable hamburger from suppliers within the Amazon participating in the Novo Campo program, says Nappo.

"The JBS vision of the future of livestock farming in Brazil is about increasing productivity, improving the quality of the raw material, and addressing the sustainability of cattle farms. It's a very integrated view," says Nappo.

JBS also recognizes the need to work with its competitors and customers to drive deforestation out of the livestock supply chain in Brazil. He notes that the Cattle Agreement, with the three largest meat processors, only covers around half of the marketplace. "We frequently sit down with Greenpeace, and our competitors, to discuss how we can make the agreement more robust, and how we can bring together the rest of our value chain."

"Given our scale of operation and the leadership position we have taken, JBS can be a 'game-changer' in several issues across the beef value chain ... We can influence the entire supply chain over time to prevent deforestation, one of the most important sources of greenhouse emissions in Brazil," Nappo adds.

The latest front is Brazil's retail sector. Last year, Greenpeace launched a campaign to encourage the big supermarkets to verify the sources of their meat. "Since that campaign, the three largest supermarkets in Brazil, responsible for 40% of the retail beef market, have made an agreement with Greenpeace. We're working with them to bring the rest of the industry into this zero-deforestation commitment."



Given our scale of operation and the leadership position we have taken, JBS can be a ‘game-changer’ in several issues across the beef value chain ... We can influence the entire supply chain over time to prevent deforestation, one of the most important sources of greenhouse emissions in Brazil.

**Márcio Nappo,
Director of Sustainability at JBS**





Commodity snapshots

Soy in 2016

What is at stake?

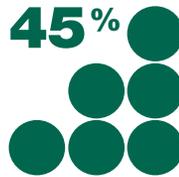
Companies report that, on average **16%** of company revenue is dependent upon soy.

For publicly listed companies, the revenue dependent on soy at risk is estimated to be up to **US\$167 billion**.

Risks

% of companies reporting on soy that recognize operational, reputational and regulatory risks in the supply chain with the potential to generate a substantive change in business operations, revenue or expenditure.

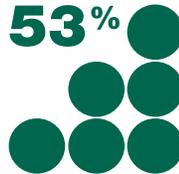
Operational



“Droughts have impacted soy production in major growth regions which affects global supply. This has previously increased the price of soy which then impacts upon the feed process. The price of feed is an important aspect of the cost of rearing animals and meat and dairy production.”

J Sainsbury Plc

Reputational



“JBS is exposed to reputational risks in a potential situation of purchasing soy from areas with illegal deforestation that could adversely affect the company’s image, with a large damage to its brand resulting in loss of markets, trade embargo and termination of contracts. The side effects of these events would be a consequent revenue and profits decrease.”

JBS S/A

Regulatory

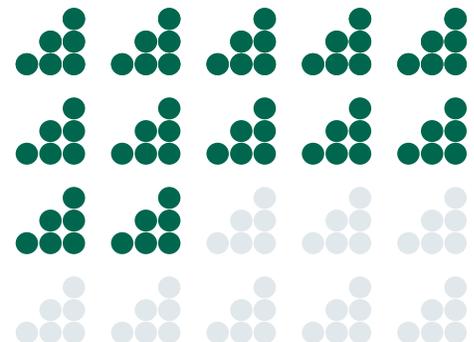


“Regulatory changes that could impact our work towards our no deforestation targets include the implementation of the Forest Code in Brazil.”

Delhaize Group

Confidence in future commodity supply

60% of companies reporting on soy have identified sufficient sources of sustainable material to meet future operational needs





Operating sustainably gives us the opportunity to be a pioneer in the market, especially in Europe. We recognise that sustainability practices must be a concern to everyone in the production chain.

Grupo André Maggi



Actions towards a deforestation-free supply chain

- ▼ **40%** of companies reporting on soy use certification schemes.
- ▼ **12%** of manufacturers and retailers are able to trace back the soy they source or produce to the farm or plantation; **28%** are able to trace over 90% of their production or consumption.
- ▼ **72%** of manufacturers and retailers report to work with their direct suppliers. **22%** audit them, **26%** run workshops and training for them, **18%** do joint projects and **8%** offer technical support.



- ▼ Supplier audits
- ▼ Joint projects
- ▼ Workshops and training
- ▼ Technical support

Opportunities

- ▼ **66%** of companies reporting on soy recognize opportunities related to the sustainable production or sourcing of this commodity; **34%** have already experienced some.

Leadership level for soy

A Score

Unilever

A- Score

JBS S/A

L'Oréal

Marks and Spencer Group plc

Nestlé

Communicating progress on managing deforestation risk

We would like to congratulate all of the companies that responded to our program in 2016, providing vital deforestation risk-related information to investors. For the first time this year, CDP's forests program is publishing the scores achieved by requested companies responding publicly to the 2016 forests information request¹⁹. Those companies that received a leadership status for any of the commodities they reported on are featured on the commodity pages (page 22 to 31). We are proud to have had South Pole Group as our Global Forests Scoring Partner in 2016.

The scoring methodology is based on four consecutive levels, representing the steps a company takes as it progresses towards leadership in deforestation risk management. The levels are: Disclosure; Awareness; Management; and Leadership. A company needs to achieve a minimum score on each level in order to be assessed on the following one. Sections of the questionnaire of most importance to data users carry more weight and each commodity a company reports on receives a separate score.

Every element in the questionnaire is scored for Disclosure, which measures the completeness of the company's response, making no judgement on the quality of the answers. The Awareness score measures the extent to which the company has assessed deforestation-related issues, risks and impacts from sourcing or producing forest-risk commodities. A company should consider the importance of forest-risk commodities to their organization, and the potential impact their organization has on deforestation. This level does not assess or measure action to manage deforestation risk, but rather whether the company has an understanding of these issues in relation to its own

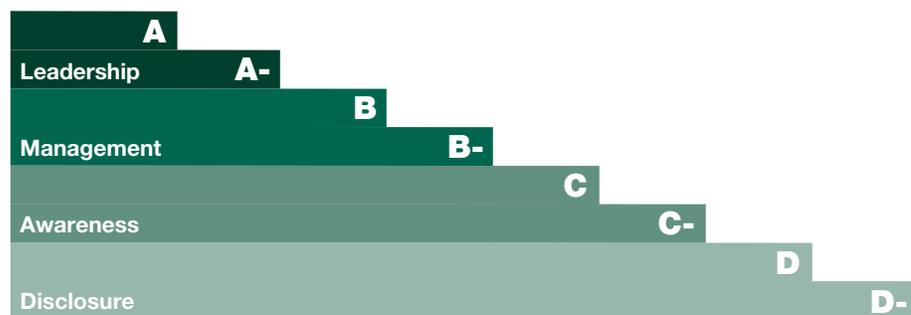
business. The Management score measures the extent to which the company has implemented actions, policies and strategies to address deforestation-related risk, such as having a defined policy or commitment, undertaking regular risk assessments that feed into business strategy, and having clear targets and goals that it can meet. For Leadership status, the company must demonstrate that it is undertaking actions that are considered best practice in deforestation risk management, as is currently understood by CDP, and informed through consultation with other stakeholders working in the field of deforestation risk management.

CDP's forests score is an indicator of a company's commitment to transparency around their deforestation risks and how they are managing and mitigating them. CDP's forests score is based solely on activities and positions disclosed in their CDP response. However, RepRisk, a business intelligence provider specializing in ESG risks, provides CDP with additional risk research and data into the proposed leadership companies to assess whether any severe reputational issues could put this status into question. Companies eligible for an A are those that achieve 75% of the points available in the leadership band and have met the leadership criteria stated in our publicly available scoring methodology²⁰, which includes submitting a public response.

However, not all companies requested to respond to CDP do so. Companies that are requested to disclose their data and fail to provide sufficient information to CDP in order for us to evaluate their performance, have received an F. An F does not indicate a failure in terms of environmental stewardship and does not indicate that the company does not provide environmental information through other sources.

Score levels:

The levels build consecutively from Disclosure to Leadership. A threshold of 75% in a lower level has to be passed before a company is scored for the next level. For more information, please see our [Introduction to Scoring](#).



"F" indicates a failure to provide sufficient information to CDP in order for us to evaluate performance. It does not indicate a failure in terms of environmental stewardship and does not indicate the company does not provide environmental information through other sources, but only through CDP reports.

¹⁹ Some self-selected companies have opted to have their score made public; these are included on pages 33-38.
²⁰ A comprehensive view of our benchmarking criteria can be found in CDP's Forests Scoring Methodology available via CDP's website: www.cdp.net

Join our participating companies

Company Name	Country	Company score
Agricultural Production		
Agropalma	Brazil	Palm Oil (Not scored)
Archer Daniels Midland*	USA	Timber (B-), Palm Oil (B), Soy (B)
Barry Callebaut AG*	Switzerland	Palm Oil (C-), Cattle Products (D), Soy (D)
Bunge*	USA	Palm Oil, Soy (Private score)
Cargill	USA	Palm Oil (A-), Soy (C)
Golden Agri-Resources*	Singapore	Palm Oil (B)
Grupo André Maggi	Brazil	Timber, Cattle Products, Soy (Private score)
JBS S/A	Brazil	Timber (A-), Cattle Products (A-), Soy (A-)
Marfrig Global Foods S/A	Brazil	Timber (B), Palm Oil (D), Cattle Products (A-), Soy (B)
Minerva Foods*	Brazil	Cattle Products (B)
Olam International	Singapore	Timber (B), Palm Oil (B)
Permata Hijau Group*	Singapore	Palm Oil (Private score)
PT Musim Mas	Indonesia	Palm Oil (Private score)
Sime Darby Bhd	Malaysia	Palm Oil (Private score)
SLC Agricola SA*	Brazil	Soy (C)
Wilmar International Limited	Singapore	Palm Oil (A-)
Automobiles and Components		
Fiat Chrysler Automobiles NV	Italy	Timber, Cattle Products (Private score)
Fuji Heavy Industries Ltd.*	Japan	Timber (Not scored)
Isuzu Motors Limited*	Japan	Timber (Not scored)
Johnson Controls	USA	Timber, Palm Oil, Cattle Products, Soy (Private score)
Mazda Motor Corporation	Japan	Timber (A-), Cattle Products (C)
Suzuki Motor Corporation	Japan	Timber (Private score)
Consumer Durables, Household and Personal Products		
Avon Products, Inc.	USA	Timber (C-), Palm Oil (C)
Church & Dwight Co., Inc*	USA	Palm Oil (Private score)
Clorox Company	USA	Timber, Palm Oil, Soy (Private score)
Colgate Palmolive Company	USA	Timber (B), Palm Oil (B), Cattle Products (B), Soy (B)
Cosmax Inc*	South Korea	Timber, Palm Oil, Cattle Products, Soy (Not scored)
Henkel AG & Co. KGaA	Germany	Timber (C), Palm Oil (C)
Johnson & Johnson	USA	Timber, Palm Oil (Not scored)
KAO Corporation	Japan	Timber (A-), Palm Oil (A-)
Kimberly-Clark Corporation	USA	Timber (A-)
Kimberly-Clark de México S.A.B. de C.V.	Mexico	Timber (A-)
L'Oréal	France	Timber (A), Palm Oil (A), Soy (A-)
Natura Cosméticos SA	Brazil	Timber (B), Palm Oil (B)
Oriflame Cosmetics AB	Sweden	Timber (A-), Palm Oil (B)
Reckitt Benckiser	United Kingdom	Timber, Palm Oil, Cattle Products, Soy (Private score)
SCA	Sweden	Timber (A)
Shiseido Co., Ltd.	Japan	Timber (B), Palm Oil (B), Soy (B)
Sofidel S.p.A.	Italy	Timber (Private score)

Company Name	Country	Company score
Uni-Charm Corporation	Japan	Timber (C), Cattle Products (C)
Unilever plc	United Kingdom	Timber (A), Palm Oil (A), Cattle Products (A), Soy (A)
Energy		
Neste Corporation	Finland	Palm Oil (A-), Cattle Products (B), Soy (B)
Food, Beverage and Tobacco Processing		
Ajinomoto Co.Inc.*	Japan	Timber (B), Palm Oil (A-), Soy (B)
Altria Group, Inc.*	USA	Timber (C)
Associated British Foods	United Kingdom	Timber (C), Palm Oil (C), Soy (C)
B&G Foods, Inc.	USA	Palm Oil, Cattle Products, Soy (Private score)
Barilla Holding SpA*	Italy	Timber (B), Palm Oil (B)
Chocoladefabriken Lindt & Sprüngli AG	Switzerland	Palm Oil (Private score)
Danone	France	Timber (B), Palm Oil (B), Soy (B)
General Mills Inc.	USA	Timber (C), Palm Oil (A-)
Greencore Group PLC	Ireland	Timber, Palm Oil (Private score)
Grupo Bimbo, S.A.B. de C.V.	Mexico	Palm Oil (Private score)
Grupo Herdez	Mexico	Timber, Soy (Not scored)
Grupo Lala*	Mexico	Timber (Private score)
Intersnack Group GmbH & Co. KG*	Germany	Palm Oil (Not scored)
Kellogg Company	USA	Timber (B), Palm Oil (A-)
Maple Leaf Foods Inc.	Canada	Palm Oil, Cattle Products, Soy (Not scored)
Mars	USA	Timber (C), Palm Oil (C), Cattle Products (C), Soy (C)
McCormick & Company, Incorporated	USA	Soy (B-)
Mead Johnson Nutrition Company	USA	Palm Oil (C)
Nestlé	Switzerland	Timber (A-), Palm Oil (A-), Cattle Products (A-), Soy (A-)
NH Foods Ltd.	Japan	Cattle Products (Private score)
Orion	South Korea	Palm Oil (Not scored)
Orkla ASA	Norway	Timber (C), Palm Oil (C), Soy (C)
PepsiCo, Inc.	USA	Timber (B-), Palm Oil (B-)
Reynolds American Inc.*	USA	Timber (A-)
Smithfield Foods, Inc.	USA	Timber (Not scored)
SunOpta Inc.	Canada	Timber, Palm Oil, Soy (Private score)
The Hain Celestial Group, Inc.	USA	Timber, Palm Oil, Soy (Private score)
The Hershey Company	USA	Timber (C), Palm Oil (C)
The Kraft Heinz Company*	USA	Palm Oil (C)
WhiteWave Foods*	USA	Timber, Palm Oil, Soy (Private score)
Food and Staples Retailing		
Boots UK	United Kingdom	Timber, Palm Oil, Cattle Products, Soy (Private score)
Carrefour	France	Timber (B), Palm Oil (B), Cattle Products (C), Soy (B)
Delhaize Group	Belgium	Timber (B), Palm Oil (A-), Soy (B)
Empire Company Limited	Canada	Timber, Palm Oil (Not scored)
J Sainsbury Plc	United Kingdom	Timber (B) , Palm Oil (A-), Cattle Products (B), Soy (B)

Company Name	Country	Company score
Jerónimo Martins SGPS SA	Portugal	Timber (B) , Palm Oil (A-), Cattle Products (B), Soy (B)
Kesko Corporation	Finland	Timber (C) , Palm Oil (C), Cattle Products (C-), Soy (C)
Koninklijke Ahold	Netherlands	Timber, Palm Oil, Cattle Products, Soy (Private score)
Pick 'n Pay Stores Ltd	South Africa	Palm Oil, Soy (Private score)
Raia Drogasil SA	Brazil	Palm Oil (D)
Tesco	United Kingdom	Timber (C), Palm Oil (C), Cattle Products (D), Soy (C)
Wesfarmers	Australia	Timber (C), Palm Oil (C), Cattle Products (C), Soy (D)

Hotels, Restaurants and Leisure, and Tourism Services

Asea of Mexico	Mexico	Cattle Products, Soy (Private score)
Compass	United Kingdom	Timber, Palm Oil, Cattle Products, Soy (Private score)
Dunkin' Brands Group*	USA	Timber (C), Palm Oil (C)
Marriott International, Inc.*	USA	Timber, Cattle Products (Not scored)
McDonald's Holdings Company (Japan), Ltd.*	Japan	N/A**
McDonald's Corporation	USA	Timber (B), Palm Oil (B), Cattle Products (C), Soy (B)
Minor International PCL*	Thailand	Timber, Palm Oil, Cattle Products, Soy (Private score)
Sodexo	France	Timber (A-), Palm Oil (A-), Cattle Products (A-), Soy (B)
Starbucks Corporation*	USA	Timber, Palm Oil, Cattle Products, Soy (Private score)
Thomas Cook Group	United Kingdom	Timber (C-)

Industrials

Arcadis*	Netherlands	Timber (B)
Bellway Plc	United Kingdom	Timber (Private score)
Brambles	Australia	Timber (B)
China State Construction International Holdings Ltd*	China	Timber (C)
Crest Nicholson PLC*	United Kingdom	Timber (A-)
Croda International	United Kingdom	Palm Oil (A-)
Dai Nippon Printing Co., Ltd.	Japan	Timber (A-)
Daito Trust Construction Co., Ltd.	Japan	Timber (B), Palm Oil (B), Cattle Products (B-), Soy (B)
Herman Miller*	USA	Timber (B)
Interserve Plc*	United Kingdom	Timber (B), Palm Oil (C), Cattle Products (C), Soy (C)
ITOCHU Corporation	Japan	Timber, Palm Oil (Private score)
Kajima Corporation	Japan	Timber (B)
KBR Inc	USA	Timber (D)
Kingspan Group PLC	Ireland	Timber (B)
Kokuyo Co., Ltd.	Japan	Timber (Private score)
Marubeni Corporation	Japan	Timber, Palm Oil, Cattle Products, Soy (Private score)
Masco Corporation*	USA	Timber (Not scored)
Mitsubishi Corporation	Japan	Palm Oil (Private score)
Mitsui & Co., Ltd.*	Japan	Timber (Private score)
Nagase & Co., Ltd.*	Japan	Timber (C-)
Nobia*	Sweden	Timber (Private score)
Obrascon Huarte Lain (OHL)	Spain	Timber (A-)

Company Name	Country	Company score
Plum Creek Timber Co. Inc.*	USA	N/A**
Royal BAM Group nv*	Netherlands	Timber (A-)
Saint-Gobain	France	Timber (Private score)
Sekisui Chemical Co., Ltd.	Japan	Timber (B)
Sekisui House, Ltd.	Japan	Timber (B)
Skanska AB	Sweden	Timber (Private score)
Sojitz Corporation	Japan	Timber (Private score)
Symrise AG*	Germany	Timber, Palm Oil (Private score)
Taisei Corporation	Japan	Timber (C)
The Dow Chemical Company*	USA	Timber (C), Palm Oil (C)
Transcontinental Inc.	Canada	Timber (B)
Travis Perkins	United Kingdom	Timber (B), Cattle Products (C)

Information Technology

Hewlett-Packard	USA	Timber (A)
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Materials

Ahlstrom Corporation	Finland	Timber (C)
Amcor	Australia	Timber (B)
Asia Pulp & Paper	Indonesia	Timber (B)
BillerudKorsnäs	Sweden	Timber (A-)
Catalyst Paper Corporation	Canada	Timber (B)
Domtar Corporation	Canada	Timber (Private score)
DS Smith Plc	United Kingdom	Timber (A-)
Empresas CMPC*	Chile	Timber (Not scored)
Evergreen Packaging Inc.,	USA	Timber (Private score)
FIBRIA Celulose S/A	Brazil	Timber (A-)
Holmen	Sweden	Timber (A-)
International Paper APPM Ltd.	India	Timber (Not scored)
International Paper Company	USA	Timber (Not scored)
Klabin S/A	Brazil	Timber (A-)
Mayr-Melnhof Karton Aktiengesellschaft	Austria	Timber (Private score)
Metsä Board	Finland	Timber (A-)
Mondi PLC	United Kingdom	Timber (A)
Multi-Color NACPG*	USA	Timber (B-), Soy (D)
Nippon Paper Industries Co Ltd	Japan	Timber (Private score)
Oji Holdings Corporation	Japan	Timber (Private score)
Orora*	Australia	Timber (Private score)
Rengo Co., Ltd.	Japan	Timber (Private score)
Resolute Forest Products Inc.	Canada	Timber (Private score)
Sappi	South Africa	Timber (A-)
Smurfit Kappa Group PLC	Ireland	Timber (B)
Stella-Jones Inc	Canada	Timber (Not scored)
Sumitomo Forestry Co., Ltd.	Japan	Timber (B)

Company Name	Country	Company score
SWM	USA	Timber (B)
TANAX, INC.	Japan	Timber (Private score)
TETRA PAK	Sweden	Timber (A)
Toppan Printing Co., Ltd.	Japan	Timber (B)
Toyo Seikan Group Holdings, Ltd.*	Japan	Timber (C)
UPM-Kymmene Corporation	Finland	Timber (A)
WestRock Company	USA	Timber (Private score)
Weyerhaeuser Company	USA	Timber (C)
Media		
News Corp	USA	Timber (A-)
Pearson	United Kingdom	Timber (B)
RELX Group	United Kingdom	Timber (A-)
Sky plc	United Kingdom	Timber (Private score)
Walt Disney Company	USA	Timber (Private score)
Retailing		
Best Buy Co., Inc.	USA	Timber (Not scored)
Big Lots, Inc.*	USA	Timber, Palm Oil, Cattle Products, Soy (Not scored)
H&M Hennes & Mauritz AB	Sweden	Timber (C), Palm Oil (B)
Home Retail Group	United Kingdom	Timber (C)
Inditex	Spain	Timber (A), Cattle Products (A-)
J. Front Retailing Co., Ltd.	Japan	Timber (Not scored)
Kingfisher	United Kingdom	Timber (A-), Palm Oil (C), Cattle Products (B)
Lojas Renner S.A.*	Brazil	Timber, Cattle Products (Private score)
Marks and Spencer Group plc	United Kingdom	Timber (A-), Palm Oil (A-), Cattle Products (A-), Soy (A-)
Matahari Department Store Tbk	Indonesia	Palm Oil (D)
N Brown Group Plc	United Kingdom	Timber (Private score)
Office Depot, Inc.	USA	Timber (Not scored)
RONA inc.	Canada	Timber (B-)
SM Investments*	Philippines	Palm Oil (C-), Cattle Products (C-), Soy (C-)
Williams-Sonoma Inc	USA	Timber (Private score)
Woolworths Holdings Ltd	South Africa	Timber (C), Palm Oil (A-), Cattle Products (C), Soy (B)
Textiles, Apparel, Footwear and Luxury Goods		
Burberry Group	United Kingdom	Timber (B), Palm Oil (C), Cattle Products (B)
Coach, Inc.*	USA	Timber (B-), Cattle Products (B-)
Eclat Textile Co Ltd*	Taiwan	Timber (Private score)
Gildan Activewear Inc.*	Canada	Timber (Not scored)
Hanesbrands Inc.*	USA	Timber (B)
Kering	France	Timber (B), Cattle Products (A-)
Makalot Industrial Co., Ltd.*	Taiwan	Timber (Private score)
NIKE Inc.	USA	Timber, Cattle Products (Private score)

Company Name	Country	Company score
Transportation and Logistics		
Deutsche Post AG	Germany	Timber (Private score)
Eurostar	United Kingdom	Timber, Cattle Products (Private score)
Nankai Electric Railway Co., Ltd.	Japan	Timber (Not scored)
SAS	Sweden	Timber, Palm Oil, Cattle Products, Soy (Private score)
UPS	USA	Timber (Private score)
Virgin Atlantic Airways Ltd	United Kingdom	Timber, Palm Oil, Cattle Products, Soy (Private score)
Utilities		
Capital Power Corporation*	Canada	Timber (Not scored)
Iberdrola SA	Spain	Timber (B)

Key: * New respondent ** See parent company listed

Should you be participating?

Non-responding companies

Company	Country	Score
Consumer Discretionary		
Aaron's Inc	USA	F
ABC-Mart, Inc.	Japan	F
Abercrombie & Fitch Co.	USA	F
AccorHotels	France	F
adidas AG	Germany	F
Advance Publications Inc	USA	F
American Eagle Outfitters Inc.	USA	F
Anta Sports Products Ltd	Hong Kong	F
Aoyama Trading Co., Ltd.	Japan	F
Ascena Retail	USA	F
Ashley Furniture Industries Inc	USA	F
Asics Corporation	Japan	F
Astra International	Indonesia	F
Autogrill SpA	Italy	F
Axel Springer SE	Germany	F
Barratt Developments plc	United Kingdom	F
Bata Ltd.	Switzerland	F
Bed Bath & Beyond Inc.	USA	F
Beidahuang Group	China	F
Belle International	Hong Kong	F
Belmond Ltd	Bermuda	F
Berkeley Group	United Kingdom	F
Bertelsmann	Germany	F
Bloomin' Brands Inc	USA	F
BMW AG	Germany	F
Bovis Homes Group	United Kingdom	F
Brilliance China Automotive Holdings Ltd	Hong Kong	F
Brinker International, Inc.	USA	F
Buffalo Wild Wings Inc	USA	F
Burlington Stores Inc	USA	F
BYD	China	F
C & J Clark International Ltd	United Kingdom	F
Cabela's Inc	USA	F
Café de Coral Holdings Ltd	Hong Kong	F
CalAtlantic Group Inc	USA	F
Caleres Inc	USA	F
Canadian Tire Corporation, Limited	Canada	F
Card Factory	United Kingdom	F
Carnival Corporation	USA	F
Carter's Inc	USA	F
CCC	Poland	F
Charterhouse Capital Ltd	United Kingdom	F
Cheesecake Factory Bakery Inc.	USA	F

Company	Country	Score
Chico's Fas, Inc.	USA	F
China Travel International Investment Hong Kong Limited	Hong Kong	F
Chipotle Mexican Grill	USA	F
Chongqing Changan Automobile Company Limited	China	F
Christian Dior	France	F
Columbia Sportswear	USA	F
Compagnie Financière Richemont SA	Switzerland	F
Cracker Barrel Old Country Store Inc	USA	F
D.R. Horton, Inc.	USA	F
Daihatsu Motor Co., Ltd.	Japan	F
Daily Mail & General Trust	United Kingdom	F
Daimler AG	Germany	F
Dalian Huafeng Furniture Group Co Ltd	China	F
Daphne International Holdings Ltd	China	F
Darden Restaurants, Inc.	USA	F
Dave & Buster's Entertainment Inc	USA	F
Debenhams	United Kingdom	F
Deckers Outdoor Corp.	USA	F
Dick's Sporting Goods, Inc.	USA	F
Dillard's Inc.	USA	F
DineEquity Inc	USA	F
Dollar General Corporation	USA	F
Dollar Tree Inc	USA	F
Dollarama Inc	Canada	F
Domino's Pizza Enterprises	Australia	F
Domino's Pizza Group plc	United Kingdom	F
Domino's Pizza, Inc.	USA	F
Don Quijote Holdings Co., Ltd.	Japan	F
Dongfeng Motor Group	China	F
DSW Inc	USA	F
Dunelm Group	United Kingdom	F
E.W. Scripps	USA	F
El Puerto de Liverpool SAB de CV	Mexico	F
Esprit Holdings	Hong Kong	F
Express Inc	USA	F
Fairfax Media	Australia	F
Fast Retailing Co., Ltd.	Japan	F
Feng Tay Enterprises Co Ltd	Taiwan	F
Foot Locker Inc	USA	F
Forbo International SA	Switzerland	F
Ford Motor Company	USA	F
Foschini Group Ltd	South Africa	F

Company	Country	Score
Foshan Saturday Shoes Co Ltd	China	F
Fossil, Inc.	USA	F
Gafisa S.A.	Brazil	F
Gannett Co., Inc.	USA	F
Gap Inc.	USA	F
Geely Automobile Holdings	Hong Kong	F
General Motors Company	USA	F
Genesco Inc	USA	F
G-III Apparel Group Ltd	USA	F
Global Brands Group	Hong Kong	F
GNC Holdings Inc	USA	F
Great Wall Motor Company (H)	China	F
Greene King	United Kingdom	F
Groupe Eram	France	F
Groupe PSA	France	F
Guangzhou Automobile Group Co. Ltd	China	F
Guess ?, Inc.	USA	F
H2O Retailing Corporation	Japan	F
Hanssem Company Ltd	South Korea	F
Harvey Norman Holdings	Australia	F
Haseko Corporation	Japan	F
Heinrich Deichmann-Schuhe GmbH & Co KG	Germany	F
Henan Shoes City Leather Group	China	F
Hermes International	France	F
Hilton Worldwide, Inc.	USA	F
Honda Motor Company	Japan	F
Hotel Shilla Co., Ltd.	South Korea	F
Howden Joinery Group Plc	United Kingdom	F
Hudson's Bay Co.	Canada	F
HUGO BOSS AG	Germany	F
Hyundai Department Store	South Korea	F
Hyundai Motor Co	South Korea	F
Iida Group Holdings	Japan	F
IKEA	Sweden	F
Informa	United Kingdom	F
Intercontinental Hotels Group	United Kingdom	F
Intime Retail Group Co Ltd	China	F
Isetan Mitsukoshi Holdings Ltd.	Japan	F
Izumi Co., Ltd.	Japan	F
Jack in the Box Inc	USA	F
jcpenny	USA	F
JM AB	Sweden	F
John Wiley & Sons Inc	USA	F
Jollibee Foods	Philippines	F

Company	Country	Score
Kasen International Holdings Ltd	Cayman Islands	F
Kate Spade & Co	USA	F
KB Home	USA	F
Kia Motors Corp	South Korea	F
Kohl's Corporation	USA	F
L Brands, Inc.	USA	F
Lagardere S. C. A.	France	F
La-Z-Boy Inc	USA	F
Lear	USA	F
Leggett & Platt, Inc.	USA	F
Lennar Corporation	USA	F
Li & Fung Limited	Hong Kong	F
Li Ning Company Ltd.	Hong Kong	F
Lojas Americanas S/A	Brazil	F
Lotte Shopping	South Korea	F
Lowe's Companies, Inc.	USA	F
LPP S.A.	Poland	F
Lululemon Athletica Inc.	Canada	F
LVMH	France	F
Macy's, Inc.	USA	F
Mahindra & Mahindra	India	F
Marston's PLC	United Kingdom	F
Marui Group Co., Ltd.	Japan	F
Mattel, Inc.	USA	F
MDC Holdings Inc.	USA	F
Melia Hotels International SA	Spain	F
Men's Wearhouse Inc	USA	F
Meredith Corporation	USA	F
Meritage Homes Corp	USA	F
Michael Kors Holdings Ltd	Hong Kong	F
Mitchells & Butlers	United Kingdom	F
Mitsubishi Motors Corporation	Japan	F
Mohawk Industries, Inc.	USA	F
Moncler	Italy	F
MORNINGSTAR INC.	USA	F
Mr Price Group Ltd	South Africa	F
MRV Engenharia e Participações	Brazil	F
Natuzzi SpA	Italy	F
New York Times Company	USA	F
Next	United Kingdom	F
NH Hotel Group	Spain	F
Nissan Motor Co., Ltd.	Japan	F
Nitori Holdings Co., Ltd.	Japan	F
Nordstrom, Inc.	USA	F

Company	Country	Score
Norwegian Cruise Line Holdings Ltd	USA	F
NVR Inc.	USA	F
Oxford Industries Inc	USA	F
Pacific Textiles Holdings Ltd	Cayman Islands	F
Page Industries Ltd	India	F
Panera Bread Co.	USA	F
Papa John's International Inc	USA	F
Persimmon	United Kingdom	F
Pets At Home Group	United Kingdom	F
Polo Ralph Lauren Corporation	USA	F
Popeyes Louisiana Kitchen Inc	USA	F
Porsche Automobil Holding SE	Germany	F
Pou Chen Corp.	Taiwan	F
Prada	Italy	F
Pulte Homes Inc	USA	F
PVH Corp	USA	F
Red Robin Gourmet Burgers Inc	USA	F
Redrow Homes Ltd	United Kingdom	F
Renault	France	F
Resorttrust Inc	Japan	F
Restaurant Brands International	Canada	F
Restaurant Group	United Kingdom	F
Restoration Hardware Holdings Inc	USA	F
Rightmove	United Kingdom	F
Ross Stores Inc	USA	F
Royal Caribbean Cruises Ltd	USA	F
Ryohin Keikaku Co., Ltd.	Japan	F
S.A.C.I. Falabella	Chile	F
Salvatore Ferragamo SpA	Italy	F
Samsonite International SA	Hong Kong	F
Sanrio Company, Ltd.	Japan	F
Schibsted ASA	Norway	F
Select Comfort Corp	USA	F
Shangri-La Asia	Hong Kong	F
Shenzhen Tiancheng Furniture Co Ltd	China	F
Shenzhou International Group Holdings Ltd	China	F
Shimachu Co., Ltd.	Japan	F
Shimamura Co., Ltd.	Japan	F
Shinsegae	South Korea	F
Singapore Press Holdings	Singapore	F
Skechers U.S.A. Inc	USA	F
Skylark Co., Ltd.	Japan	F
Sonic Corp	USA	F
Sports Direct International	United Kingdom	F

Company	Country	Score
SSP	United Kingdom	F
Staples, Inc.	USA	F
Starwood Hotels & Resorts Worldwide, Inc	USA	F
Steinhoff International Holdings	South Africa	F
Steven Madden Ltd	USA	F
Takashimaya Company, Limited	Japan	F
Target Corporation	USA	F
Tata Motors	India	F
Taylor Wimpey Plc	United Kingdom	F
Ted Baker Plc	United Kingdom	F
Tempur Pedic International Inc	USA	F
Tesla Motors, Inc.	USA	F
Texas Roadhouse	USA	F
The Buckle, Inc.	USA	F
The Children's Place, Inc.	USA	F
The Home Depot, Inc.	USA	F
The Michaels Companies, Inc	USA	F
Thomson Reuters Corporation	USA	F
Thor Industries, Inc.	USA	F
Time Inc.	USA	F
TJX Companies, Inc.	USA	F
TOD'S	Italy	F
Toll Brothers Inc.	USA	F
TopBuild Corp	USA	F
Toyota Motor Corporation	Japan	F
TRI Pointe Homes Inc	USA	F
Truworths International	South Africa	F
TUI Group	United Kingdom	F
Tumi Holdings Inc	USA	F
UBM plc	United Kingdom	F
Ulta Salon Cosmetics & Fragrance Inc	USA	F
Umw Holdings Bhd	Malaysia	F
Under Armour Inc	USA	F
Urban Outfitters, Inc.	USA	F
VF Corporation	USA	F
Volkswagen AG	Germany	F
Wacoal Holdings Corp.	Japan	F
Wendy's International	USA	F
Wetherspoon	United Kingdom	F
WH Smith	United Kingdom	F
Whitbread	United Kingdom	F
Wolters Kluwer	Netherlands	F
Wolverine World Wide Inc	USA	F
Wuji Qisheng Leather & Fur Co. Ltd.	China	F

Company	Country	Score
Wyndham Worldwide Corporation	USA	F
Yue Yuen Industrial	Hong Kong	F
Yum! Brands, Inc.	USA	F
Zhejiang Aokang Shoes Co Ltd	China	F

Consumer Staples

AAK KAMANI PVT LTD	India	F
Aarhuskarlshamn	Sweden	F
Adecoagro Sa	Argentina	F
Aeon Co., Ltd.	Japan	F
Agrifirm Group BV	Netherlands	F
Alimentation Couche-Tard Inc.	Canada	F
AmorePacific Corporation	South Korea	F
AmorePacific Group	South Korea	F
Amul	India	F
ARAMARK CORPORATION	USA	F
Arcor	Argentina	F
Arla Foods amba	Denmark	F
Aryzta AG	Switzerland	F
Astra Agro Lestari Tbk Pt	Indonesia	F
Avi Ltd	South Africa	F
Axfood	Sweden	F
Bakkafrost	Denmark	F
Behshahr Industrial Development Corp	Iran, Islamic Republic of	F
Beiersdorf AG	Germany	F
BGF Retail Co Ltd	South Korea	F
BİM BİRLEŞİK MAĞAZALAR A.Ş.	Turkey	F
Bongrain Sa	France	F
Booker Group	United Kingdom	F
Boparan Holdings Ltd	United Kingdom	F
BRF S.A	Brazil	F
Bright Food Group Co Ltd	China	F
British American Tobacco	United Kingdom	F
Bumitama Agri Ltd	Indonesia	F
Calbee, Inc.	Japan	F
Campbell Soup Company	USA	F
Caramuru Alimentos SA	Brazil	F
Casey's General Stores Inc	USA	F
Casino Guichard-Perrachon	France	F
Cencosud SA	Chile	F
Charoen Pokphand Foods PCL	Thailand	F
Charoen Pokphand Indonesia	Indonesia	F
China Huishan Dairy Holdings Company Ltd	China	F
China Mengniu Dairy Company Limited	Hong Kong	F

Company	Country	Score
China Resources Enterprise	China	F
Chinatex Corp	China	F
Cia. Brasileira de Distribuicao (CBD) Grupo Pao de Acucar	Brazil	F
CJ Cheiljedang	South Korea	F
Clicks Group Ltd	South Africa	F
COAMO Agroindustrial Cooperativa	Brazil	F
COFCO Ltd	China	F
Colruyt	Belgium	F
ConAgra Foods, Inc.	USA	F
Controladora Comercial Mexicana	Mexico	F
Corbion	Netherlands	F
COSMOS Pharmaceutical Corporation	Japan	F
Costco Wholesale Corporation	USA	F
CP ALL Pcl	Thailand	F
CVS Health	USA	F
Dabur India	India	F
Dairy Crest Group	United Kingdom	F
Darmex Agro PT	Indonesia	F
De Heus	Netherlands	F
Dean Foods Company	USA	F
Dia	Spain	F
Diamond Foods Inc.	USA	F
DLG Denmark	Denmark	F
Doctor's Associates Inc	USA	F
Dongsuh	South Korea	F
Dorman	USA	F
East Hope Group Co Ltd	China	F
Ebro Foods SA	Spain	F
Edgewell Personal Care	USA	F
El Tejar SA	Brazil	F
Emami Ltd.	India	F
E-MART Co., Ltd	South Korea	F
Energizer Holdings, Inc.	USA	F
Estee Lauder Companies Inc.	USA	F
Eurocash S.A.	Poland	F
Ezaki Glico Co., Ltd.	Japan	F
FamilyMart Co., Ltd.	Japan	F
Felda Global Ventures	Malaysia	F
Feronia Inc/Canada	Canada	F
Ferrero Spa	Italy	F
First Resources Ltd	Singapore	F
Flowers Foods Inc	USA	F
ForFarmers BV	Netherlands	F

Company	Country	Score
Fresh Market Inc	USA	F
Friendship Frozen Foods Trading Co.	Hong Kong	F
George Weston Limited	Canada	F
Glanbia PLC	Ireland	F
Godrej Consumer Products	India	F
GrainCorp	Australia	F
Granol	Brazil	F
Greggs	United Kingdom	F
Groupe Auchan	France	F
Groupe Lactalis SA	France	F
Gruma SAB	Mexico	F
Grupo Boticário	Brazil	F
Grupo Los Grobo LLC	Argentina	F
Guangdong Wens Foodstuffs Group Co Ltd	China	F
Gudang Garam	Indonesia	F
Hangzhou Wahaha Group Co Ltd	China	F
HRG Group Inc	USA	F
Hengan Intl Group	China	F
Herbalife Ltd	Cayman Islands	F
Hormel Foods	USA	F
Hypermarcas S/A	Brazil	F
ICA Gruppen	Sweden	F
Imperial Brands	United Kingdom	F
Imperial Pacific International Holdings Limited	Hong Kong	F
Indofood Sukses Mak Tbk Pt	Indonesia	F
Inner Mongolia Yili Industrial Group	China	F
IOI	Malaysia	F
ITC Limited	India	F
J & J Snack Foods, Inc.	USA	F
Japan Tobacco Inc.	Japan	F
Japfa Comfeed Indonesia Tbk PT	Indonesia	F
Jean Coutu Group Inc	Canada	F
JVL Agro Industries Ltd	India	F
Kerry Group PLC	Ireland	F
Kewpie Corporation	Japan	F
Kikkoman Corporation	Japan	F
Kobayashi Pharmaceutical Co., Ltd.	Japan	F
Korea Kolmar	South Korea	F
KOSE Corporation	Japan	F
Kroger	USA	F
KT&G	South Korea	F
Kuala Lumpur Kepong	Malaysia	F
Lancaster Colony Corporation	USA	F
Land O'Lakes	USA	F

Company	Country	Score
LAWSON, Inc.	Japan	F
Les Mousquetaires	France	F
LG Household & Health Care	South Korea	F
Lion Corporation	Japan	F
Loblaw Companies Limited	Canada	F
Lotte Confectionery Co.,Ltd.	South Korea	F
Louis Dreyfus	Netherlands	F
Magnit	Russia	F
Marico	India	F
Marine Harvest Group	Norway	F
Matsumotokiyoshi Holdings Co., Ltd.	Japan	F
Meiji Holdings Co Ltd	Japan	F
METRO AG	Germany	F
Metro Inc.	Canada	F
Mewah International Inc	Singapore	F
Mondelez International Inc	USA	F
Morrison Supermarkets	United Kingdom	F
Nichirei Corporation	Japan	F
Nisshin Seifun Group Inc.	Japan	F
Nissin Foods Holdings Co., Ltd.	Japan	F
Nong Shim	South Korea	F
North West Company Inc.	Canada	F
Nu Skin Enterprises Inc	USA	F
Nutreco Holding	Netherlands	F
O'Key Group SA	Luxembourg	F
Ontex Group NV	Belgium	F
Ottogi	South Korea	F
Perkebunan Nusantara	Indonesia	F
Philip Morris International	USA	F
Pigeon Corp	Japan	F
Pinnacle Foods Group	USA	F
Pioneer Foods	South Africa	F
Pola Orbis Holdings Inc.	Japan	F
Post Holdings Inc	USA	F
PPB Group	Malaysia	F
President Chain Store Corp	Taiwan	F
PriceSmart Inc	USA	F
Procter & Gamble Company	USA	F
REWE Group	Germany	F
Rite Aid Corp	USA	F
Royal Friesland Campina	Netherlands	F
Ruchi Soya	India	F
Sanderson Farms Inc	USA	F
Saputo Inc.	Canada	F

Company	Country	Score
Seven & I Holdings Co., Ltd.	Japan	F
Shandong Sanwei Group	China	F
Shoprite Holdings Ltd	South Africa	F
SIFCA SA	Cote d Ivoire	F
Snyder's-Lance Inc	USA	F
SpartanNash Co	USA	F
Spectrum Brands Inc.	USA	F
Sprouts Farmers Market Inc	USA	F
Südzucker AG	Germany	F
Sugi Holdings Co., Ltd.	Japan	F
Sun Art Retail Group Ltd	Hong Kong	F
SUPERVALU INC.	USA	F
Swedish Match	Sweden	F
Sysco Corporation	USA	F
The J.M. Smucker Company	USA	F
The Nisshin Oillio Group,Ltd.	Japan	F
The Spar Group Ltd	South Africa	F
Tianjin Julong Group Co.	China	F
Tiger Brands	South Africa	F
Tingyi (Cayman Islands) Holdings	Hong Kong	F
Toyo Suisan Kaisha, Ltd.	Japan	F
TreeHouse Foods Inc	USA	F
Tsuruha Holdings Inc.	Japan	F
Tyson Foods, Inc.	USA	F
ÜLKER BİSKÜVİ SANAYİ A.Ş.	Turkey	F
UNFI	USA	F
Uni-president Enterprises	Taiwan	F
Universal Corporation	USA	F
Universal Robina	Philippines	F
UNY Group Holdings Co., Ltd.	Japan	F
Vandemoortele NV	Belgium	F
Vector Group Ltd	USA	F
Viscofan	Spain	F
Wal Mart de Mexico	Mexico	F
Walgreens Boots Alliance	USA	F
Wal-Mart Stores, Inc.	USA	F
Want Want China Holdings Ltd.	Hong Kong	F
WD-40 Company	USA	F
WH Group Ltd	China	F
Whole Foods Market, Inc.	USA	F
Woolworths Limited	Australia	F
X5 Retail Group NV	Russia	F
Yakult Honsha Co Ltd.	Japan	F
Yamazaki Baking Co., Ltd.	Japan	F

Company	Country	Score
Yildiz Holding AS	Turkey	F
Energy		
China Shenhua Energy	China	F
PT. PERTAMINA PERSERO	Indonesia	F
Financials		
Chubb Limited	Switzerland	F
CK Hutchison Holdings Ltd	Hong Kong	F
Cresud SACIF y A	Argentina	F
Daiwa House Industry Co., Ltd.	Japan	F
Potlatch Corp	USA	F
Rayonier Inc.	USA	F
St. Joe Co.	USA	F
Industrials		
3M Company	USA	F
Aboitiz Equity Ventures	Philippines	F
ACS Actividades de Construccion y Servicios	Spain	F
Aditya Birla Nuvo	India	F
AECOM	USA	F
Agromir	Russia	F
Alfa SAB de CV	Mexico	F
Arabtec Holding	United Arab Emirates	F
Armstrong World Industries Inc.	USA	F
Balfour Beatty	United Kingdom	F
Bidvest Group Ltd	South Africa	F
Bouygues	France	F
Brady Corp	USA	F
Brenntag AG	Germany	F
Bunzl plc	United Kingdom	F
Carillion	United Kingdom	F
Chicago Bridge & Iron Co. N.V.	USA	F
China Communications Construction	China	F
China Railway Construction	China	F
China Railway Group	China	F
Chiyoda Corporation	Japan	F
CIMIC Group	Australia	F
CITIC Limited	Hong Kong	F
CJ	South Korea	F
Comfort Systems USA Inc	USA	F
Comsys Holdings Corporation	Japan	F
Daelim Industrial	South Korea	F
DCC PLC	Ireland	F

Company	Country	Score
Deluxe Corp	USA	F
Dialog Group Bhd	Malaysia	F
Dieta 18 OOO	Russia	F
DMCI Holdings Inc	Philippines	F
Eiffage	France	F
EMCOR Group Inc.	USA	F
Far Eastern New Century Corporation	Taiwan	F
FERROVIAL	Spain	F
Fluor Corporation	USA	F
Galliford Try Plc	United Kingdom	F
Gamuda	Malaysia	F
Grafton Group PLC	Ireland	F
Granite Construction Inc	USA	F
Groupe Blattner Elwyn	Democratic Republic of Congo	F
Grupo Carso S.A.	Mexico	F
GS Engineering & Construction	South Korea	F
Hayel Saeed Anam Group Ltd	Yemen	F
HD SUPPLY	USA	F
Hopewell Holdings	Hong Kong	F
Htoo Group	Myanmar	F
Huijia Group	China	F
Hyundai Development Company	South Korea	F
Hyundai E&C	South Korea	F
IFFCO	United Arab Emirates	F
IJM Corp Bhd	Malaysia	F
International Group of Entrepreneurs	Myanmar	F
JA Group	Japan	F
Jacobs Engineering Group Inc.	USA	F
JG Summit Holdings Inc.	Philippines	F
JGC Corporation	Japan	F
Keppel Corp	Singapore	F
Kier Group	United Kingdom	F
Kinden Corporation	Japan	F
KOÇ HOLDİNG A.Ş.	Turkey	F
Kumagai Gumi Co Ltd	Japan	F
Larsen & Toubro	India	F
LG	South Korea	F
Maeda Road Construction Co.,Ltd	Japan	F
MASTEC	USA	F
NCC	Sweden	F
Nishimatsu Construction Co Ltd	Japan	F
Nisshinbo Holdings Inc.	Japan	F
Noble Group	Hong Kong	F

Company	Country	Score
Obayashi Corporation	Japan	F
OCI N.V.	Netherlands	F
Oetker-Gruppe	Germany	F
Oriental Partners Ltd	Hong Kong	F
Parker-Migliorini International LLC	USA	F
Peab AB	Sweden	F
Penta-Ocean Construction Co Ltd	Japan	F
Promotora y Operadora de Infraestructura SAB de CV	Mexico	F
Quanta Services Inc	USA	F
Rajawali Corp PT	Indonesia	F
Rezervnaja Prodoval'stvennaja Kompanija TD ZAO	Russia	F
Rimbunan Hijau Group	Malaysia	F
Rizhao Changhua Aquatic Foodstuff Co Ltd	China	F
Royal Boskalis Westminster	Netherlands	F
Royal Golden Eagle	Singapore	F
RR Donnelley & Sons Co	USA	F
Samsung C&T	South Korea	F
Seibu Holdings Inc.	Japan	F
SembCorp Industries	Singapore	F
Shanghai Construction Group Co Ltd	China	F
Shanghai Industrial Holding Ltd	Hong Kong	F
Shimizu Corporation	Japan	F
Sinopec Eng Group Co H	Hong Kong	F
SK Holdings Co Ltd	South Korea	F
SNC-Lavalin Group Inc.	Canada	F
Sumitomo Corporation	Japan	F
TD Pervomaiski Khladokombinat	Russia	F
Ting Hsin International Group	Taiwan	F
Toda Corporation	Japan	F
Toyota Tsusho Corporation	Japan	F
Triputra Agro Persada	Indonesia	F
Universal Forest Products Inc	USA	F
Vinci	France	F
Wolseley plc	United Kingdom	F

Materials

Adeka Corporation	Japan	F
Asia Pacific Resources International Limited (APRIL)	Singapore	F
Avery Dennison Corporation	USA	F
BASF SE	Germany	F
Boise Cascade Co	USA	F

Company	Country	Score
Boral	Australia	F
Canfor Corporation	Canada	F
Cikel	Brazil	F
Danzer	Switzerland	F
E.I. du Pont de Nemours and Company	USA	F
Glencore plc	Switzerland	F
Graphic Packaging	USA	F
Grupo Jari	Brazil	F
Huhtamäki Oyj	Finland	F
Huntsman Corporation	USA	F
Kapstone Paper And Packaging	USA	F
Koninklijke DSM	Netherlands	F
Louisiana-Pacific Corp	USA	F
NEENAH PAPER INC	USA	F
Nine Dragons Paper Holdings	Hong Kong	F
NOF CORPORATION	Japan	F
Packaging Corporation Of America	USA	F
Precious Woods Holding AG	Switzerland	F
Rougier SA	France	F
Samko Timber Ltd	Singapore	F
Samling Global	Malaysia	F
Sealed Air Corp.	USA	F
Shandong Chenming Paper Holdings Limited	China	F
Shandong Sunrise Group Co. Ltd.	China	F
Siam Cement	Thailand	F
Sodefor S.P.R.L.	Liechtenstein	F
Solvay S.A.	Belgium	F
Sonoco Products Company	USA	F
Stora Enso Oyj	Finland	F
Suzano Papel & Celulose	Brazil	F
West Fraser Timber Co. Ltd.	Canada	F
WTK Group	Malaysia	F

Utilities		
CEZ	Czech Republic	F
China Power International Development Limited	Hong Kong	F
Chubu Electric Power Co., Inc.	Japan	F
Cleco Corporation	USA	F
CMS Energy Corporation	USA	F
Consolidated Edison, Inc.	USA	F
Dominion Resources, Inc.	USA	F
DTE Energy Company	USA	F
Duke Energy Corporation	USA	F
E.ON SE	Germany	F

Company	Country	Score
EDF	France	F
Edison International	USA	F
EDP - Energias de Portugal S.A.	Portugal	F
ENEL SpA	Italy	F
Entergy Corporation	USA	F
Huadian Power International Corporation Limited	China	F
NextEra Energy, Inc.	USA	F
NRG Energy Inc	USA	F
The AES Corporation	USA	F
The Chugoku Electric Power Company	Japan	F

“F” indicates a failure to provide sufficient information to CDP in order for us to evaluate performance. It does not indicate a failure in terms of environmental stewardship and does not indicate the company does not provide environmental information through other sources, but only through CDP reports.

Investor signatories

List of current investor signatories to CDP's forests program²¹.

3Sisters Sustainable Management LLC	Candriam Investors Group	FIPECq - Fundação de Previdência Complementar dos Empregados e Servidores da FINEP, do IPEA, do CNPq
AB	CareSuper	First Affirmative Financial Network
ACTIAM	Caser Pensiones E.G.F.P	First Commercial Bank
Active Earth Investment Management	Cathay Financial Holding	First State Superannuation Scheme
Addenda Capital Inc.	Catholic Super	Folksam
AGF Investment Inc.	Cbus Superannuation Fund	Fondo Pensione Gruppo Intesa Sanpaolo - FAPA
Align Impact LLC	CCLA Investment Management Ltd	FRANKFURT-TRUST Investment Gesellschaft mbH
Alliance Trust	Cedrus Asset Management	Friends Fiduciary Corporation
Alquity Investment Management Ltd	Central Finance Board of the Methodist Church	FUNCEF - Fundação dos Economiários Federais
AMF	CERES-Fundação de Seguridade Social	Fundação AMPLA de Seguridade Social - Brasetros
Amundi AM	Christian Brothers Investment Services Inc.	Fundação Atlântico de Seguridade Social
ANBIMA – Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais	Christian Super	Fundação Atílio Francisco Xavier Fontana
Antera Gestão de Recursos S.A.	Christopher Reynolds Foundation	Fundação Bannisul de Seguridade Social
APG Group	Church Commissioners for England	Fundação Calouste Gulbenkian
Arabesque Asset Management	Church of England Pensions Board	Fundação Chef de Assistência e Seguridade Social – Fachesf
Arisaig Partners	ClearBridge Investments	Fundação Corsan - dos Funcionários da Companhia Riograndense de Saneamento
Arjuna Capital	CM-CIC Asset Management	Fundação de Assistência e Previdência Social do BNDES - FAPES
ASM Administradora de Recursos S.A.	Colorado College	Fundação Eletrobrás de Seguridade Social - ELETROS
Atlantic Asset Management Pty Ltd	Commlnsure	Fundação Itaipu BR - de Previdência e Assistência Social
Ausbil Investment Management	Commonwealth Superannuation Corporation	Fundação Itaubanco
Australian Ethical Investment	Compton Foundation, Inc.	Fundação Itaúsa Industrial
Avaron Asset Management AS	Confluence Capital Management LLC	Fundação Rede Ferroviária de Seguridade Social – Refer
Aviva plc	Connecticut Retirement Plans and Trust Funds	Fundação Sanepar de Previdência e Assistência Social - FUSAN
Aviva Investors	Conser Invest	Fundação Sistel de Seguridade Social (Sistel)
AXA Group	Crayna Capital, LLC	Fundação Vale do Rio Doce de Seguridade Social - VALIA
AXA Investment Managers	Credit Agricole	FUNDIÁGUA – Fundação de Previdência Complementar da CAESB
BAE Systems Pension Scheme	CTBC Financial Holding Co., Ltd	Futuregrowth Asset Management
Baillie Gifford & Co.	Cultura Bank	GameChange Capital LLC
Banco Bradesco S/A	Cyrte Investments B.V.	GEAP Fundação de Seguridade Social
Banco BTG Pactual SA	Dana Investment Advisors	General Equity Group AG
Banco da Amazônia S.A.	Delta Lloyd Asset Management	Generation Investment Management
Banco do Brasil Previdência	Development Bank of Japan Inc.	Genus Capital Management
Banco do Brasil S/A	DIP - Danske civil- og akademiingeniorers Pensionskasse	German Equity Trust AG
Banesprev – Fundo Banespa de Seguridade Social	DLM Invista Asset Management S/A	Global Forestry Capital S.a.r.l.
Bank J. Safra Sarasin AG	Domini Social Investments LLC	Globalance Bank
Bankinter	DoubleDividend Management BV	GOOD GROWTH INSTITUT für globale Vermögensentwicklung mbH
Degroof Petercam	Doughty Hanson & Co.	Good Super
Banque Libano-Française	East Capital AB	Government Employees Pension Fund ("GEPF"), Republic of South Africa
Basellandschaftliche Kantonalbank	EBG Capital	Greater Manchester Pension Fund
BASF Sociedade de Previdência Complementar	Ecofin Limited	Green Alpha Advisors
Becker College	EdenTree Investment Management	Green Century Capital Management
BioFinance Administração de Recursos de Terceiros Ltda	EEA Group Ltd	Green Science Partners
Blom Investment Bank	EGAMO	Groupe OFI AM
Blumenthal Foundation	Eko	Grupo Santander Brasil
BM&FBOVESPA	Ekobanken - Din Medlemsbank	Hannon Armstrong Sustainable Infrastructure Capital, Inc
BMO Global Asset Management	Element Investment Managers	Harbour Asset Management
Boston Common Asset Management, LLC	ELETRA - Fundação Celg de Seguros e Previdência	Hazel Capital LLP
Brasilprev Seguros e Previdência S/A.	Elo Mutual Pension Insurance Company	Henderson Global Investors
Breckinridge Capital Advisors	Environment Agency Pension fund	Hermes Fund Managers
British Airways Pensions	Environmental Investment Services Asia	HESTA Super
BSW Wealth Partners	Erik Penser Fondkommission	HIP Investor
CAI Corporate Assets International AG	Erste Asset Management	HSBC Fundo de Pensão Multipatrocinado
Caixa de Previdência dos Funcionários do Banco do Nordeste do Brasil (CAPEF)	Ethos Foundation	Iguana Investimentos
Caixa Econômica Federal	Etica SGR	Ilmarinen Mutual Pension Insurance Company
Caixa Geral de Depósitos	Evangelical Lutheran Church in Canada Pension Plan for Clergy and Lay Workers	Impax Asset Management Group plc
Caja de Ingenieros	Evangelical Lutheran Foundation of Eastern Canada	Independent Planning Counsel
California State Teachers' Retirement System (CalSTRS)	Evangelisch-Luth. Kirche in Bayern	
California State University, Northridge Foundation	FACEB – Fundação de Previdência dos Empregados da CEB	
Calvert Investment Management, Inc	FAELCE – Fundacao Coelce de Seguridade Social	
	FAPERS- Fundação Assistencial e Previdenciária da Extensão Rural do Rio Grande do Sul	
	Federal Finance	
	Fédérés Gestion d'Actifs	
	Finance S.A.	
	Financiere de l'Echiquier	

21 The list of investor signatories as of October 20, 2016.

Inflection Point Capital Management	Norges Bank Investment Management (NBIM)	Sprucegrove Investment Management Ltd
Insight Investment Management (Global) Ltd	Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC)	Standard Life Investments
Instituto Infraero de Seguridade Social - INFRAPREV	NorthStar Asset Management, Inc	Standish Mellon Asset Management
Instituto Sebrae De Seguridade Social - SEBRAEPREV	Northward Capital	StatewideSuper
Integre Wealth Management of Raymond James	Notenstein Privatbank AG	Stewart Investors
Invesco Perpetual UK Smaller Companies Trust	Oceana Investimentos ACVM Ltda	Storebrand ASA
Investec plc	OceanRock Investments Inc.	Strathclyde Pension Fund
Irish Life Investment Managers	Office of the Vermont State Treasurer	Stratus Group
Itaú Asset Management	ÖKOWORLD LUX S.A.	Sustainable Development Capital LLP
Itaú Unibanco Holding S.A.	Oliver Rothschild Corporate Advisors	Sustainable Insight Capital Management (SICM)
Jantz Management LLC	Oppenheim & Co Limited	Svenska Handelsbanken
Jessie Smith Noyes Foundation	Opplsyningsvesenets fond (The Norwegian Church Endowment)	Svenska Kyrkan, Church of Sweden
Johnson & Johnson Sociedade Previdenciaria	Overlook Investments Limited	Svenska Kyrkans Pensionskassa
	PAI Partners	Swift Foundation
Johnson Private Wealth Management	Park Foundation	Sycomore Asset Management
Kagiso Asset Management	Parnassus Investments	Symphonia sgr
Kaiser Ritter Partner Privatbank AG (Schweiz)	Pax World Funds	T. Sinai Kalkinma Bankası A.Ş.
Kepler Cheuvreux	PCJ Investment Counsel Ltd.	Tasplan Super
KEVA	Pensioenfonds Vervoer	TD Asset Management (TD Asset Management Inc. and TDAM USA Inc.)
KeyCorp	Pensionsmyndigheten	TD Securities (USA) LLC
Kleinwort Benson Investors	PETROS - Fundação Petrobras de Seguridade Social	Telstra Super
KLP	PGGM	Terra Alpha Investments LLC
KPA Pension	Pictet Asset Management SA	Terra Global Capital, LLC
Laird Norton Family Foundation	Plato Investment Management	The Bullitt Foundation
Legal and General Investment Management	Polden Puckham Charitable Foundation	The Children's Investment Fund Foundation
LGT Capital Partners	Porto Seguro S.A.	The Clean Yield Group
Local Authority Pension Fund Forum	POSTALIS - Instituto de Seguridade Social dos Correios e Telégrafos	The Council of Lutheran Churches
Local Government Super	PREVHAB Previdência Complementar	The Daly Foundation
LocalTapiola (LähiTapiola)	PREVIG Sociedade de Previdência Complementar	The Joseph Rowntree Charitable Trust
London Pensions Fund Authority	Previnorte - Fundação de Previdência Complementar	The New School
LUCRF Super	Progressive Asset Management, Inc.	The Russell Family Foundation
Ludgate Investments Limited	Psagot Investment House Ltd	The Sustainability Group
Maine Public Employees Retirement System	Railpen Investments	The University of Edinburgh Endowment Fund
Marc J. Lane Investment Management, Inc.	Rathbone Greenbank Investments	Columbia Threadneedle Investments
Martin Currie	Real Grandeza Fundação de Previdência e Assistência Social	Trillium Asset Management, LLC
Maryknoll Sisters	Reynders McVeigh Capital Management	Triodos Bank
Matrix Asset Management	River Twice Capital Advisors, LLC	Tri-State Coalition for Responsible Investment
Mediobanca	Robeco	Trusteam Finance
Mellon Capital Management	RobecoSAM AG	UBS
Mendesprev Sociedade Previdenciária	Rockefeller Asset Management	UBS Global Asset Management
Mercer	Rothschild & Cie Gestion Group	Union Investment Privatfonds GmbH
Merck Family Fund	Royal London Asset Management	Unionen
Mercy Investment Services, Inc.	Ruffer Investment Company	UNISON staff pension scheme
Merseyside Pension Fund	Russell Investments	Unity College
Metrus – Instituto de Seguridade Social	Samsung Fire & Marine Insurance	University of California
Miller/Howard Investments	Santa Fé Portfolios Ltda	University of Massachusetts Foundation
Mistra, The Swedish Foundation for Strategic Environmental Research	Santander Brasil Asset Management	University of Toronto
Momentum Manager of Managers (Pty) Ltd	Sarasin & Partners	University of Toronto Asset Management Corporation (UTAM)
MN	Schroders	University of Washington
Monega Kapitalanlagegesellschaft mbH	SERPROS - Fundo Multipatrocinado	Veris Wealth Partners
Mongeral Aegon Seguros e Previdência S.A.	Shinkin Asset Management Co., Ltd	Veritas Pension Insurance
Montanaro Asset Management Limited	Sisters of St Francis of Philadelphia	VicSuper
Morgan Stanley	Sisters of St. Dominic	Vinva Investment Management
Nathan Cummings Foundation, The	Smith Pierce, LLC	Vision Super
National Australia Bank	SNW Asset Management	Vontobel Holding AG
National Grid UK Pension Scheme	Sociedade de Previdência Complementar da Dataprev - Prevdata	Walden Asset Management, a division of Boston Trust & Investment Management Company
National Pensions Reserve Fund of Ireland	Società reale mutua di assicurazioni	West Midlands Pension Fund
Natural Investments LLC	Societe Generale	Westfield Capital Management Company, LP
NEI Investments	Solaris Investment Management	WHEB Asset Management
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