

Changing Fortunes

The state of deforestation and conversion-free production among prominent cattle and soy producers

November 2022



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Executive summary

In 2021, the world witnessed a

22%

rise in deforestation in the Brazilian Amazon.

In 2021,

10

of the world's largest commodity traders published a shared corporate commitment to halt forest loss.

Globally, cattle and soy production are the main agricultural drivers of deforestation and conversion of tropical and subtropical ecosystems. In 2021, the world witnessed a 22% rise in deforestation in the Brazilian Amazon - the highest rate in the last 15 years¹.

As the global demand for cattle and soy products increases, so does the risk of deforestation. Companies have a responsibility to change the way they operate, by producing and sourcing deforestation and conversion-free, sustainable goods.

This report comes at a time of increased political and corporate will to change the course of deforestation and climate change. In 2021, 10 of the world's largest commodity traders published a shared corporate commitment to halt forest loss². Signatories to that roadmap now include ADM, Amaggi, Bunge, Cargill, COFCO International, JBS, Luis Dreyfus and Marfrig - all featured in this report.

It examines critical aspects of performance towards eradicating it from supply chains in the most prominent cattle and soy companies.



1. Ministério Da Ciência, Tecnologia E Inovações, Patria Amada (2021) Projeto de Monitoramento do Desmatamento na Amazônia Legal por Satélite (PRODES). <https://www.gov.br/inpe/pt-br/assuntos/ultimas-noticias/divulgacao-de-dados-prodes.pdf>

2. UNFCCC (2021) Agricultural Commodity Companies Corporate Statement of Purpose. <https://ukcop26.org/agricultural-commodity-companies-corporate-statement-of-purpose/>

Key findings



1 Gaps in governance and measuring and targets are consistent in cattle and soy companies. Policies must be strengthened and implemented through the company's supply chains. This includes making commitments to eradicate conversion from all operations by 2025.



2 Companies are signalling limited ambition about their intentions to stop deforestation. Most companies have set unambitious targets to implement no deforestation and conversion-free commitments, coupled with a lack of commitment to restore land changed in that time.



3 Deforestation and conversion-free policy must be backed up by industry and supply chain-wide traceability and verification systems. Indirect suppliers pose a significant deforestation risk to all the companies assessed. Some companies are managing this better than others by having a clearer view of where the major risks are in their supply bases using traceability and verification, however comprehensive mapping remains patchy.



4 Certification has not been widely adopted by either sector. Whilst options are limited for cattle, there are over 70 certification schemes for soy production³. These include four major independent certifications provided by The Roundtable for Responsible Soy, ProTerra, International Sustainability and Carbon Certification and the Roundtable on Sustainable Biomaterial, that are recognized as certifying deforestation and conversion free production in CDP's framework.



5 There is potential for cattle and soy traders to improve performance on traceability. Companies in both sectors can do more to increase traceability by going beyond specific, high risk geographies, to cover >90% of all direct suppliers. They can further reduce deforestation and conversion risk by mapping beyond first tier. Given the perceived difficulties of tracing cattle, it is surprising the cattle sector is not outperformed by soy on this measure.

3. Planter Tracker (2022). Increased soy certification would decrease deforestation risk. <https://planet-tracker.org/increased-soy-certification-would-decrease-deforestation-risk/#~:text=What%20certifications%20are%20there%20for,are%20around%2070%20soy%20certifications>.

Introduction

Forests now occupy just

30%

of the Earth's land surface.

Globally, cattle and soy production are destroying crucial biomes in South America like tropical rainforests in the Amazon, savannas in the Cerrado and dry forests in the Gran Chaco.



Losses included **40%** in Pará, and



17% in Mato Gross

Forests are essential to climate, nature and people. They provide a flow of environmental, social and economic services that are vital to life on the planet. Forests now occupy just 30% of the Earth's land surface⁴.

Despite increasing recognition of their benefits, forests are still being cleared at an unprecedented rate. Recent studies have shown the Amazon has reached a tipping point from being a carbon sink to a carbon source. The world's largest rainforest is losing its ability to recover from disturbances and provide the vital ecosystem services we depend on⁵.

The cattle and soy industries are two important agricultural sectors that provide livelihoods to producers at the frontiers of the forests and those working along its supply chains, but they are also linked to severe environmental degradation. Globally, cattle and soy production are destroying crucial biomes in South America like tropical rainforests in the Amazon, savannas in the Cerrado and dry forests in the Gran Chaco⁶. Losses included 40% in Pará and 17% in Mato Grosso - Mato Grosso and Pará have some of the largest cattle herds in the country, Mato Grosso is also Brazil's largest producer of soybeans.

CDP works with companies to measure and manage the forest risks and opportunities stemming from commodity production. Its organizational guide for environmental action includes questionnaires, guidance and a scoring methodology that set out a roadmap for good environmental performance. Within that roadmap, 15 forest-related key performance indicators ([Appendix](#)) have been identified to specifically support companies transition to conversion and deforestation-free production. CDP's tools encourage the uptake of a range of measures that improve transparency, governance and sustainable production.

4. Global Forest Watch (2022) <https://www.globalforestwatch.org/dashboards/global/>

5. Harvey, Chelsea (2022) Amazon Rain Forest Nears Dangerous 'Tipping Point'. <https://www.scientificamerican.com/article/amazon-rain-forest-nears-dangerous-tipping-point/>

6. WWF (2018) What Are The Biggest Drivers of Tropical Deforestation? <https://www.worldwildlife.org/magazine/issues/summer-2018/articles/what-are-the-biggest-drivers-of-tropical-deforestation#:~:text=Globally%2C%20beef%20and%20soy%20are.commodities%20is%20projected%20to%20rise.>

About this report

The aim of this report is to examine the most significant cattle and soy companies by market share against CDP's forest-related key performance indicators (KPIs). The following case studies detail where companies are meeting expectations to transition to deforestation and conversion-free production and where there are opportunities to take more action. The report analyzes data disclosed through CDP's 2021 forest questionnaire.

The analysis of commitments and actions against forest-related indicators can go towards implementing the development of the corporate roadmap set up by 10 of the world's largest commodity traders. Reporting through CDP can track progress against this.



Context



Context

C and D scores account for:

64%

of disclosing cattle companies.



and

54%

of those disclosing on soy.

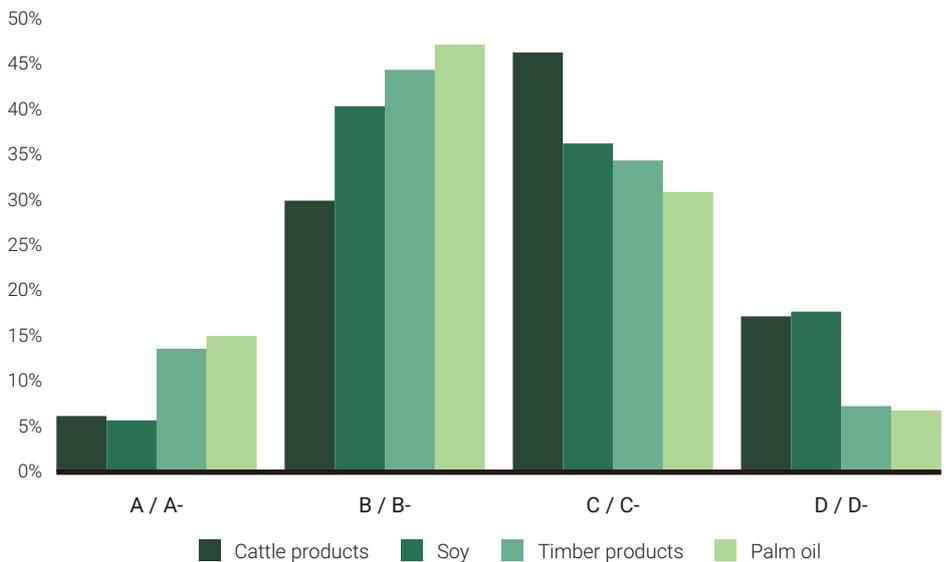


The key cattle and soy companies

Figure 1 shows how companies that disclosed through CDP performed in 2021. Of the four key agricultural commodities scored, the cattle and soy sectors performed the worst – they have

less than half the number of A grade companies compared to timber and palm. C and D scores account for 64% of disclosing cattle companies, and 54% of those disclosing on soy.

Figure 1. Grouped 2021 CDP scores by commodity



Currently seven of the 10 highest impact cattle and soy companies disclose through CDP. They include three meatpackers – JBS, Marfrig and Minerva, and four soy traders - Amaggi, Archer Midland Daniels (ADM), Bunge and Cargill. Louis Dreyfus has been requested to

disclose on forest-related impacts since 2013 and COFCO International since 2020, yet neither have disclosed through CDP. Whilst BRF discloses on palm, soy and timber, it does not submit a response for cattle products.

Table 1 shows the CDP score for each of the companies between 2020 and 2021. As should be expected from the biggest companies, all are in the top two CDP scoring bands ranging from A to B-. However, the majority are standing still. Only Amaggi makes CDP's A List and is the only company to have improved its

score between years. Both ADM and Bunge received lower scores in 2021 because of tougher scoring thresholds. For the market-leading companies to be leading on forest-related issues and demonstrating they can transition at pace to deforestation-free production and consumption, all need to be achieving an A.

Table 1. Company performance by CDP score in 2020 and 2021

Sector	Score / Company	2020	2021
 Cattle	JBS	B	B
	Marfrig	A-	A-
	Minerva	B	B
	BRF ⁷	Failed to disclose	Failed to disclose
 Soy	ADM	B	B-
	Amaggi	A-	A
	Bunge	B	B-
	Cargill	B	B
	Louis Dreyfus ⁸	Failed to disclose	Failed to disclose
	COFCO International	Failed to disclose	Failed to disclose

7. BRF does not disclose on cattle through CDP's forest questionnaire. It discloses on palm oil, soy, and timber.

8. Louis Dreyfus is requested by CDP Investor signatories to disclose through the forests questionnaire and is a non-disclosing company.

JBS, Marfrig and Minerva are the largest meat processors in Brazil, with a market share of

72%

of cattle exports.

Around

30%

of global soy production comes from Brazil.

80%

of Brazilian soy was exported to China and the EU.

57%

of those exports came from Amaggi, ADM, Bunge, Cargill, COFCO, and Louis Dreyfus.

Did you know?

In 2020, Brazil was the world's leading exporter of beef. JBS, Marfrig and Minerva are the largest meat processors in Brazil, with a market share of 72% of cattle exports¹⁰. In 2019 they were responsible for over 50% of production.

Cattle products and soybeans are produced by many farms, but a few traders control the flow of most goods - their actions largely dictate the overall environmental performance of both commodities. This gives traders a disproportionate amount of influence over the supply chain, and at the same time provides a valuable point in the supply chain to channel interventions. With a controlling proportion of the market share, the largest and most influential companies set a precedent for other traders and companies handling forest

commodities - with that should come an expectation for them to demonstrate good social and environmental leadership.

Market share is not the only relationship between the companies. The expansion of soy farming into land previously converted for cattle pasture is causing ranchers to convert more land for grazing¹¹. This is a poignant example of how demand for land needs to be managed in a systematic way so that conversion is not displaced to other geographies or supply chains.

Did you know?

Around 30% of global soy production comes from Brazil¹². In 2021, 80% of Brazilian soy was exported to China and the EU. 57% of those exports came from Amaggi, ADM, Bunge, Cargill, COFCO, and Louis Dreyfus¹³. More than half of soy production in the country comes from the Amazon and the Cerrado biomes. Mato Grosso state straddles both and is Brazil's biggest soy producing region.

9. Statista (2022) Top Exporters of Beef Worldwide in 2020. <https://www.statista.com/statistics/917207/top-exporters-of-beef-global/#:~:text=In%202020%2C%20Brazil%20was%20the,Australia%2C%20with%206.9%20billion%20dollars>.
10. The origin, supply chain, and deforestation risk of Brazil's beef exports. <https://www.pnas.org/content/117/50/31770>.
11. Ermgassen et al. (2020) Using supply chain data to monitor zero deforestation commitments: An assessment of progress in the Brazilian soy sector. *Environ. Res. Lett.* 15, 035003 (2019).
12. Ritchie, Hannah and Roser, Max (2022) Soy. <https://ourworldindata.org/soy>.
13. WWF (2021) Taking deforestation and conversion-free supply chains. <https://www.worldwildlife.org/pages/taking-deforestation-and-conversion-out-of-supply-chains>.

Political and regulatory considerations

New forest-related risks and opportunities are emerging for commodity traders and producers in high deforestation risk countries. The risks come from the emergence of new legislation aimed to stop the import of products linked to tropical and subtropical deforestation, balanced by opportunities to address those same risks and more:

- ▼ The European Parliament has passed a bill that will require traders to submit a due diligence statement. Liability imposes a legal responsibility for trading companies to ensure their sourcing is not linked to deforestation.
- ▼ As of January 2022, Germany and France passed legislation imposing new due diligence requirements. Similar bills focused on deforestation are being considered in the United Kingdom and United States¹⁴.
- ▼ China is the largest importer of soy and beef today. It has no policies in place ensuring the import of deforestation-free agricultural commodities. However, its revised Forest Law (2019)¹⁵ does prohibit purchasing, processing, or transporting timber that originates from illegal sources. On this basis, China may extend legality due diligence and verification requirements to imports of other agricultural commodities in the future – this would close doors to deforestation-linked commodities in another significant market.

Brazil's domestic market consumes up to 80% of the beef it produces¹⁶, so domestic policy is significant in agricultural commodity and land use regulation.

Existing domestic sustainable land use policies already have the potential to eradicate agriculture-driven deforestation but often lack enough enforcement and specificity to the individual agricultural commodity sectors to be effective. For example, the Brazilian Forest Code requires that a minimum percentage of native vegetation is preserved on rural properties. However, a watering down of the regulation and challenges with rural properties not being registered and verified on the national land planning and monitoring system limit its

effectiveness as a management and verification tool. Regarding international trade, a central challenge for deforestation-free supply chains remains the traceability of the indirect cattle supply networks. Efforts to develop a public traceability system have been undermined by restricted access to information on farm-to-farm cattle movements¹⁷. One potential solution is the Green Label (Selo Verde), a digital platform that records and provides traceability information in the cattle supply chain, monitoring up to five tiers of indirect suppliers. However, it has not been given support by Brazil's federal government, and has so far only been implemented in the state of Pará with implementation starting to scale to the state of Minas Gerais.



14. EU's deforestation-free product regulation, UK Law on Forests Risk Commodities and the proposal of the FOREST Act.

15. Chinese Academy of Forestry (2019) Forest Law of the People's Republic of China. <https://www.atibt.org/wp-content/uploads/2020/01/China-Forest-Law-Amendment-2020-20191228.pdf>

16. ABIEC (2019), Beef Report. <http://www.abiec.com.br/en/publicacoes/beef-report-2019-2/>

17. The Washington Post (2022) Devouring the Rainforest. <https://www.washingtonpost.com/world/interactive/2022/amazon-beef-deforestation-brazil/>

Summary of performance



2

Summary of performance

The three cattle
and four soy
companies meet

67%

of the KPIs in full.

Key Performance Indicators

Key Performance Indicators (KPIs) are used to evaluate the performance of the companies. CDP's KPIs are arranged in six categories that group critical aspects of performance towards eradicating deforestation from supply chains ([Appendix](#)).

Performance against each of the KPIs is assessed as:

- ▼ **Full** - The KPI has been met. The company reported meeting all elements of the KPI.
- ▼ **Partial** - The KPI has not been met. The company reports significant progress has been made to meeting it.
- ▼ **None** - The KPI has not been met. The company did not report meeting any of the KPI elements.

Between them, the three cattle and four soy companies meet 67% of the KPIs in full. [Table 2](#) summarises how they fared together, against the six categories and individually against each indicator.



Table 2. KPI performance by category and company
(Full KPI = ✓ Partial KPI = - None = x)

Between them, the three cattle and four soy companies meet 67% of the KPIs in full. Table 2 summarises how they fared together, against the six categories and individually against each indicator.

		 Cattle				 Soy					
Category	KPIs	JBS	Marfrig	Minerva	KPIs attained	Amaggi	ADM	Bunge	Cargill	KPIs attained	
Governance	Board-level oversight	✓	✓	✓	44%	-	-	✓	✓	42%	
	Policy	-	✓	-		✓	✓	-	-		
	Commitments	-	-	-		✓	-	-	-		
Strategy	Long-term strategic business plans	✓	✓	✓	100%	✓	✓	✓	✓	100%	
Risk management	Forests-related risk assessment	✓	✓	✓	100%	✓	✓	-	-	50%	
Measuring & targets	Targets	-	✓	✓	60%	-	-	✓	✓	50%	
	Certification	x	x	x		x	x	x	x		
	Traceability	-	✓	-		-	-	-	-		
	Compliance (with no conversion and/or no deforestation commitment)	✓	✓	✓		✓	✓	✓	✓		✓
	Legal compliance	✓	✓	✓		✓	✓	✓	✓		✓
Value chain engagement	Supply chain engagement-smallholders	✓	✓	✓	75%	✓	✓	✓	✓	88%	
	Supply chain engagement-direct suppliers	✓	✓	✓		✓	✓	✓	✓		
	Supply chain engagement-beyond first-tier suppliers	x	x	✓		✓	✓	✓	✓		
	Forest-related external activities or initiatives	-	✓	✓		✓	-	-	✓		
Ecosystem restoration and protection	Beyond no-deforestation	✓	x	✓	67%	✓	✓	-	✓	75%	
Total KPIs fully achieved		8	11	11	74%	11	9	8	10	67%	



Cattle

Overview

- ▼ Strategy and risk management are well covered with all companies fully meeting the KPIs. Early identification of significant financial impacts materializing from physical, regulatory and reputational risk puts companies in a stronger position to mitigate, adapt and transition. This protects market share, revenues and stakeholder interests.
- ▼ The biggest gap is in governance. Companies have set themselves either less ambitious commitments and shorter timescales or more ambitious commitments and longer timescales. To achieve verified deforestation and conversion-free supply by 2030, ambition must be increased, and implementation timescales shortened. Revised guidance from the [Accountability Framework initiative](#) now recommends that companies strengthen their commitments by bringing targets forward to 2025 or sooner, to align with science-based target setting and the commitments already being made by most companies across the key forest risk commodity sectors¹⁸.
- ▼ Measuring and targets is the second weakest area of implementation. Although certification is currently a challenging KPI to meet in the cattle sector, the expectation is that traceability goals are being worked towards and that they cover complete supply chains, including indirect suppliers. Companies are urged to be more transparent on the proportions of total deforestation and conversion-free produce they are known to source.

Individual company performance

- ▼ Marfrig performs well on KPIs that assess governance, strategy and approach to deforestation risk management. It is the strongest performer on measuring and targets. Its biggest areas for improvement are engagement with indirect suppliers which can support its supply chain mapping efforts and corporate contributions to ecosystem restoration where it fails to meet KPIs at any level.
- ▼ JBS, the largest food company in the world, performs least well against the KPIs. To meet the KPIs it can look to broaden the scope of its policy to be company-wide and include more social aspects. JBS underperforms on traceability and beyond first-tier engagement. Both activities go hand in hand to help reveal deforestation and conversion risk within its supply chain. Generally, JBS should focus on working across its entire supply chain, not just direct suppliers or selected geographies, through a mixture of initiatives.
- ▼ Minerva, Brazil's leading beef producer, is the only company that achieves or is working towards all the KPI categories. It can take vital steps to remove deforestation from its operations by strengthening its policies and commitments.

18. The Accountability Framework initiative (2022) The AFI recommends a target date no later than 2025 to eliminate deforestation and conversion in supply chains. <https://accountability-framework.org/the-afi-recommends-a-target-date-of-2025-or-sooner-to-eliminate-deforestation-and-conversion-in-supply-chains/>



Overview

- ▼ Strategy is the only category that unanimously satisfies the KPI expectations. Overall, companies perform well in supply chain engagement but there are opportunities to improve further with relative ease.
- ▼ The least progress has been made in measuring and targets where eight important certification and traceability indicators are not being met, despite some progress being reported. Soy companies are encouraged to use a combination of certification and traceability to verify deforestation free status and to reduce exclusions in supply chain mapping.
- ▼ There is a 58% gap in governance. Companies are not setting robust and comprehensive remediation policies or in most cases, making commitments that address the range of social and environmental conditions needed to drive sustainable agricultural production and development. As with the cattle traders, implementation dates for commitments are not consistent with what is now considered best practice in two of four cases. The large traders are encouraged to bring the implementation of their commitments forwards to 2025 to ensure no further conversion opportunity is given and that human rights are protected as soon as possible.
- ▼ There are quick wins when it comes to risk assessments. Companies perform well against most KPI elements, but two out of the four timelines are too short. Changing risk assessments' time horizons can improve performance against this indicator.

Individual company performance

- ▼ Amaggi performs best of the four traders in terms of CDP score and in meeting 11 of CDP's KPIs. It can set itself apart by strengthening its deforestation linked targets and working towards achieving >90% traceability.
- ▼ ADM and Cargill both meet the expectations of 10 KPIs, with Bunge achieving eight. ADM, Bunge and Cargill are encouraged to set a good deforestation free foundation by working towards meeting the governance KPIs, particularly policies and commitments.
- ▼ Bunge and Cargill are encouraged to increase the time horizons of their risk assessments to at least six years to meet minimum good practice expectations.
- ▼ Bunge scores worst against CDP's KPIs and in overall score. It could become more involved in multistakeholder collaborations and take a longer view on risks, in addition to the next steps identified for the other soy companies.

Detailed analysis of each companies' performance, as measured by **CDP's 15 forest-related KPIs**, is included in the [Appendix](#). It includes a set of next steps relevant to each indicator not achieved.

Conclusions

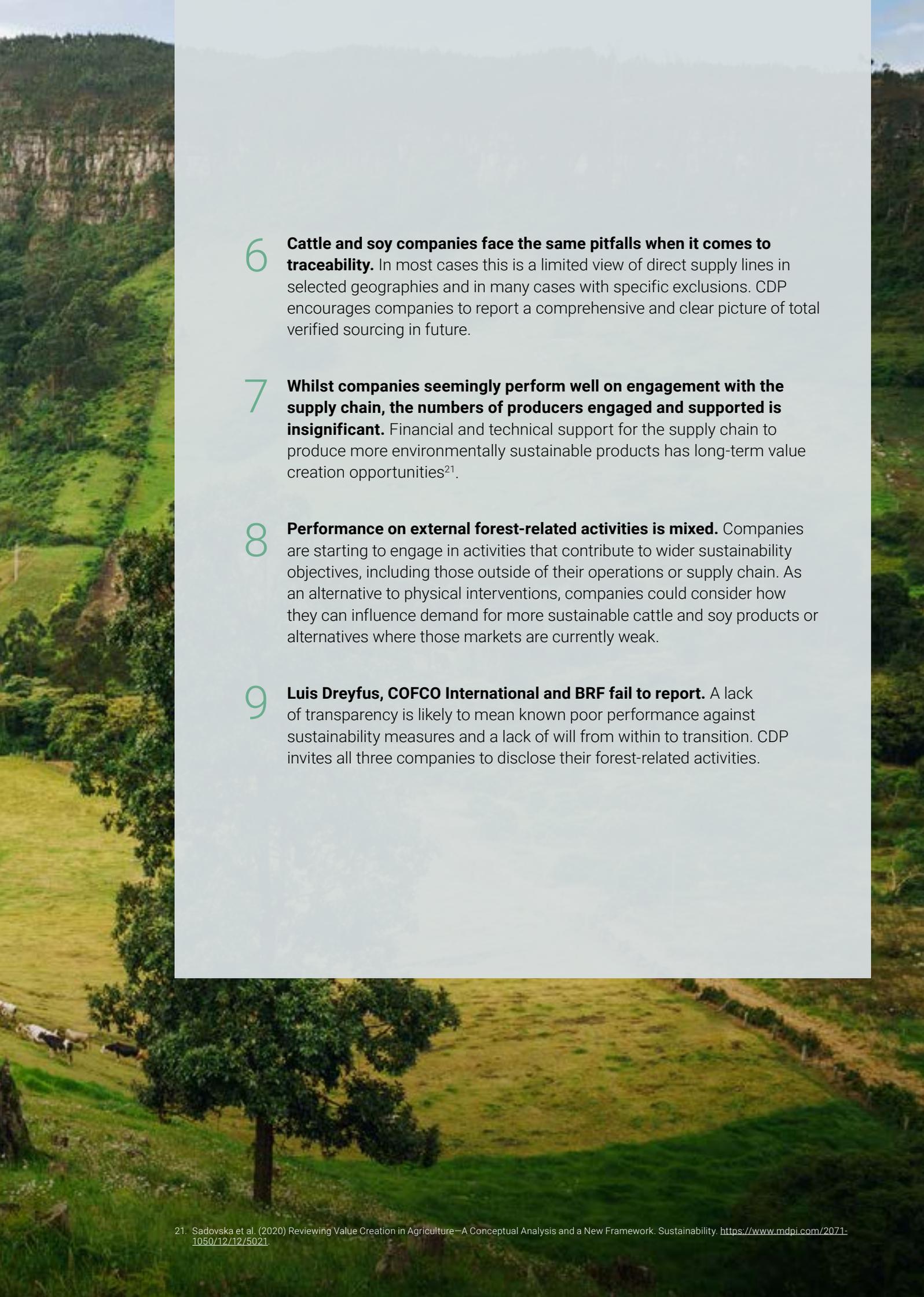
3

Conclusions

- 1 Gaps in governance and measuring and targets are consistent in cattle and soy companies.** Policies must be strengthened and implemented through the company's supply chains. This includes making commitments to eradicate conversion from all operations by 2025.
- 2 Companies are signaling limited ambition about their intentions to stop deforestation.** Most companies have set unambitious targets to implement no-deforestation and conversion commitments, coupled with lack of commitment to restore land changed in that time.
- 3 Company commitments that recognize and support human rights and social value, including remediation, can support sustainable business.** Indigenous and tribal territories experience significantly reduced deforestation rates and high levels of carbon sequestration¹⁹ yet are only recognized by two companies – action in these areas can support business, planet and people.
- 4 Deforestation and conversion-free policy must be backed up by industry and supply chain-wide traceability and verification systems.** Indirect suppliers pose a significant deforestation risk to all the companies assessed. Some are managing this better than others by having a clearer view of where the major risks lie within their supply bases using traceability and verification, however comprehensive mapping remains patchy.
- 5 Soy traders don't seem to be using certification to its full potential, despite there being over 70 certification schemes for soy production²⁰.** These include four major independent certifications provided by The Roundtable for Responsible Soy, ProTerra, International Sustainability and Carbon Certification and the Roundtable on Sustainable Biomaterial, that are recognized as certifying deforestation and conversion-free production in CDP's framework.

19. FAO and FILAC (2021) Forest Governance by indigenous and tribal peoples. An opportunity for climate action in Latin America and the Caribbean. <https://www.fao.org/documents/card/en/c/cb2953en>.

20. Planter Tracker (2022). Increased soy certification would decrease deforestation risk. <https://planet-tracker.org/increased-soy-certification-would-decrease-deforestation-risk/#:~:text=What%20certifications%20are%20there%20for,are%20around%2070%20soy%20certifications>.



6 Cattle and soy companies face the same pitfalls when it comes to traceability. In most cases this is a limited view of direct supply lines in selected geographies and in many cases with specific exclusions. CDP encourages companies to report a comprehensive and clear picture of total verified sourcing in future.

7 Whilst companies seemingly perform well on engagement with the supply chain, the numbers of producers engaged and supported is insignificant. Financial and technical support for the supply chain to produce more environmentally sustainable products has long-term value creation opportunities²¹.

8 Performance on external forest-related activities is mixed. Companies are starting to engage in activities that contribute to wider sustainability objectives, including those outside of their operations or supply chain. As an alternative to physical interventions, companies could consider how they can influence demand for more sustainable cattle and soy products or alternatives where those markets are currently weak.

9 Luis Dreyfus, COFCO International and BRF fail to report. A lack of transparency is likely to mean known poor performance against sustainability measures and a lack of will from within to transition. CDP invites all three companies to disclose their forest-related activities.

Appendix

How are cattle and soy companies performing against CDP's 15 KPIs?

This section examines the KPIs that have not been achieved by the cattle and soy companies using data disclosed through the 2021 forest questionnaire – focusing on commitments, targets, certification and traceability. A table for each KPI sets out the performance against the actions companies are expected to take to meet each KPI. Under the current situation we highlight some of the measures being taken by the companies, recognizing good practice that's already in place. Any gaps or opportunities to strengthen good practice and meet or exceed the expectations of the KPI are set out as next steps.



4

Governance



Policy

To meet the KPI:

- For all three companies, extending the scope of the policies is a first step to curtailing all forest loss associated with cattle products – this includes legal and illegal deforestation from direct and indirect sourcing. The legality or illegality of forest clearance bears little meaning to climate regulation, conservation of ecosystems or wellbeing of people that depend on them.
- JBS is expected to expand its policies to be companywide or cover all commodity specific operations.
- JBS and Minerva are expected to strengthen their policies by including commitments to remediation, restoration and/or compensation for past harms.

Current situation: **Marfrig** is the only company that has fully met the policy KPI with a comprehensive commodity specific, company-wide no-deforestation policy including social and remediation elements. **Minerva** partially meets the KPI by making a company-wide commitment to ending illegal deforestation by 2030. **JBS** has established a policy for zero illegal deforestation for indirect suppliers in the Cerrado, Pantanal, Atlantic Forest and Caatinga biomes – as this policy is limited to selected geographies and does not include social elements, it only partially meets the KPI.

Table 3. Scope of forest-related policies

KPI component	JBS	Marfrig	Minerva
Publicly available, general or commodity specific, company-wide no deforestation policy	No	Yes	Yes
Eliminate conversion of natural ecosystems / commitment to eliminate deforestation / commitment to no planting on peatlands and to no exploitation (NDPE)	Yes	Yes	Yes
Commitment to remediation, restoration and/or compensation of past harms	No	Yes	No
Commitment to protect rights and livelihoods of local communities	Yes	Yes	Yes
Overall KPI achievement	Partial	Full	Partial

Companies must strive to meet zero-deforestation targets before 2030, to discourage any further deforestation within that time.



Commitments

Current situation: It is increasingly accepted that companies must strive to reach zero-deforestation targets before 2030 to discourage any further deforestation within that time. The dominant companies should aspire to bring deadlines forward to 2025 or sooner.

To meet the expectations of this KPI, commitments must be comprehensive, timebound and include all environmental, social and legal factors listed in Table 5.

Marfrig makes the most robust commitments of the three traders, including environmental and social elements. **Minerva** makes some social and environmental commitments in its policies and is wider in geographic scope, extending to purchases in Paraguay and coverage of all Brazilian sourcing biomes – this will reduce leakage within its own supply chain in Brazil and South America. However, with that broader geographic scope comes a target date that is beyond 2030. **JBS'** policy is the most restricted in geographic scope, making environmental commitments in the Amazon biome only but with the nearest commitment date.

With commitments that differ by completion date, geographic and supplier scope, there is a risk that leakage will occur in other areas of the supply chain. Consistent commitments from the three companies will give all a better chance of eliminating deforestation across the industry.



To meet the KPI:

- ▼ JBS and Minerva are expected to make comprehensive, public, zero-deforestation commitments that include social and legal components that address the needs of planet and people.
- ▼ All companies must recognize the role that remediation and restoration will contribute to undoing past harms and strengthening implementation. By adding policies that require reintegration of converted land, clearance will be discouraged.
- ▼ All companies are expected to increase the social expectations of their suppliers. A first step is to ensure suppliers recognize the needs of people working in supply chains and living in indigenous territories.

Table 4. Scope of forest-related policies

KPI component	JBS	Marfrig	Minerva
Public no-deforestation, forests-related commitment	Yes	Yes	Yes
Covers 100% of production/ consumption volumes	No	Yes	Yes
Applies to direct operations/supply chain	Supply chain	Direct and supply chain	Direct and supply chain
Cut-off date, before 2020	2008	2008	2009
Implementation date, before 2030	2020	2020	>2030
Includes FPIC	No	Yes	Yes
UN Declaration on the Rights of Indigenous Peoples	No	No	No
Remediate any adverse impacts on indigenous people and local communities	No	No	No
Adoption of the UN International Labour Organization principles	No	No	No
Resolution of complaints and conflicts through an open, transparent and consultative process	No	No	No
Recognition of legal and customary land tenure rights	No	Yes	Yes
Restoration and compensation to address past deforestation and/or conversion	No	Yes	No
Overall KPI achievement	Partial	Partial	Partial

Measuring & targets



Companies are increasingly expected to trace 100% of cattle to breeding and rearing farms in all geographies, at the highest geographic resolution possible, by 2030 as a minimum.

Marfrig has achieved

62%

traceability in the Amazon and

42%

in the Cerrado.



Targets

This indicator assesses if companies are setting traceability and certification targets that let them track progress against the no deforestation and no conversion commitments they have set themselves. The targets ensure the company is translating commitments into operational change across its supply chain. Targets are assessed for scope and progress.

Current situation: To fully meet the expectations of this KPI, targets can be either 100% traceability or 100% certification of supplies - they must relate to a public no deforestation or conversion commitment. Companies are expected to demonstrate they have met the target or are making progress to achieving it.

Traceability of the cattle supply chain to distant, indirect suppliers is currently the only way to guarantee a complete picture of where cattle originates and the stops they make before reaching the slaughterhouse – it is currently the only way to separate deforestation and conversion from production in complex supply lines. Companies are increasingly expected to trace 100% of cattle to breeding and rearing farms in all geographies, at the highest geographic resolution possible, by 2030 as a minimum.

JBS reports no traceability target designed to track a deforestation commitment. Despite it certifying all leather production under the Leather Working Group, the certification does not guarantee no deforestation and conversion-free production, so does not meet the KPI on grounds of certification.

Marfrig has three traceability targets. In 2020 it achieved its target to trace suppliers to fattening farms in the Amazon by cross-referencing suppliers against government lists including embargoed areas using the IBAMA registry, Ministry of Labor and Employment - MTE, proof of land registry (SCNR) and Rural Environmental Registration (CAR). Achievement of this target gives Marfrig low visibility of its most immediate supply chain (see Figure 2). It has set two new stronger targets to trace indirect suppliers further along its supply chain to rearing farms in the Amazon and Cerrado. This will give Marfrig medium-level visibility of its suppliers in those geographies. Against those stronger targets, it has achieved 62% traceability in the Amazon and 42% in the Cerrado. Marfrig meets the KPI on all three traceability targets at a medium level.

Figure 2. Visibility of Brazilian cattle supply chain (Proforest, 2017)

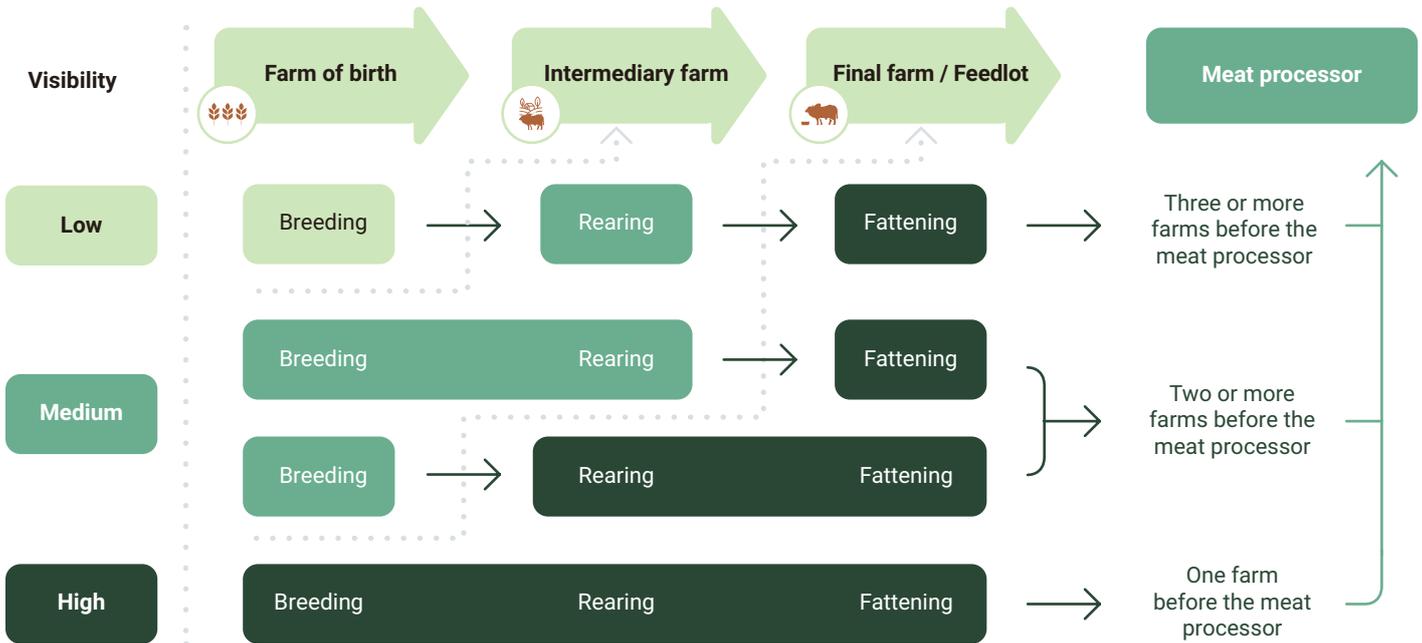


Table 5. Scope of targets

To meet the KPI:

- ▼ JBS can meet the expectations of this KPI by setting a traceability target or extending the coverage of its traceability scheme to cover all production.
- ▼ For Marfrig and Minerva to continue meeting this KPI, they must demonstrate ongoing progress towards the targets they have set.

KPI component	JBS	Marfrig	Minerva
Forest-related target	Yes	Yes	Yes
Traceability			
Target to trace 100% of supply back to at least municipality or equivalent level	No	Yes	Yes
Supply chain traceability point	N/A	Fattening / rearing	Fattening
Companies that have achieved or are making linear progress towards targets to trace 100% of supply back to at least municipality or equivalent level	No	Yes – one achieved	Yes
Target linked to deforestation commitment	No	Yes	Yes
Certification			
Target to source 100% no-deforestation certified commodities	Yes – leather products only	No	No
Companies that have achieved or are making linear progress towards targets to source 100% no-deforestation certified commodities	No	No	No
Target linked to deforestation commitment	Yes	No	No
Overall KPI achievement	Partial	Full	Full

Currently none of the companies can certify

>90%

of production is deforestation and conversion-free via a third party.

In 2020, Marfrig had

<1%

of its production certified by Rainforest Alliance Sustainable Agriculture Network Chain of Custody.



Certification

Current situation: Credible third party certification is valuable in verifying the production of deforestation-free commodities. It is used to communicate to buyers, consumers, investors and other stakeholders that the company has adopted responsible practices. Compared to other commodities such as timber, palm or coffee, zero-deforestation certification schemes for cattle products are limited. Any schemes developed to certify deforestation-free, regenerative practices, with sustainable resource use and carbon sequestration could provide multiple benefits to companies.

This indicator assesses the coverage and scope of certification. Currently none of the companies can certify >90% of production is deforestation and conversion-free via a third party. In 2020 **Marfrig** had <1% of its production certified by Rainforest Alliance Sustainable Agriculture Network Chain of Custody, but due to low uptake the scheme has been omitted from Rainforest Alliance’s updated standard, meaning no production will be certified from 2021. **Minerva** has no deforestation-free certified production.

Table 6. Scope of certification schemes

KPI component	JBS	Marfrig	Minerva
No exclusions & over 90% certified in no credit/offset or mass balance certification* ²²	0%	<1%	0%
Overall KPI achievement	None	None	None

To meet the KPI:

- With few options for third party certification, cattle companies must look to traceability to verify deforestation and conversion-free sourcing.
- The cattle companies have a large amount of influence within their industry – it is within their combined possibilities to support the creation, piloting and scaling of independent third party certifications which until now have been unsuccessful without their backing.

22. *For the purposes of this analysis “no deforestation compliant certification” is defined as third party verified certification that includes a no deforestation/conversion criterion and is not a credit, offset, mass-balance or controlled wood type. Purchase of certified materials or credits using a mass-balance or book-and-claim system helps contribute to the production of no deforestation commodities, however, it does not demonstrate that the commodities are deforestation-free/conversion-free and extra due diligence is needed to confirm commodities are not contributing to deforestation.

None of the companies have achieved

>90%

traceability beyond their immediate suppliers meaning overall scope is limited.

To meet the KPI:

- ▼ JBS can improve the transparency of its reporting by detailing the geographic scope of its traceability system.
- ▼ Marfrig sources cattle in the Amazon and Cerrado biomes. It can improve its disclosure by reporting exclusions on traceability in the Cerrado.
- ▼ JBS and Minerva should expand traceability beyond its direct suppliers / fattening farm stage.
- ▼ All companies should strive for no geographic exclusions so that visibility of deforestation risk covers 100% of production, including both direct and indirect suppliers with a target date no later than 2025.



Traceability

Current situation: Considering the complexity of the Latin American cattle supply chain and that most indirect suppliers are unmonitored, there are opportunities for deforestation to enter at the early stages of the supply chain. This is where new ranches are established that can be outside the known supply chain and from where cattle is transported for further breeding, rearing and fattening.

Marfrig reports tracing 100% of its volumes to farm level with no exclusions and meets this KPI. However, the traceability scope is limited to direct suppliers. **Minerva** reports 100% traceability for direct suppliers in all Brazilian biomes and 75% of direct suppliers in Paraguay. **JBS** excludes certain suppliers from its monitoring. None of the companies have achieved >90% traceability beyond their immediate suppliers meaning overall scope is limited.

JBS has a target to cover indirect suppliers in the Amazon, Cerrado and other Brazilian biomes by 2025. **Marfrig's** target is to achieve full traceability of its supply chain in the Amazon, including indirect suppliers. It will do the same with the Cerrado and other biomes, achieving zero deforestation by 2030.

Minerva reports its plans to expand geographic monitoring of direct supplier farms to all operating countries in South America by 2030, with interim stages of completion including 100% of direct supplier farms in Paraguay expected by December 2021 (to be confirmed through 2022 disclosure), Colombia in 2023, Uruguay in 2025 and expansion to other countries in South America by 2030.

Table 7. Scope of traceability

KPI component	JBS	Marfrig	Minerva
Companies that can trace more than 90% of their production/ consumption volume of a commodity back to at least municipality or equivalent level (no exclusions)	No	No	No
Scope of geographic coverage	Brazil	Amazon	Brazil
Traceability point	Fattening farms	Fattening farms	Fattening farms
Exclusions	Yes – specific suppliers	None reported	Yes - limited geographies
Overall KPI achievement	Partial	Full	Partial

Next steps:

- Despite meeting the KPI, all companies are expected to raise their level of ambition and monitor no-deforestation compliance beyond their current commitments. This means looking through the supply chain to rearing farms to understand the level of deforestation and conversion-free production further up the supply chain. Some companies already have the means to verify suppliers beyond their current reporting boundaries.
- Although not currently part of the expectations for this indicator, third party verification will give additional confidence to stakeholders in the level of deforestation and conversion-free compliance being reported, and should be carried out as standard to verify reduced risk.

Compliance

Current situation: For Brazilian supply chains, standard practice is for all companies to monitor against government protected areas and embargoed suppliers. All three companies report having monitoring, reporting and verification (MRV) systems in place and assessing compliance of their policies and commitments. The companies use a variety of MRV technologies and techniques to achieve the expected level of verification and fully meet the KPI.

Table 8. Scope of monitoring, reporting and verification

KPI component	JBS	Marfrig	Minerva
Companies have a system to control, monitor, or verify compliance with no conversion and/or no deforestation commitments and this system covers all relevant direct operations or supply chains	Yes	Yes	Yes
Stage of operation	Supply chain	Direct operations, supply chain	Direct operations, supply chain
Volume in compliance	100%	100%	100%
Suppliers in compliance	100%	91-99%	100%
MRV approach	Geospatial monitoring tool	Community-based monitoring; first-party verification; geospatial monitoring tool; third-party verification	Community-based monitoring; first-party verification; geospatial monitoring tool; ground-based monitoring system; second-party verification
Overall KPI achievement	Full	Full	Full

Value chain engagement

All companies report working with smallholders and direct suppliers – although the numbers supported are

<1%

of suppliers.

Minerva is the only company to submit a response about engagement beyond immediate suppliers – it achieved the KPI in full.

All companies report working with smallholders and direct suppliers by providing either financial assistance, technical assistance or both – although the numbers supported are less than 1% of suppliers.

Smallholders make up most of the supply chain, so engagement is key to educating and providing support to elevate social conditions, break the land clearance cycle, and restore the environment. This is especially true where certification, traceability and MRV systems don't yet reach and where ranchers are outside the immediate sphere of a purchasing company's contractual influence.



Beyond first-tier suppliers

Current situation: **Minerva** is the only company to submit a response about engagement beyond immediate suppliers – it achieved the KPI in full. Its approach uses a due diligence and screening system that is app-based, linked to Minerva's systems and made available to its suppliers. It relies on the same socio-environmental criteria Minerva expect of its direct suppliers. It was scheduled to be phased in starting with the Amazon in late 2021, followed by a Brazil-wide roll out, before being implemented in all other South American countries by 2030.

Minerva Foods has been pioneering the verification of its indirect supply farms through a partnership with the National Wildlife Federation and Wisconsin-Madison University. Minerva is the first company to test a novel indirect supply farm assessment tool called Visipecc. The tool, developed by Wisconsin-Madison University, will help to develop and guide workable action plans to tackle the risks of deforestation within the indirect supply farms of Minerva.

Table 9. Scope of indirect supplier engagement

KPI component	JBS	Marfrig	Minerva
Traders, manufacturers or retailers working beyond first-tier suppliers to manage and mitigate deforestation risks	No information disclosed	No information disclosed	Yes
Supply chain mapping	N/A	N/A	Yes
Capacity building	N/A	N/A	Yes
Overall KPI achievement	None	None	Full

To meet the KPI:

- JBS and Marfrig can improve their performance against essential forest-related criteria by disclosing against this metric. If they are not doing so already, both companies can support a more sustainable cattle industry by working with their complete Supply chain. Capacity building programs provide an immediate opportunity to increase knowledge, expectations and raise standards among suppliers.



Forest-related external activities or initiatives

Current situation: All companies participate in a multi-stakeholder initiative. **Marfrig** and **Minerva** fully meet the KPI as they also take part in jurisdictional or landscape approaches.

Marfrig reported its engagement in jurisdictional approaches. It is a member of PCI – Produce, Conserve and Include - a strategic group that intends to expand and increase agricultural, livestock and forest production economy by preserving remaining forests, conserving native vegetation, developing recovery of environmental liabilities and socio-economic integration of family agriculture, and encouraging the creation of initiatives for natural resource conservation.

In 2020, **Minerva** was part of the working group that developed the monitoring protocol for cattle suppliers in the Amazon, working with slaughterhouses and the retail sector with the support of Imaflora and the Federal Public Ministry.

Table 10. Scope of multi-stakeholder and jurisdictional initiatives

KPI component	JBS	Marfrig	Minerva
Companies participating in external activities or initiatives to promote the implementation of their forests-related policies and commitments	Yes	Yes	Yes
Engaged in jurisdictional approaches	No	Yes	Yes
Overall KPI achievement	Partial	Full	Full

To meet the KPI companies need to:

- There is an emerging consensus among civil society that companies working in isolation will struggle to deliver deforestation and conversion-free at the required pace and scale needed. By joining a jurisdictional approach initiative, JBS will open new opportunities for collaboration and sustainable production.

Ecosystem restoration and protection

Beyond no-deforestation

Current situation: **JBS** and **Minerva** fully meet the restoration KPI. **JBS** contributes to projects that support ecosystem restoration and protection and monitors biodiversity, carbon, soil and water outcomes at six monthly intervals. **Marfrig** reports it will start implementing projects in the next two years.

Table 11. Scope of ecosystem restoration and protection

KPI component	JBS	Marfrig	Minerva
Companies supporting or implementing projects focused on ecosystem restoration and protection	Yes	No	Yes
Monitoring frequency must be more than every five years	Yes	No	Yes
Measured outcomes	Yes	No	Yes
Overall KPI achievement	Full	None	Full

To meet the KPI:

-  Marfrig is not currently involved in any restoration initiatives. However, there is an opportunity for them to implement restoration with the suppliers that have been identified as non-compliant through compliance monitoring. Supporting suppliers restore degraded land presents a good opportunity to progress against the KPIs and improve their CDP score. Marfrig may also choose to take part in other projects outside of their supply chain.

How cattle and soy companies are performing against CDP's 15 KPIs

The meet the KPI:

- Whilst Amaggi's and ADM's governance arrangements do not meet the current indicator criteria, they do follow the TCFD and TNFD disclosure recommendations and report that board members or a board-level committee oversee forest-related issues.
- In future, CDP aims to further align with the TCFD and TNFD disclosure recommendations and assess governance arrangements using a broader set of board-level and management roles but also how they monitor, assess, and manage forest-related risks and opportunities.

This section examines the KPIs that have not been achieved by the soy companies – focusing on governance, risk management, measuring and targets, engagement and restoration.



Governance

Board-level oversight

Current situation: Board-level oversight of forest-related issues by critical C-suite positions or board directors enables a comprehensive response to environmental risk, often drawing on the expertise of other vital departments such as finance, risk and legal. Currently neither **Amaggi** nor **ADM** meet the indicator criteria.

Table 12. Scope of board-level oversight

KPI component	Amaggi	ADM	Bunge	Cargill
Companies where one of five key board positions has oversight of forest-related issues – Board Chair, Director on board, Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Risk Officer (CRO)	No – Chief Sustainability Officer	No – Board level committee	Yes	Yes
Overall KPI achievement	Partial	Partial	Full	Full

Cargill is the only company that does not apply its soy policy company-wide, restricting it to selected facilities, business or geographies. This risks displacing production and land conversion to other parts of its supply chain.

The meet the KPI:

- ▼ Cargill is expected to extend the scope of its commodity specific policy to cover all regions and facilities. The current policy is limited to South America.
- ▼ Both Bunge and Cargill are expected to make public policies related to remediation. Given they are both already involved in restoration initiatives, they are halfway to mitigating the effects of any prior deforestation.

Policy

Current situation: Two of the four traders meet this KPI in full. **Amaggi, ADM** and **Bunge** disclosed they have publicly available forests, company-wide, commodity-specific policies that aim to produce or source deforestation-free soy. **Cargill** is the only company that does not apply its soy policy company-wide, restricting it to selected facilities, business or geographies. This risks displacing production and land conversion to other parts of its supply chain.

Neither **Bunge** nor **Cargill** include remediation in their policies so only partially meet the KPI.

Table 13. Scope of forest-related policy

KPI component	Amaggi	ADM	Bunge	Cargill
Publicly available, general or commodity specific, company-wide no deforestation policy	Yes	Yes	Yes	No
Eliminate conversion of natural ecosystems / commitment to eliminate deforestation / commitment to no planting on peatlands and to no exploitation (NDPE)	Yes	Yes	Yes	Yes
Commitment to remediation, restoration and/or compensation of past harms	Yes	Yes	No	No
Commitment to protect rights and livelihoods of local communities	Yes	Yes	Yes	Yes
Overall KPI achievement	Full	Full	Partial	Partial

Amaggi's commitments are comprehensive and include all social, remediation and restoration elements. It is the only company that fully meets the expectations of the KPI.

Commitments

Current situation: It is crucial that the large traders not only endorse commitments towards the preservation of critical biomes but also act on them.

All four companies endorse the Brazilian Soy Moratorium. **Cargill** participates in the **Cerrado Working Group** and **ADM** in the Sectoral Vision on the Chaco (ViSEc). **Amaggi** is the only trader that has not joined the Soft Commodities Forum. All companies are signatories to the COP26 Agricultural Commodity Companies Corporate Statement of Purpose.

Amaggi's commitments are comprehensive and include all social, remediation and restoration elements. It includes a cut-off date of 2008 as required by the Brazilian Soy Moratorium and has the earliest implementation date of the four traders - it is the only company that fully meets the expectations of the KPI.

Bunge and **Cargill** do not meet the KPI due to the absence of social commitments – they are the biggest barriers to meeting the KPI expectations.

ADM reports no commitment to restoration or compensation of past harms – it only currently meets the restoration criteria.



To meet the KPI:

- Bunge and Cargill are expected to set and report cut-off dates. Business impacts from remediation, compensation and restoration can be reduced the sooner commitments are in place and enforced. Cut-off dates should not be later than 2020 to meet Accountability Framework and emerging Forest Land and Agriculture Science Based Targets. Although not part of the KPI criteria, for high impact companies it is recommended that target dates should be no later than 2025.
- Most of the commitments adopted by companies are focused on Brazil. It is important to ensure that other biomes like the Gran Chaco (Argentina, Paraguay, Bolivia and Brazil) are also included to avoid production leading to those areas and driving further conversion.
- Incorporating social commitments is one of the weak points companies currently have and are encouraged to support to help meet sustainable development goals more broadly.

Table 14. Scope of commitments

KPI component	Amaggi	ADM	Bunge	Cargill
Public no-deforestation, forests-related commitment	Yes	Yes	Yes	Yes
Covers 100% of production/consumption volumes	Yes	Yes	Yes	Yes
Applies to direct operations/supply chain	Direct operations and supply chain	Direct operations and supply chain	Direct operations and supply chain	Direct operations and supply chain
Cut-off date prior to 2020	2008	2008	N/A	Not reported
Implementation date before 2030	2020	2026-30	2021-25	2026-30
Includes FPIC	Yes	Yes	Yes	Yes
UN Declaration on the Rights of Indigenous Peoples	Yes	Yes	No	No
Remediate any adverse impacts on indigenous people and local communities	Yes	Yes	No	No
Adoption of the UN International Labour Organization principles	Yes	Yes	No	No
Resolution of complaints and conflicts through an open, transparent and consultative process	Yes	Yes	Yes	No
Recognition of legal and customary land tenure rights	Yes	Yes	Yes	No
Restoration and compensation to address past deforestation and/or conversion	Yes	No	No	No
Overall KPI achievement	Full	Partial	Partial	Partial

To meet the KPI:

- ▼ Bunge and Cargill are expected to increase the time horizons of their risk assessments to give more time to react to incoming risks and mitigate business impacts.
- ▼ Good practice involves assessing availability and quality of forest risk commodities, impact of activity on the status of ecosystems and habitats, social impacts and on local communities over the longer term.
- ▼ Given proposed legislative changes in key purchasing markets, companies may want to assess risks to their supplies and how they can mitigate against them.

! Risk management

Forest-related risk assessment

Current situation: **ADM** and **Amaggi** achieved the risk management KPI in full. **Bunge's** and **Cargill's** risk assessments fully cover relevant operations, but the timeframes are too short with assessments ranging between one and three years.

All four companies export soy to the European Union but only **Amaggi** and **Cargill** report considering incoming due diligence regulation in the EU.

Table 15. Scope of risk management measures

KPI component	Amaggi	ADM	Bunge	Cargill
Companies who conduct a comprehensive forest-related risk assessment	Yes	Yes	Yes	Yes
Full coverage of relevant operations with risks beyond six years considered	Yes	Yes	No	No
Availability of forest risk commodities	Yes	Yes	Yes	Yes
Quality of forest risk commodities	Yes	Yes	Yes	Yes
Impact of activity on the status of ecosystems and habitats, social impacts, and local communities	Yes	Yes	Yes	Yes
Overall KPI achievement	Full	Full	Partial	Partial

Bunge traces

96%

of soy to farms identified as being under direct risk of deforestation in South America including the Cerrado and Chaco biomes.

Cargill has achieved

100%

traceability of direct suppliers in Brazil using GIS to map farm boundaries.

ADM has set a target to trace

100%

of direct and indirect supply in Argentina, Brazil and Paraguay.

Amaggi reports tracing

98%

of its suppliers using GIS polygons and satellite imagery to detect changes in land use.



Measuring & targets

Targets

Current situation: Together the companies have set eight targets. Most are related to a zero-deforestation commitment.

Bunge has made two targets and reports achieving both. It traces 96% to farms identified as being under direct risk of deforestation in South America including the Cerrado and Chaco biomes. It reports achieving an overlapping target to trace 100% of sourcing in 25 high priority Cerrado municipalities identified by the Soft Commodity Forum (SCF) by 2020.

Cargill reports it has achieved 100% traceability of direct suppliers in Brazil using GIS to map farm boundaries. From its reporting it is unclear if this extends to other parts of its South American business.

ADM has set a target to trace 100% of direct and indirect supply in Argentina, Brazil and Paraguay. It is the most ambitious target in geographic scope, supply chain point and target year (2022). It has achieved 50% to date including the SCF priority regions.

Amaggi reports tracing 98% of its suppliers using GIS polygons and satellite imagery to detect changes in land use. It is not clear from its disclosure if this includes indirect suppliers.



To meet the KPI:

- ADM and Amaggi are expected to link targets to zero deforestation commitments.
- Cargill should make it clear if it has achieved 100% traceability through all supply chain levels.
- Bunge and Cargill are expected to clearly report on the level of traceability through all supply chain levels.

Table 16. Scope of forest-related targets

KPI component	Amaggi	ADM	Bunge	Cargill
Forest-related target	Yes	Yes	Yes	Yes
Traceability				
Target to trace 100% of supply back to at least municipality or equivalent level	No	No	Yes	Yes
Supply chain traceability point	Farm	Municipality	Farm	Farm
Companies that have achieved or are making linear progress towards targets to trace 100% of supply back to at least municipality or equivalent level	No	No	Yes, completed	Yes, completed
Link to no-deforestation commitment	No	No	Yes	Yes
Certification				
Target to source 100% no-deforestation certified commodities	Yes	No	No	No
Companies that have achieved or are making linear progress towards targets to source 100% no-deforestation certified	No	No	No	No
Target linked to a no conversion or zero net/gross deforestation commitment	Yes	No	No	No
Overall KPI achievement	Partial	Partial	Full	Full

Only

2-4%

of global soy production is certified, one of the lowest rates among the main commodities driving deforestation.

To meet the KPI:

- Companies can implement their zero-deforestation agreements using verified deforestation and conversion-free certifications.
- If companies choose to use certification over traceability, they are expected to scale their levels of certified procurement.

Certification

Current situation: Adopting certification schemes is one of the tools that can be used to combat deforestation in corporate supply chains. However, only 2-4% of global soy production is certified²³, one of the lowest rates among the main commodities driving deforestation.

No trader reached the KPI requirements, (that at least 90% of the commodity will be certified using a third-party, no-deforestation compliant methodology, excluding mass balance).

Whilst **Amaggi** reports achieving 92% certification, it is an in-house scheme that relies on mass balance. The proportion of certified soy production for the other traders covers less than one fifth of production.

Table 17. Scope of certification

KPI component	Amaggi	ADM	Bunge	Cargill
No exclusions & over 90% certified in no credit/offset or mass balance certification*	92%	13%	18%	3%
Overall KPI achievement	None	None	None	None



23. CGIAR (2018) Does soybean certification help to reduce deforestation? <https://www.foreststreesagroforestry.org/news-article/does-soybean-certification-help-to-reduce-deforestation/>

To meet the KPI:

- ▼ All companies are encouraged to disclose information about the overall level of traceability achieved to both direct and indirect suppliers.
- ▼ To meet the expectations of the KPI, all traders are encouraged to continue their efforts to map their complete supply lines.



Traceability

Current situation: Traceability is the chosen method to implement zero-deforestation commitments among the four traders. All the suppliers use more advanced polygon mapping and satellite imagery to identify land use change within monitored boundaries.

Amaggi has managed to trace over 90% of direct suppliers and is working towards full supply chain mapping. Currently it manages to trace 22% of indirect supplies that accounts for 13% of its total supply.

ADM reports high levels of traceability to direct suppliers. In priority regions it meets its 100% traceability target. Overall, it achieves 83% traceability in two south American countries but does not disclose progress for any indirect suppliers. On average it is short of the 90% expectation for this KPI.

Bunge reports tracing 100% of production and sourcing to farm and municipality level from direct and indirect suppliers but provides no detail to support this claim. It is likely it relates to priority Cerrado municipalities in Brazil and not overall consumption.

Cargill reports handling close to 100% deforestation and conversion-free soy. Its methodology relies on estimates while it implements polygon mapping for the rest of its supply chain²⁴.

Table 15. Scope of risk management measures

KPI component	Amaggi	ADM	Bunge	Cargill
Companies that can trace more than 90% of their production/consumption volume of a commodity back to at least municipality or equivalent level (no exclusions)	98% to priority jurisdictions	100% to priority municipalities. Overall: 85% Brazil, 80% Paraguay	100%*	96% Brazil, 99% Argentina, 98% Paraguay.
Scope of geographic coverage	Farm	Municipality	Farm / municipality	Farm
Traceability point	Direct suppliers	Direct suppliers	Direct suppliers	Direct suppliers
Exclusions	78% of indirect suppliers (10% of total supply)	Production outside South America	Not disclosed	Not disclosed
Overall KPI achievement	Partial	Partial	Partial	Partial

24. Cargill (2021) Cargill South American Soy, Sustainability Report 2021 – Mid-year update <https://www.cargill.com/doc/1432192055486/soy-progress-mid-year-report-2021-en.pdf>.

Value chain engagement

To meet the KPI:

- For ADM and Bunge to meet the KPI they are encouraged to get involved in jurisdictional approaches. This can benefit both organizations by either sourcing certified soy from the landscape or by contributing to sustainability objectives outside their supply chains.
- All companies can raise their level of ambition by working in sourcing regions outside of Matto Grosso where most efforts are currently centered.

Forest-related external activities or initiatives

Current situation: This KPI assesses the types of external, multistakeholder initiatives companies have involved themselves with to improve sustainable sourcing and in turn meet their own sustainability aims. To meet the KPI in full, companies are expected to contribute to landscape or jurisdictional initiatives.

All the companies are involved in numerous multistakeholder initiatives.

Amaggi and **Cargill** are also involved in the Produce, Conserve and Include (PCI) initiative. **Amaggi** reports being involved with the Earth Innovation Institute: Balikpapan Challenge and works in several Verified Sourcing Areas in Matto Grosso. Both companies meet the KPI in full.

Table 19. Scope of multi-stakeholder and jurisdictional initiatives

KPI component	Amaggi	ADM	Bunge	Cargill
Companies participating in external activities or initiatives to promote the implementation of their forests-related policies and commitments.	Yes	Yes	Yes	Yes
Engaged in jurisdictional approaches	Yes	No	No	Yes
Overall KPI achievement	Full	None	None	Full

Amaggi and Cargill's projects are the largest, with each contributing to the restoration of

80,000

hectares to date.



Ecosystem restoration and protection

Beyond no-deforestation

Current situation: Amaggi, ADM and Cargill fully meet this KPI, but the scale and ambition of the projects vary.

Amaggi and Cargill's projects are the largest, with each contributing to the restoration of 80,000 hectares to date. Most restoration projects have a short life cycle of one to five years, but Amaggi's project aims to research restoration and impacts on weather with an expected lifespan of over 20 years. It has already contributed to increasing scientific understanding of forest restoration.

ADM delivered a short one-year project that restored 50 hectares in Brazil, whilst Bunge restored a wildlife corridor in Malaysia but did not specify the coverage or monitoring frequency.

To meet the KPI:

- ▼ Bunge can disclose more information about its impacts. This may mean implementing a local monitoring program.
- ▼ The level of ambition for some of the projects could be greater, especially in terms of scale. Where projects have been completed, companies are urged to identify new opportunities for restoration. Through its [Nature Positive Challenge](#), CDP is aware of opportunities to contribute to restoration projects for companies that are interested.

Table 20. Scope of restoration

KPI component	Amaggi	ADM	Bunge	Cargill
Companies supporting or implementing projects focused on ecosystem restoration and protection.	Yes	Yes	Yes	Yes
Monitoring frequency must be more than every five years	Yes	Yes	No	Yes
Measured outcomes	Yes	Yes	Coverage not disclosed	Yes
Overall KPI achievement	Full	Full	Partial	Full

Appendix

An aerial photograph of a river meandering through a dense, lush green forest. The river is dark and winds through several large, grassy islands. A large, bold white number '5' is overlaid on the bottom right portion of the image.

5

Understanding CDP's 15 forest-related key performance indicators

Introduction

Addressing deforestation caused by the production of seven forest-risk commodities (FRCs) is one of the most pressing environmental challenges we face today. CDP's forests questionnaire enables companies to disclose on their progress towards eradicating commodity driven deforestation from their operations and supply chains and provides the data to companies, investors, policy makers and civil society groups looking to drive improvement.

By completing the forests questionnaire, companies can show if they are recognizing and responding to the risks and opportunities resulting from their reliance on FRCs. Scoring the questionnaire response results in the generation of an overall score.

To supplement the overall score, CDP has created a set of 15 deforestation management Key Performance Indicators (KPIs) that track corporate performance against essential actions needed to remove deforestation from supply chains. The KPIs use a company's questionnaire response to provide more detailed feedback than the overall score, so companies can understand where specific improvements are required.

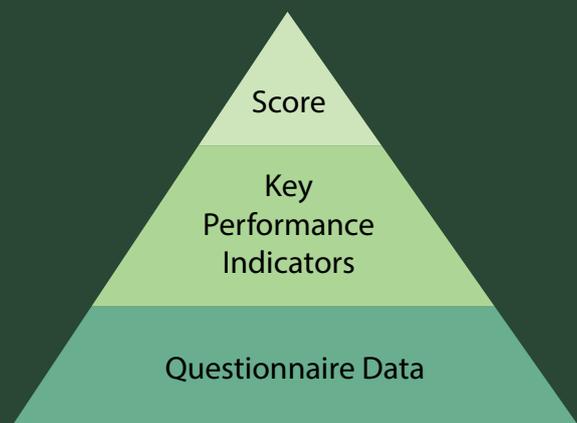


Figure 1. Level of detail in CDP's forests products

15 KPIs

CDP has identified six categories and within them 15 KPIs that provide more detailed feedback about a company's disclosure. The individual KPIs are strongly aligned with the 12 Core Principles of the [Accountability Framework](#). For details about each KPI, the categories they are grouped into, the questions that are used to assess them and how they relate to the AFI's framework, please see the [summary table](#).

Performance against each of the KPIs is assessed as:



Full – The KPI has been met.

The company reported meeting all elements of the KPI.



Partial – The KPI has not been met.

The company reports progress has been made to meeting it.



No attainment – The KPI has not been met.

The company did not report meeting any of the KPI elements.

Scores

CDP's scoring process gives an overall evaluation of the information disclosed through the forests questionnaire - by commodity - ranging from A (Leadership) to D (Disclosure) or F (Failed to respond). Responders need to demonstrate a minimum score at each scoring category level before they can be assessed for the next. CDP's overall approach to scoring is described in the scoring introduction, available on the [guidance page](#). The [scoring methodology](#) for the forests questionnaire is available for download on the CDP website.

Figure 2. CDP scoring category levels

Score	Scoring category level	Scoring category description
A / A-	Leadership	Implementing current best practices
B / B-	Management	Taking coordinated action on forests issues
C / C-	Awareness	Knowledge of impacts on, and of, forests issues
D / D-	Disclosure	Transparent about forests issues

How CDP scores and KPIs work together

The scoring methodology assesses a company's complete disclosure (the level of detail and comprehensiveness in a response), as well as the company's awareness of environmental issues, its management methods, and progress towards environmental stewardship. This provides a means for companies to achieve best practice and is facilitated using scoring categories.

Feedback is given to companies about their overall level of performance and level of performance within each category (e.g. governance, risk assessment, land-based metrics). However, since feedback is grouped by category, it may obscure a level of detail needed to understand progress against essential actions.

CDP's forest-related KPIs provide further detail about where essential actions are being taken and where improvement is needed. A responder meeting all the KPIs will always have a good score, but it is feasible that a good score obscures the need to take some essential actions.

Figure 3. Diagram showing score feedback by scoring category



The awareness level threshold companies must achieve to be scored for management or leadership points

Key Performance Indicators

Category	KPI	KPI Description	Justification	Question Number	AFI Principle*
 Governance	1 Board-level oversight	Companies where one of five key board positions has oversight of forest-related issues - Board Chair, Director on Board, Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Risk Officer (CRO).	Oversight of forest-related issues by one or more designated members of the board demonstrates accountability at the most senior level. A top-down approach supports the escalation and integration of environmental issues in company-wide practices, enabling a comprehensive response to environmental risk.	F4.1, F4.1a	Core Principle 4: Company systems to drive implementation
	2 Policy	Companies with either a publicly available, general or commodity specific, company-wide no-deforestation policy with social elements, remediation and restoration - commitment to eliminate conversion of natural ecosystems, commitment to eliminate deforestation, commitment to no-deforestation, to no planting on peatlands and to no exploitation (NDPE), commitment to remediation, restoration and/or compensation of past harms, commitment to protect rights and livelihoods of local communities.	Robust and comprehensive policy demonstrates the importance of forest-related issues to the business and sets clear goals and guidelines to direct action. A strong policy with social, remediation, and restoration elements clarifies corporate expectations for suppliers, supports accountability, enables the tracking of progress towards set goals, and supports constructive engagement with a range of stakeholders.	F4.5, F4.5a, F4.5b	Core Principle 1: Protection of forests and other natural ecosystems
	3 Commitments	Companies with a public no-deforestation (no conversion of natural ecosystems, zero gross deforestation/no-deforestation) forests-related commitment with social elements, remediation and restoration that is timebound, set to be completed by 2030, includes a cut-off date before 2020, with FPIC, covers 100% of production/consumption and applies to all relevant operations. Includes commitments to operations in accordance with the UN Declaration on the Rights of Indigenous Peoples, remediate any adverse impacts on indigenous people and local communities, adoption of the UN International Labour Organization principles, resolution of complaints and conflicts through an open, transparent and consultative process, recognition of legal and customary land tenure rights, restoration and compensation to address past deforestation and/or conversion.	A company that makes robust public commitments to eliminate deforestation from operations and supply chains is publicly demonstrating actions and the progress it is making to meet its policy objectives.	F4.6, F4.6b	Core Principle 2: Respect for human rights Core Principle 3: Specification of commitments
 Strategy	4 Strategy	Companies that integrate forest-related issues into all parts of their long-term strategic business plans: financial planning, long-term business objectives and strategy for long-term objectives.	Integration of forest-related commitments within all core business units, financial investments, and procurement decisions provides opportunity for companies to innovate and respond to changing market and regulatory conditions.	F5.1	Core Principle 4: Company systems to drive implementation
 Risk Management	5 Risk assessment	Companies who conduct a comprehensive forest-related risk assessment: full coverage of relevant operations with risks beyond six years considered and availability of forest risk commodities, quality of forest risk commodities, impact of activity on the status of ecosystems and habitats, social impacts, local communities are included in the assessment.	Comprehensive forest risk assessments help companies view the complete risk landscape, prioritize top issues and devise effective mitigation over short and long time horizons. Forest-related assessments should consider future availability and quality of commodities as well as impacts on markets, nature and people to ensure risks to and from the operations are considered.	F2.1, F2.1a, F2.1b, F2.1c	Core Principle 5: Supply chain assessment and traceability
 Measuring and Targets	6 Certification	Companies with at least 90% of total production/consumption volume of a commodity certified in a no-deforestation compliant certification.	Third-party certification is one of the primary approaches to demonstrating commodities have been sourced in accordance with standards e.g. meeting no-deforestation standards and commitments. Mass balance and book and claim are not accepted as no-deforestation compliant certifications as they require supplementary due diligence to verify deforestation free status.	F6.3, F6.3a	Core Principle 5: Supply chain assessment and traceability
	7 Traceability	Companies that can trace more than 90% of their production/consumption volume of a commodity back to at least municipality or equivalent level.	Tracing the origins of forest risk commodities demonstrates that production and processing complies with company commitments and determines the extent and nature of any issues that need to be addressed.	F6.2, F6.2a	
	8 Targets	Companies that have achieved or are making linear progress towards targets to source 100% no-deforestation certified commodities or trace 100% of supply back to at least municipality or equivalent level.	Effective implementation of policies and commitments requires specific targets to be set. Regular reporting of progress against set targets is used by the company, investors and other CDP data users to track progress in establishing ethical and deforestation-free operations and supply chains.	F6.1, F6.1a	N/A

Key Performance Indicators

Category	KPI	KPI Description	Justification	Question Number	AFI Principle*
 Measuring and Targets	9 Compliance	Companies that have either a no-deforestation policy or comprehensive commitment and have a system to control, monitor, or verify compliance and this system covers all relevant direct operations or supply chains and more than 90 % of total volume in compliance.	Companies must have systems in place to control, monitor or verify compliance with no-deforestation commitments throughout operations and supply chains. Robust monitoring and verification systems are essential components of company operations, supply chain management, and accountability. The establishment of compliance mechanisms can also inform corrective actions when engaging with suppliers not in-line with deforestation goals.	F6.4, F6.4a	Core Principle 11: Monitoring and verification
	10 Legal compliance	Companies that produce or source commodities from regions with high deforestation risk and assess own compliance and/or the compliance of your suppliers with forest regulations and/or mandatory standards.	Assessments of compliance within supply chains with legal frameworks when sourcing from forest risk countries represents good due diligence and demonstrates to investors and other CDP data users that the company respects forest regulations and mandatory labour standards in countries of operations.	F6.6	
 Value Chain Engagement	11 Supply chain engagement Smallholder	Companies working with smallholders to support good agricultural practices and reduce deforestation and/or conversion of natural ecosystems by providing them with financial or technical assistance to them to help achieve this. Financial or technical assistance includes offering on-site technical assistance and extension services, investing in pilot projects, paying higher prices linked to best agricultural practices, financial incentives for certified products.	Smallholders often play an important role in sourcing forest risk commodities but they may lack the capacity to implement sustainable production practices. Companies can provide smallholders with technical and/or financial support to reduce deforestation and the conversion and financial incentives for certified production.	F6.7	Core Principle 6: Managing for supply chain compliance
	12 Supply chain engagement Direct suppliers	Processors, traders, manufacturers and retailers working with direct suppliers to support and improve their capacity to comply with forest-related policies, commitments, and other requirements and are providing financial or technical support to help them achieve this. Financial or technical assistance includes offering on-site training and technical assistance, investing in pilot projects, paying higher prices linked to best agricultural practices, financial incentives for certified products, offering credit lines linked to best agricultural practices.	Direct suppliers are subject to significant influence from procuring companies through contractual obligations. Support and incentives to direct suppliers can support no-deforestation policies and commitments. Engagement can be used as a tool to initiate corrective action with suppliers that are not compliant with environmental and social policies and commitments.	F6.8	
	13 Supply chain engagement Beyond first-tier suppliers	Traders, manufacturers or retailers working beyond first-tier suppliers to manage and mitigate deforestation risks through supply chain mapping or capacity building.	Working beyond direct suppliers supports a deforestation free supply chain. This can start with supply chain mapping to gather information about the complete supply chain. Capacity building activities can support with management of risks and opportunities associated with procurement outside of immediate areas of influence.	F6.9	
	14 Forest-related external activities or initiatives	Companies participating in external activities or initiatives to promote the implementation of their forests-related policies and commitments through jurisdictional approaches.	Company participation in collective efforts is increasingly expected to mitigate commodity driven deforestation. Collaboration at jurisdictional and landscape level has the potential to eliminate ecosystem conversion at larger scales, working across supply chains.	F6.10	Core Principle 10: Collaboration for landscape and sectoral sustainability
 Ecosystem Restoration and Protection	15 Beyond no-deforestation	Companies supporting or implementing projects focused on ecosystem restoration and protection with timely monitoring and measured outcomes.	Good practice extends beyond stopping conversion in operations and supply chains. Companies can proactively protect and restore degraded land and forests within or beyond their operations. Ecosystem restoration, conservation, and/or reforestation projects should be monitored to demonstrate the environmental and social impact being delivered.	F6.12, F6.12a	N/A

*Whilst Afi Core Principles 7 (Land acquisition, land use planning and site development), 8 (Land management and long-term protection), and 9 (Access to remedy and environmental restoration) are covered to some extent in the CDP forests questionnaire, there are no questions that map precisely to them. Disclosure through CDP is aligned with Afi Principle 12 (Reporting, disclosure and claims).



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About CDP

CDP is a global non-profit that runs the world's environmental disclosure system for companies, cities, states and regions. Founded in 2000 and working with more than 680 financial institutions with over \$130 trillion in assets, CDP pioneered using capital markets and corporate procurement to motivate companies to disclose their environmental impacts, and to reduce greenhouse gas emissions, safeguard water resources and protect forests. Nearly 20,000 organizations around the world disclosed data through CDP in 2022, including more than 18,700 companies worth half of global market capitalization, and over 1,100 cities, states and regions. Fully TCFD aligned, CDP holds the largest environmental database in the world, and CDP scores are widely used to drive investment and procurement decisions towards a zero carbon, sustainable and resilient economy. CDP is a founding member of the Science Based Targets initiative, We Mean Business Coalition, The Investor Agenda and the Net Zero Asset Managers initiative.

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