Jurisdictional ACTION NETWORK

TFA TROPICAL FOREST ALLIANCE

Companies Collaborating for Sustainable Soy Landscapes

Progress and Transition Pathways

CDP DRIVING SUSTAINABLE ECONOMIES

proforest

JANUARY 2024

This report is part of a global study on private sector engagement at landscape and jurisdictional scale initiated by the Tropical Forest Alliance (TFA) and conducted in collaboration with Proforest, CDP and others. The study aims to advance understanding of the use of landscape and jurisdictional approaches as a key corporate strategy and to map the way forward to mobilize more private sector action and multi-stakeholder collaboration at scale.

Through interviews and desktop research, the study explores why and how manufacturers, retailers, traders and integrated companies have used landscape and jurisdictional approaches to address deforestation driven by palm oil, soy, beef, pulp, paper and packaging, and cocoa. It also delves into other possible uses of these approaches, including to meet corporate nature, climate and people goals, and explains how companies can leverage their efforts and collaborate with others to accelerate progress. The papers will be made available on the Jurisdictional Approaches Resource Hub.

This study, part of TFA's support for the Jurisdictional Action Network, was developed with generous support from Cargill and the governments of Norway, United Kingdom and the Netherlands.

Authors: Cecilia Korber Goncalves, Larissa Monteiro, Veronique Bovee and Norma Mercedes Pedroza Arceo
Contributors: Tharic Galuchi, Leony Aurora, Julia Faro and Jane Lino
Copy editor: Katherine Demopoulos and Ellen Griffiths
Design and layout: Chantelle de Lange of Adhesive Designs

The research team is grateful for the valuable data, insights and reviews provided by Charton Locks (Produzindo Certo), Matthew Mann (Viterra), Ricieri Marchi (WBCSD), Lucie Smith (WBCSD), Heloisa Torres (AMAGGI), Lilian Vendrametto (Conservation International) and Fernanda Xavier (IPAM). We also appreciate the valuable data and insights from representatives of other companies, industry platforms and implementers of landscape initiatives interviewed and corresponded with for this study.

Citation: Tropical Forest Alliance, Proforest and CDP, *Companies Collaborating for Sustainable Soy Landscapes: Progress and Transition Pathways*, January 2024.

SUMMARY NUMBERS & RECOMMENDATIONS

STUDY FINDINGS IN NUMBERS

15
Companies* taking landscape-scale action

6
Landscape and jurisdictional initiatives supported by companies

5
Landscape and jurisdictional initiatives with more than one commodity

4
Landscape and jurisdictional initiatives supported by more than one company

* Downstream, midstream and integrated companies that have taken landscape-scale action in soy producing areas.

RECOMMENDATIONS FOR COMPANIES

1. Develop clear plans to transform soy production at landscape scale
2. Increase private sector collaboration in landscape-scale action
3. Engage actors from outside the private sector to join landscape- and jurisdictional-scale efforts
4. Support incentives to prevent legal deforestation as part of landscape-scale action

RECOMMENDATIONS FOR ALL PROPONENTS OF LANDSCAPE AND JURISDICTIONAL APPROACHES

1. Engage sectoral representatives and coalitions in landscape and jurisdictional efforts
2. Enable companies' landscape engagement to contribute to corporate climate goals

WHAT ARE YOU INTERESTED IN?

How many companies are taking landscape-scale action — SECTION 2.2

Why companies take landscape-scale action for soy — SECTION 2.3

How companies have engaged with landscape and jurisdictional initiatives — SECTION 3.1

Examples of landscape-scale action companies have taken — SECTION 3.2

Opportunities to accelerate progress — SECTION 4.1 SECTION 4.3

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

ABIOVE

Brazilian Association of Vegetable Oil Industries; Associação Brasileira das Indústrias de Óleas Vegetais

ADM

Archer Daniels Midland

ANEC

National Association of Grain Exporters; Associação Nacional dos Exportadores de Cereais

BRL

Brazilian reals

CAPPRO

Camara Paraguaya de Procesadores de Oleaginosas y Cereales

CAR

Rural Environmental Registry; Cadastro Ambiental Rural

CGF FPCOA

Consumer Goods Forum Forest Positive Coalition of Action

CSO

Civil society organization

ESG

Environmental, social and governance

EU

European Union

EUDR

European Union Deforestation Regulation

FOLUR

Food Systems Land Use and Restoration

GCF TF

Governors' Climate & Forests Task Force

GDP

Gross domestic product

GHG

Greenhouse gas emissions

GIZ

German Agency for International Cooperation; Deutsche Gesellschaft für Internationale Zusammenarbeit

IPAM

Amazon Environmental Research Institute; Instituto de Pesquisa Ambiental da Amazônia

ISCC

International Sustainability and Carbon Certification

LTKL

Sustainable Districts Association; Lingkar Temu Kabupaten Lestari

REDD

Reducing emissions from deforestation and degradation

REM

REDD Early Movers

RTRS

Round Table on Responsible Soy

SCF

Soft Commodities Forum

TFA

Tropical Forest Alliance

VISEC

Visión Sectorial del Gran Chaco Argentino

WRI

World Resources Institute

1. SOY PRODUCTION, TRADE AND SUSTAINABILITY

1.1 SOY PRODUCTION AND TRADE

Soybean, a legume originating from China, is a major source of protein for humans and animals (Dong et al. 2021). It has many uses in food, including as soy milk, soy oil and soy lecithin, and in industry as biofuels and animal feed (Efeca and Proforest 2020). In fact, more than three-quarters of cultivated soy is used as animal feed (76%), with 20% consumed by humans and 4% used in industry (Our World in Data 2021).

The production of soybean is dominated by Brazil, which accounts for 41% of global output, followed by the United States at 28% and Argentina with 12% (USDA 2023a). Together, these top three producing countries are responsible for 81% of output, while China, the largest consumer, produces 5% and India 3% (USDA 2023a).

> **"THE PRODUCTION OF SOYBEAN IS DOMINATED BY BRAZIL, 41% OF GLOBAL OUTPUT, FOLLOWED BY THE UNITED STATES AT 28% AND ARGENTINA WITH 12%.**

In 2021, the total trade of soybeans reached $78.5 billion (OEC 2021), with China, also the largest soybean importer, taking 59% of traded volumes. China is followed by the European Union (8%), Mexico (4%) and Argentina (3%) (USDA 2023a). Nearly 70% of Brazil's exports go to China (USDA 2023a), and Cargill, Bunge and Archer Daniels Midland (ADM) were the three largest exporters from Brazil in 2020, with 12.9 million tonnes, 12.8 million tonnes and 11.8 million tonnes respectively (Trase 2020).

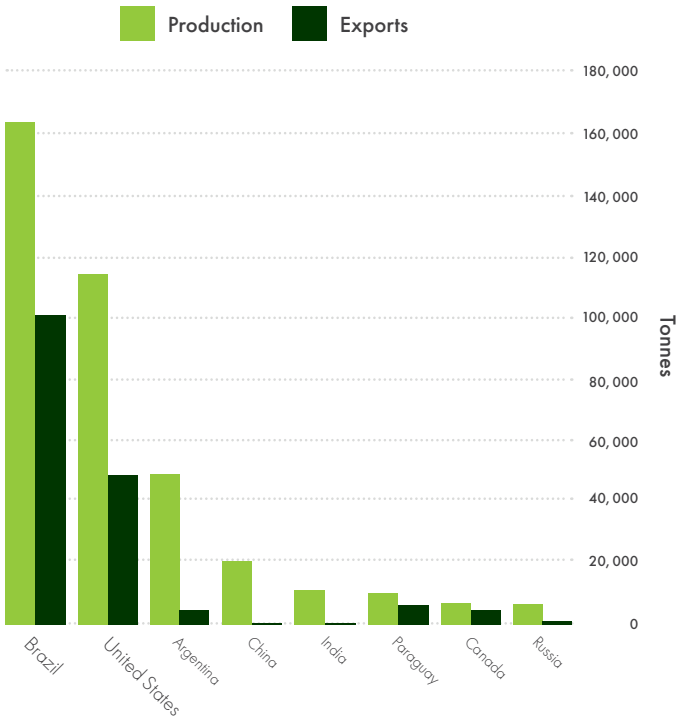
Soy production is an important driver of economic growth in Brazil. Soybean production, including for biodiesel, is expected to increase by 21% annually in 2023 to 5% of the national GDP (CEPEA and ABIOVE 2023b). The industry provided more than 2 million jobs in 2022, an increase of 80% from a decade earlier (CEPEA and ABIOVE 2023a).

The soy sector has also shown positive correlation to socioeconomic indices, such as the Gini coefficient, which measures income inequality, and the Human Development Index. In Brazil, soybean-producing municipalities have performed better on these indices compared to municipalities that do not produce soy (Martinelli et al. 2017).

In Brazil, soybean is grown on approximately 44 million hectares (ha) with an average productivity of 3.6 t/ha (USDA 2023b) and Mato Grosso as the main soy producing state. Of the three top soy producing countries, Brazil has the highest productivity; the United States produces 3.4 t/ha and Argentina 2.7 t/ha (USDA 2023b). Growers in Brazil, in contrast to those in other soy producing countries, often rotate production with other commodities, such as corn (Brumatti et al. 2020).

FIGURE 1

GLOBAL SOYBEAN PRODUCTION AND EXPORTS IN 2023



Source: USDA 2023a

1.2. SOY SUPPLY CHAIN AND SUSTAINABILITY CHALLENGES

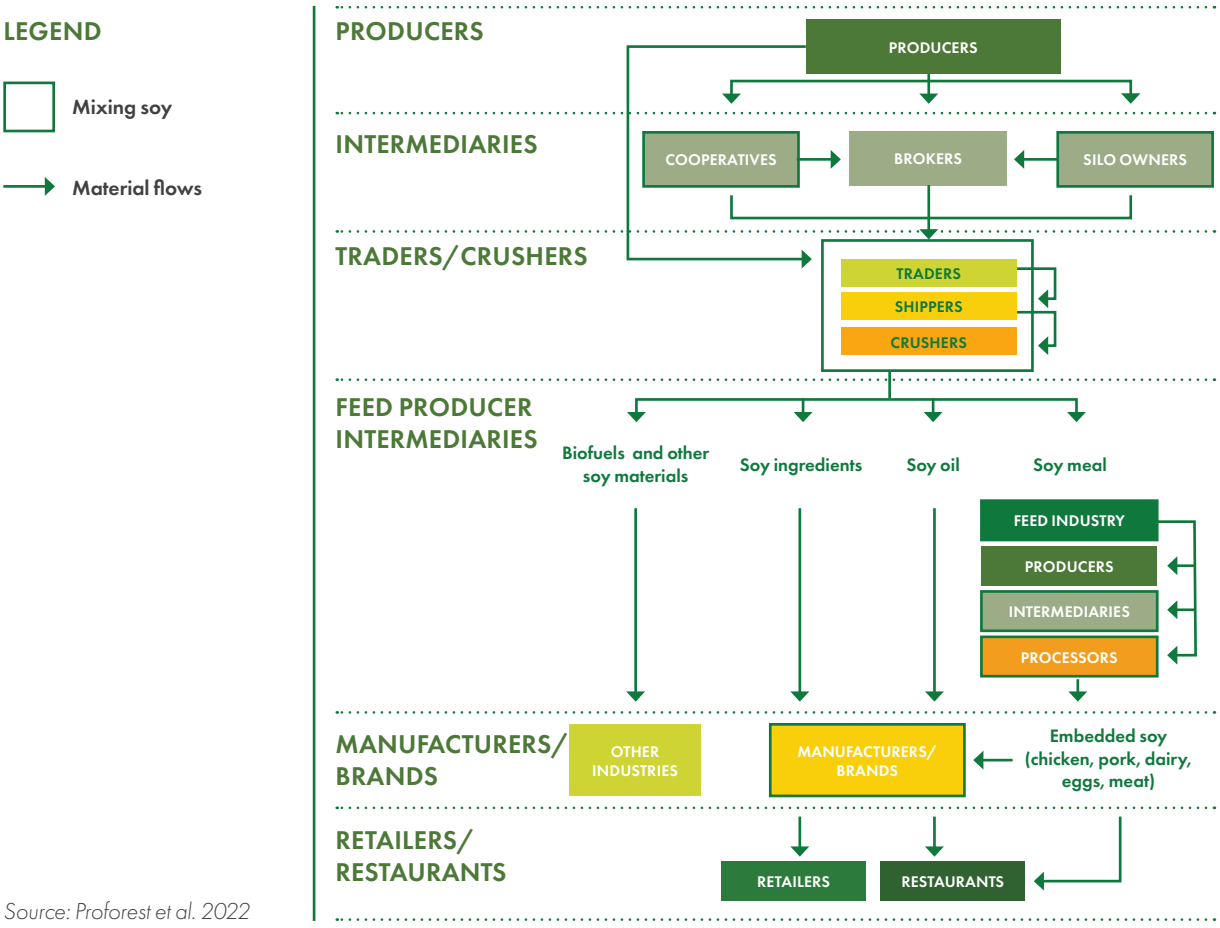
The soybean supply chain is complex, with many actors and volatile market prices (Figure 2). For downstream actors, obtaining traceability in the soy supply chain is challenging (LTS International 2019) due to logistic constraints and the variety of modes of transport used throughout the supply chain (Pontes et al. 2009).

Traceability can also be influenced by the type of sourcing: direct or indirect. In direct sourcing, soy comes from producers to the traders and crushers – making it easier to track. In indirect sourcing, the soy moves from producers to intermediaries and then to traders and crushers. Soy is also deemed as being sourced indirectly when it cannot be separated from processed products, for example soy lecithin in chocolate, or when it is embedded in other products like eggs, meat and dairy products, where the soy was contained in the animal feed (TFA and Proforest 2020).

In 2023, a task force from the Brazilian Coalition, a grouping of private sector and civil society, expanded its remit from beef to include soy (Coalizão Brasil, n.d.). It partnered with the Brazilian Association of Vegetable Oil Industries (ABIOVE) to support the Brazilian government and private sector to define short- and medium-term solutions to build a national traceability and transparency system (Coalizão Brasil, n.d.).

Soy production is linked with sustainability issues (Martinelli et al. 2017), such as climate change and greenhouse gas emissions (GHG) (Raucci et al. 2015); deforestation and conversion of forest, grassland and savannah; poisoning of workers through application of agrochemicals; water scarcity and erosion due to soil compaction; and biodiversity loss (WWF 2014, 2022). There is not yet a global database on conversion of non-forest natural ecosystems to soy, however a study from

FIGURE 2 SOY SUPPLY CHAIN



Source: Proforest et al. 2022

the World Resources Institute (WRI) identified soy as the third-largest driver of deforestation among seven agricultural commodities between 2001 and 2015. More than 95% of that deforestation to soy took place in South America, and was concentrated in the Brazilian Amazon and Cerrado and in the Gran Chaco biome in Argentina (WRI 2020).

The Cerrado is a biodiversity-rich savannah that has suffered deforestation and conversion, mainly due to the expansion of pastures and large-scale agriculture, including for soybean (Cerrado Protocol 2021).

Natural ecosystems loss in the Cerrado declined from an annual average of 2.7 million ha in 2001–4 to 0.7 million ha in 2016–19, but rose to an annual average of 0.95 million ha in 2020–23 (INPE 2024). Soy-driven conversion declined from an annual average of 190,000 ha in 2001–7 to 110,000 ha in 2014–22 (Agrosatélite and ABIOVE 2022).

> **"SOYBEAN-CULTIVATED AREA IN THE CERRADO HAS ALMOST TRIPLED IN THE PAST TWO DECADES, FROM 7.4 MILLION HA IN 2000/1 TO 21.4 MILLION HA IN 2021/22. JUST OVER HALF OF BRAZIL'S SOYBEAN PLANTED AREA IS NOW LOCATED IN THE CERRADO**

Soybean-cultivated area in the Cerrado has almost tripled in the past two decades, from 7.4 million ha in 2000/1 to 21.4 million ha in 2021/22 (Agrosatélite and ABIOVE 2022). Just over half (52%) of Brazil's soybean planted area is now located in the Cerrado (Agrosatélite and ABIOVE 2022); soybean covers around 16% of that biome (Mapbiomas 2022).

It is worth mentioning that the United States is one of the largest producer countries of soy. It is not, however, a priority country for companies' landscape-scale action as the deforestation rates are not as critical as in Latin America (Goldman et al. 2020; Pacheco et al. 2021).

Soy is also linked to social issues: human rights violations, especially related to workers; increased inequality in local income in the production region (WWF 2014); and land speculation and grabbing (Reporter Brasil 2022).

Globally, small-scale producers (those with less than 20 ha of land, who are connected to national or international value chains and have agriculture as the dominant livelihood strategy) (Solidaridad 2023), occupy 20% of the soy production area – 26.2 million ha in 2017 – while large producers occupied 104.8 million ha (IISD and SSI 2020). Soy production is also associated with land conflict with Indigenous Peoples and local communities (Sauer 2018).

1.3 SUPPLY CHAIN ACTIONS TO IMPROVE SOY SUSTAINABILITY

This section explains efforts to achieve sustainable soy production, including through certification, collaboration of companies and regulations from producer and consumer countries.

CERTIFICATION

The Round Table on Responsible Soy (RTRS), launched in 2006, is a platform for dialogue and certification, which requires proof that soy is free of deforestation and conversion (RTRS 2023).

In 2021, the RTRS certified almost 50,000 farms, corresponding to 1.3 million ha and 4.6 million tonnes of soybeans (RTRS 2021). Other certification schemes for soy include the International Sustainability and Carbon Certification (ISCC), established in 2006. This scheme supports sustainable, traceable, deforestation-free and climate-friendly supply chains (ISCC 2023), and, in 2021, certified 181,128 ha of soybean fields (ISCC 2022).

ProTerra, also launched in 2006, issued its certification standards in 2019. They include indicators on human rights and labour, good agricultural practices, deforestation, biodiversity and high conservation value forests (ProTerra 2019).

In 2023, ProTerra certified 78 companies, including some related to soy, such as AMAGGI, Bunge and Caramuru in Brazil (ProTerra 2023).

SECTORAL COMMITMENTS

The Amazon Soy Moratorium is one of the most important sectoral commitments for combating deforestation in the Amazon (ICV 2015). In force since 2006, it requires traders to avoid trading or financing soy from areas that were (legally and illegally) deforested after 2008 in the Amazon (ANEC n.d.). In 2021, 6.41 million ha of the 6.6 million ha of soy in the Amazon complied, while 0.19 million ha did not (ABIOVE et al. 2023).

In March 2023, the ABIOVE and ANEC reinforced their commitment to comply with Brazilian regulations by launching socio-environmental criteria for the production and purchase of soy in the country (ABIOVE and ANEC 2023). The associations recommend their members do not source or finance soy from the 2022/23 harvest onwards if it is produced in areas of the Cerrado deforested or converted after 1 August 2020 and no legal authorization for suppression of native vegetation is presented by the farmer.[1]

> **"THE AMAZON SOY MORATORIUM IS ONE OF THE MOST IMPORTANT SECTORAL COMMITMENTS FOR COMBATING DEFORESTATION IN THE AMAZON… IT REQUIRES TRADERS TO AVOID TRADING OR FINANCING SOY FROM AREAS THAT WERE DEFORESTED AFTER 2008 IN THE AMAZON**

The UK Soy Manifesto, launched in 2021, has 43 signatories – retailers and restaurants – who have committed that all physical soy shipments to the United Kingdom will be deforestation and conversion free by 2025, with a cut-off date of 1 January 2020. They will also require their suppliers to adopt the same commitments (UK Soy Manifesto n.d.). Currently, 28 of the 43 signatories have an action plan and 39 have a sustainability policy, while 24 have achieved certification for up to 33% of their soy footprint (UK Soy Manifesto n.d.).

In 2022, fourteen of the world's largest agri-commodity traders and processors, including ADM, Bunge and Cargill in the soy sector, signed the Agriculture Sector Roadmap to 1.5°C (TFA 2023). This is a sector-wide plan to reduce emissions from land-use change, support the transition to forest positive land use and commodity production, and support stakeholder engagement (TFA 2023).

CORPORATE SUSTAINABILITY COMMITMENTS AND PROGRAMMES

As in other sectors, soy traders have made individual sustainability and no-deforestation commitments, as well as policies on sustainable soy and responsible sourcing. These commitments include to advance traceability, monitoring and verification of supply chain, and transparency and accountability (ADM 2022; AMAGGI n.d.; Bunge 2022; CJ Selecta n.d.; COFCO 2021; LDC 2022; SODRU 2021; Viterra 2022).

Other efforts have also been made to achieve sustainability in soy production. Produzindo Certo launched its Protocol in 2006 that sets out actions producers must take (Produzindo Certo n. d.) and the company offers technical assistance for farmers to implement them (Produzindo Certo 2021). In 2022, Produzindo Certo supported the RTRS certification of 87 properties, totalling 1.1 million tons of certified soy (Produzindo Certo 2023).

In 2009, Argentinian soy trader Cefetra launched the Certified Responsible Soya standard, which includes indicators to safeguard the sustainable production of soy; ISCC and RTRS indicators are also included (Cefetra n.d.). This certification can

1 Recent communications suggest, however, that the commitment is for the 2023/24 harvest onwards (Canal Rural 2023).

be applied to all soybean production globally, but is focused on farms in Argentina, Brazil and Paraguay (Cefetra n.d.).

Triple S™ Cargill was launched in 2010 to support farmers in its supply chain to produce in more sustainable ways (Cargill 2021). In total, 231 farms participated in the programme during the 2020/2021 harvest, corresponding to approximately 600,000 ha (Cargill 2022).

Origins was launched by AMAGGI in 2021 to meet societal and market demands for deforestation- and conversion-free soy, and to assess producers against indicators related to good agricultural practices (AMAGGI 2022). In 2022, AMAGGI launched Origins Field, which includes further indicators and requirements recognized by the European Compound Feed Manufacturers' Federation; Origins Field has certified approximately 68,000 tonnes of soy (AMAGGI 2023).

CORPORATE COALITIONS AND MULTI-STAKEHOLDER SPACES

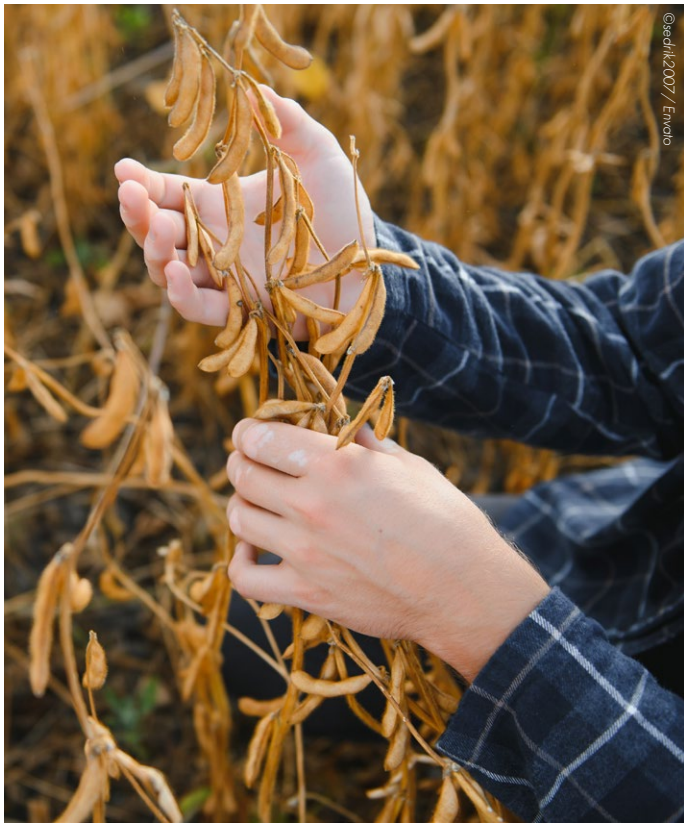
The Consumer Goods Forum Forest Positive Coalition of Action (CGF FPCoA) has brought together 21 retailers and manufacturers to leverage collective action to remove deforestation and natural ecosystem conversion from commodity production, including through collaboration with stakeholders at landscape scale. The coalition created a soy roadmap to guide the transformation of the commodity production to forest positive (CGF FPCoA 2021, updated 2023).

The Soft Commodities Forum (SCF) was created in 2018 by the World Business Council for Sustainable Development (WBCSD) to advance collective action for sustainable value chains by enabling precompetitive collaboration on monitoring land use, engaging stakeholders and transforming landscapes (WBCSD 2022a). The members include some of the largest global agribusiness companies, such as ADM, Bunge, Cargill, Louis Dreyfus and Viterra, who collaborate to deploy precompetitive solutions in 61 focus municipalities (WBCSD 2022a).

In 2022, the SCF launched the Farmers First Clusters initiative. It offers six farmer-centric solutions to encourage soy producers to adopt sustainable production: payments for surplus legal reserve, technical assistance to help producers comply with the Forest Code, restoration of native vegetation, integrated farming, expansion on pastureland and green finance (WBCSD 2022b).

The ABIOVE coordinates the Agro Plus programme (formerly Soja Plus), which was launched in 2010 to meet market demand for sustainable agricultural and livestock products through better management of rural properties and technical assistance (Agro Plus Brasil n.d.). To September 2021, the programme had provided technical assistance to 8,000 producers on 3,200 farms, producing 13 million tons of soybeans in each harvest year (Agro Plus Brasil 2021).

The Soy on Track Project is a joint effort to strengthen socio-environmental commitments and corporate policies in the soy value chain in the Amazon and Cerrado, and was created after 2006 by Imaflora (Soy on Track n.d.). It aims to support the implementation of the Amazon Soy Moratorium and the Green Protocol for Grains in Pará and to improve practices for deforestation-free soy in the Cerrado (Soy on Track n.d.).




© Victor Moriyama / Greenpeace

Similarly, the 2022 Visión Sectorial del Gran Chaco Argentino (ViSeC) brings together actors from the soybean value chain to reduce negative environmental impacts in the Gran Chaco (ViSeC n.d. b). It is a monitoring, reporting and verification system, aiming to monitor the flow of soybeans and their sub-products at national level (ViSeC n.d. a). It has 33 members, including ADM, Bunge and Cargill (ViSeC n.d. a).

PRODUCER COUNTRIES' REGULATIONS AND POLICIES

BRAZIL

Brazilian federal law 12.651/2012, known as the Forest Code, establishes rules for the protection of native vegetation. It states that rural properties must preserve certain proportions of land covered in native vegetation (known as legal reserve areas): 80% must be preserved if the property is located in a forest area such as the Amazon biome, 35% if located in the Cerrado and 20% in Campos Gerais or elsewhere in Brazil (De Siqueira et al. 2017; Azevedo et al. 2016). The remainder may be legally deforested following governmental approval.

Farmers must register their land in the Rural Environmental Registry (CAR), which is a database for controlling, monitoring and combating deforestation and conversion, as well as for the environmental and economic planning of rural properties in Brazil. Farmers must also validate their data with the state environmental secretaries. As of February 2021, almost 6 million rural properties have been registered in the CAR (Embrapa 2021). These properties have 227.4 million ha, representing 26.7% of the entire territory of Brazil, dedicated to the preservation of native vegetation (Embrapa 2021).

Another important public policy to support the transition to a more sustainable production is the Plan for Adaptation and Low-Carbon Emission in Agriculture, also known as the ABC+ Plan, which was issued in 2020. The policy aims to encourage sustainable, resilient and productive agricultural systems in Brazil through, among others, technical assistance and training, research, recognition and appreciation of producers, economic, financial and fiscal support, monitoring and evaluation (MAPA 2021).

ARGENTINA

Argentina's Constitution provides for the protection of the environment, with possible restoration if damage is observed, while its states and municipalities have power to legislate and inspect. Argentina also has the National Environmental Policy, law 25.675/2002, which concerns policy and management instruments, environmental planning and impact, and an environmental damage and compensation fund.

Furthermore, Argentina has the National Law of Territorial Management of Native Forests (Law No. 26.331/2007), which categorizes forests into areas of high conservation value that must not be transformed; medium conservation value, which may be degraded under certain circumstances; and low conservation value that can be partially or totally transformed.

PARAGUAY

Paraguay's vast political–regulatory framework in agricultural production promotes preservation, conservation and improvement of the environment that is balanced with economic development (Solidaridad 2019). Its National Environmental Policy (2005) aims to conserve and manage the use of the country's natural and cultural heritage.

Paraguay's National Forest Policy (2009) aims to increase the contribution of the forestry sector to the country's sustainable economic development, while Forestry Law 422 (1973) aims to ensure forest resources are protected, conserved, increased,


© Victor Moriyama / Greenpeace

restored and used sustainably. The Environmental Impact Assessment Law 294 (1993) regulates the impact assessment of projects – including agricultural, livestock and forestry projects – that could have a significant impact on the environment.

GOVERNMENT PROGRAMMES IN PRODUCER COUNTRIES

The Governors' Climate & Forests Task Force (GCF TF) was created in 2008 to respond to tropical deforestation and climate change. It seeks to empower a coalition of subnational jurisdictions and their civil society and private sector partners to implement jurisdiction-wide programmes. The 43 state and province members come from 11 countries, including Brazil and Bolivia.

The PCI Strategy was launched in 2015 to raise funds for Mato Grosso state in Brazil to expand and increase the efficiency of agricultural and forestry production, conserve native vegetation, restore environmental losses, promote the social and economic inclusion of smallholders, reduce emissions and sequestrate carbon by controlling deforestation and developing a low-carbon economy.

In Pará state, the Amazon Now State Plan is a sectoral plan for land use, land-use change and forestry to become carbon neutral by 2036 (Socioflorestal and TFA 2022).

> **"THE EU ADOPTED A NEW LAW TO ENSURE THAT SOY AND OTHER FOREST-RISK COMMODITIES ENTERING THE MARKET FROM 30 DECEMBER 2024 ARE PRODUCED WITHOUT DEFORESTATION OR FOREST DEGRADATION AND IN COMPLIANCE WITH NATIONAL REGULATIONS IN THE PRODUCING COUNTRIES**

CONSUMER COUNTRY POLICIES AND INITIATIVES

In June 2023, the EU adopted a new law to ensure that soy and other forest-risk commodities entering the market from 30 December 2024 are produced without deforestation or forest degradation and in compliance with national regulations in the producing countries (European Commission 2023). The United States and the United Kingdom are currently reviewing similar regulations, namely the US Forest Act and UK Environment Act, to outlaw products linked to deforestation (McCarthy 2022; OGL 2023).

Initiatives in consumer countries to advocate for sustainable soy production and sourcing include the European National Soya Initiatives, supported by IDH and the Amsterdam Declarations Partnership. Another key platform is the European Feed Manufacturers' Federation, founded in 1959, which aims to develop rules and manufacturing practices including relating to the sourcing of feed materials (FEFAC 2021). Its Soy Sourcing Guidelines contain criteria for responsible sourcing.

2. COMPANY ACTION AT LANDSCAPE SCALE IN SOY PRODUCTION LANDSCAPES

2.1 GROWTH IN PRIVATE SECTOR ACTION AT LANDSCAPE AND JURISDICTIONAL SCALE

Companies have become increasingly interested in landscape and jurisdictional approaches as they look for tools to achieve sustainable production of agricultural and forestry commodities. They have realized that individual supply chain action, while critical, is insufficient, and that successful resolution of major challenges – deforestation, natural ecosystem conversion, land conflicts and human rights risks – requires on-the-ground collaboration between multiple stakeholders (TFA 2019).

Some downstream companies, often without operations in commodity production areas or direct relationships with smallholders, are starting to engage at landscape and jurisdictional scale both individually and collectively. The CGF FPCoA members have committed to transform an area equivalent to their production-base footprint[2] to forest positive by 2030 (CGF FPCoA 2022).

More companies are also taking landscape-scale action, as reflected in the number of companies disclosing landscape engagement through CDP's forest questionnaire, which quadrupled to 192 in 2022 from 47 in 2021. In general, the business case for retailers and manufacturers to take landscape-scale action includes cost efficiency, supply chain security, risk mitigation, improving the resilience of smallholders and farmers, the possibility of achieving multiple ESG goals, meeting investor requirements and leadership in global disclosure platforms (CGF FPCoA 2022).

2 A production-base footprint is the total hectares of land needed to produce the commodities used by a company/coalition/other entity.

BOX 1
DEFINITION OF LANDSCAPE APPROACHES

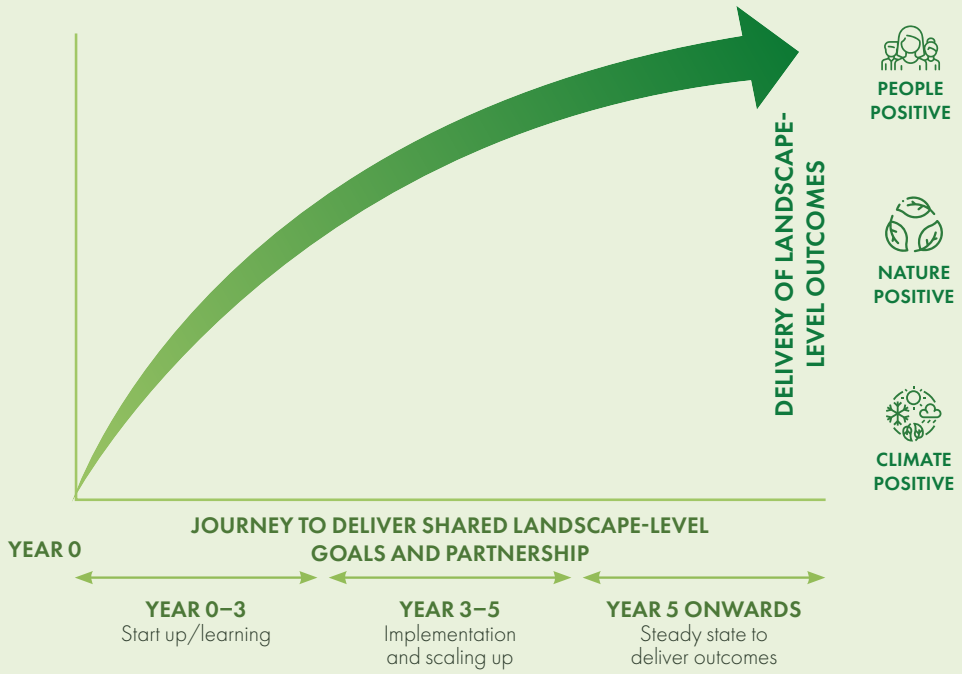
Landscape approaches involve the long-term collaboration of stakeholders within a defined natural or social geography, such as a watershed, biome, jurisdiction or company sourcing area. These management approaches seek to reconcile competing social, economic and environmental goals and build resilience through multi-stakeholder discussions to reach consensus among stakeholders and integrated landscape management (TFA et al. 2020; CDP n.d.). Sharing responsibilities between companies, producers, civil society, local governments and local communities on the ground means each can contribute according to their mandate and capacity. Outcomes are expected to be sustained in the long term as goals are determined together.

The jurisdictional approach is a type of landscape approach that operates within subnational or national administrative boundaries and with the active involvement of government. Similar approaches characterized by multi-stakeholder collaboration at scale include territorial or catchment approaches or integrated land-use management. For the purpose of this study, the authors use the terms landscape and jurisdictional approaches.

Various organizations have identified components necessary for a landscape or jurisdictional initiative to operate effectively and achieve optimal results. These components include engaged stakeholders, agreement on shared goals, multi-stakeholder governance, financing and investment, monitoring and reporting and, particularly in jurisdictional initiatives, planning and policy frameworks (ISEAL 2022; LTKL 2022). While some initiatives have made credible progress in developing these components, many are in the early stages.

Some initiatives are being developed under wider landscape- or jurisdictional-scale multi-stakeholder processes and are contributing to one of the components above or working towards one or more of the shared goals. Others do not have formal multi-stakeholder processes in place but engage a variety of stakeholders and work towards multiple goals aligned with sustainable land-use practices. This study considers and reviews diverse landscape and jurisdictional initiatives at different stages of development, with the basic tenets that they seek and promote multi-stakeholder collaboration to achieve shared sustainability goals in the landscape or jurisdiction.

FIGURE 3 DEVELOPING LANDSCAPE INITIATIVES



Source: CGF FPCoA 2021, updated 2023

2.2 COMPANIES' LANDSCAPE-SCALE ACTION IN SOY IN NUMBERS

This study focuses on midstream and downstream companies sourcing soy and taking landscape-scale action in soy production areas. The authors collated information from desktop reviews, interviews with 13 companies and 7 landscape initiative implementers. The authors also reviewed the submissions to CDP's forest questionnaire of 2022 (see Annex 1 for the research methodology).

In total, 17 companies stated to CDP in 2022 that they engaged with soy landscape initiatives, but 13 of those are investing in initiatives that, while contributing to the transition towards sustainable soy production, do not fully qualify as landscape initiatives according to the CDP criteria (see Section 2.1). Most of the non-qualifying programmes have not engaged other stakeholders in the landscape – engagement with multiple stakeholders to agree common goals and define an action plan is key to ensure there is local buy-in, robust governance, shared responsibility and sustained outcomes at landscape and jurisdictional scale.

> **"ENGAGEMENT WITH MULTIPLE STAKEHOLDERS TO AGREE COMMON GOALS AND DEFINE AN ACTION PLAN IS KEY TO ENSURE THERE IS LOCAL BUY-IN, ROBUST GOVERNANCE, SHARED RESPONSIBILITY AND SUSTAINED OUTCOMES AT LANDSCAPE AND JURISDICTIONAL SCALE.**

The four companies engaged in qualifying landscape initiatives support four landscape initiatives: the PCI Institute, PCI Sorriso, Western Mato Grosso and the Low-Carbon Regenerative Commodity Production initiative in Tocantins state in Brazil. Desktop reviews and interviews identified a further 11 companies investing in qualifying landscape initiatives and 2 additional landscape initiatives. In total, the study identified 15 downstream and midstream companies investing in 6 soy landscape and jurisdictional initiatives (see Annexes 2 and 3 for the lists of companies and initiatives). Four of these initiatives are supported by more than one company. Five initiatives target beef in addition to soy, and two also target cotton.

The authors also found three further landscape and jurisdictional initiatives that have not yet received financial support from soy buyers. Two are in Brazil (PCI Barra do Garças and PCI Tangará da Serra) and one in Paraguay (Food Systems, Land Use and Restoration; FOLUR). Some companies do, however, provide in-kind support to these initiatives: Cargill, ADM and Camara Paraguaya de Procesadores de Oleaginosas y Cereales (CAPPRO) support FOLUR. Others, such as AMAGGI, contribute to soybean productivity projects in Barra do

FIGURE 4 SOY LANDSCAPE INITIATIVES IDENTIFIED IN THIS STUDY

Sources: Interviews and published corporate reports; CDP forest questionnaire 2022

Garças region to achieve common objectives under the Produce, Conserve, Include policy. However, as is the case with AMAGGI, they may not be a member of the initiative's governance structure.

In 2022, no companies reporting to CDP stated that they planned to invest in a soy landscape initiative in the next two years. In the interviews, companies said they wanted to learn more before expanding and increasing investment in existing landscape-scale actions and initiatives.

The growth of landscape initiatives is supported partially by the public and philanthropic sectors, which are providing funding targeted at multiple goals related to sustainable land use (see Box 2).

> **"GENERALLY, COMPANIES INVEST IN LANDSCAPE INITIATIVES INSTEAD OF IN PRODUCERS IN THEIR DIRECT SUPPLY CHAIN DUE TO LIMITATIONS IN TRACEABILITY IN SOY, AND BECAUSE LANDSCAPE INITIATIVES PROVIDED AN OPPORTUNITY TO TAKE ACTION AT SCALE.**

BOX 2
PUBLIC SUPPORT FOR LANDSCAPE AND JURISDICTIONAL-SCALE EFFORTS

The REDD Early Movers (REM) programme rewards projects and institutions that successfully reduce GHG emissions from deforestation and conversion in Mato Grosso state in Brazil. It has four subprogrammes: family agriculture, traditional peoples and communities; Indigenous territories; sustainable production, innovation and markets; and institutional strengthening and structuring of public policies (REM Mato Grosso 2023). The programme assists, for example, traditional communities known as quilombolas (Afro-Brazilian residents of settlements established by escaped slaves) to reduce deforestation and conversion, and has partially financed the PCI Institute.

Since it was implemented in 2019, the REM programme has provided BRL 247 million ($49 million) to Mato Grosso to financially support 53 local organizations. This support has benefited more than 15,000 families and reached over 3.8 million ha with low-carbon agriculture. In July 2023, the REM programme renewed its partnership with Germany and the United Kingdom, which are supporting the next phase with a further €15 million and £15 million respectively. Other countries have also supported efforts at landscape and jurisdictional scale. IDH has channelled €10 million from countries including the Netherlands and Norway since 2016 at state level in Mato Grosso and at regional level in Sorriso, Barra do Garças and Juruena Valley (IDH 2023a and b). Many of their programmes are co-financed with companies.

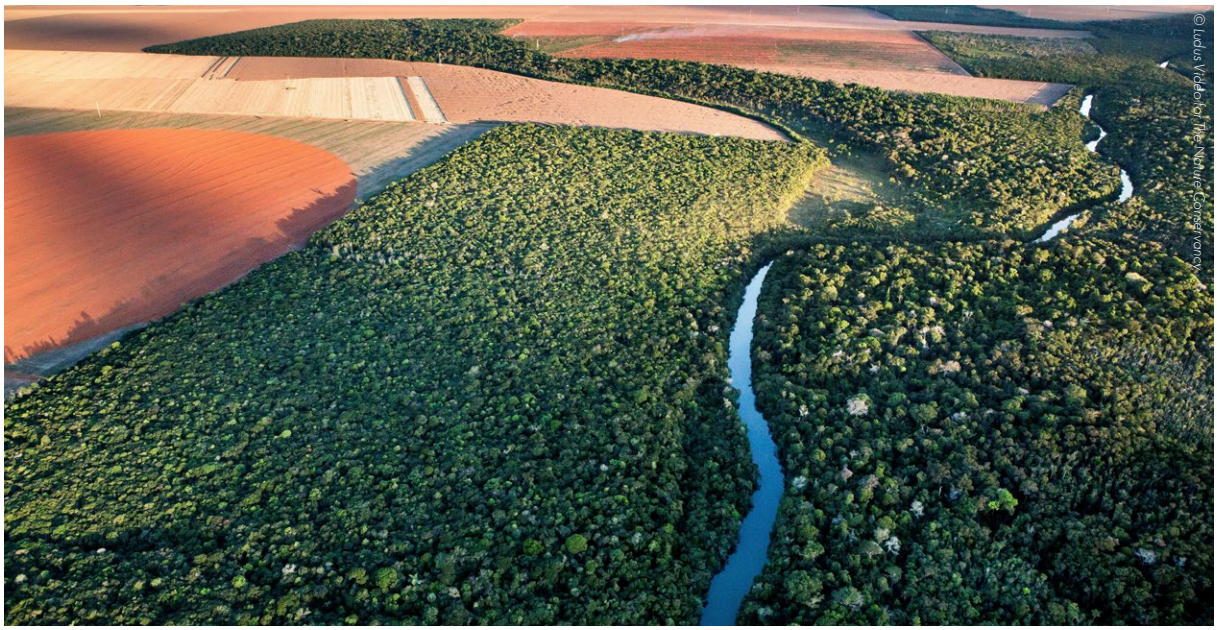
2.3. WHY COMPANIES TAKE LANDSCAPE-SCALE ACTION IN SOY

Generally, downstream and midstream companies invest in landscape initiatives instead of in producers in their direct supply chain due to limitations in traceability in soy, and because landscape initiatives provided an opportunity to take action at scale. This is reflected in company submissions to CDP and interviews conducted for this study to investigate why companies take landscape-scale action. Examples of corporate support and action are presented in Chapter 3.

PREVENTING DEFORESTATION AND CONVERSION

Of the companies reporting to CDP, three stated that investing in a landscape initiative provides an opportunity to protect natural ecosystems and that their company actions are aligned with already established jurisdictional and/or landscape initiatives in priority areas. Two pointed to the risk of deforestation and/or conversion and two invest as a response to a voluntary sector agreement. In interviews, companies stated that landscape-scale action can bring efficiencies in meeting deforestation-free, conversion-free and other sustainability commitments and in complying with sectoral agreements such as the Amazon Soy Moratorium and the Cerrado Manifesto. They also stated that supporting landscape and jurisdictional initiatives may help them comply with the EUDR by reducing the risk that they are linked with deforestation and conversion and by protecting areas of native vegetation that are not legally protected.

The Cerrado biome faces greater challenges than the Amazon biome because a higher proportion of rural Cerrado properties can be legally deforested. It is estimated that under Brazil's Forest Code, at least 41 million ha of area in properties in the Cerrado could be protected (Mendes et al. 2022). However, based on data taken from properties registered in the CAR, only 34.6 million ha had been identified for protection by landowners or guardians (Mendes et al. 2022).



PLANNING SOY EXPANSION IN AREAS FREE OF CONVERSION AND DEFORESTATION

In interviews, companies highlighted their plans to expand production and the precautions they are taking to prevent deforestation and conversion: they are mapping degraded pastures in regions of interest and ensuring that the area was not illegally deforested or converted.

Soy expansion in the low-fertility soils (CONAB 2017) of the Cerrado without conversion depends on technological and financial incentives that promote the efficient use of degraded pastures for agriculture (Solidaridad 2021). Mechanisms to encourage the protection of Cerrado vegetation will also be necessary, such as payments for environmental services (Solidaridad 2021).

In the states of Maranhão, Tocantins, Plauí and Bahia, which are covered mostly by Cerrado biome, there are more than 6.6 million ha of pastureland with agricultural potential, 4 million ha (61%) of which is degraded pastureland (Solidaridad 2021). From this, 97% of the pasture area suitable for soy is in Tocantins (54%) and Maranhão (43%), while the remaining 3% is in Bahia (Solidaridad 2021).

> **“ THE CERRADO BIOME FACES GREATER CHALLENGES THAN THE AMAZON BIOME BECAUSE A HIGHER PROPORTION OF RURAL CERRADO PROPERTIES CAN BE LEGALLY DEFORESTED.**

There would be climate benefits if soybean production is expanded in degraded pastures, resulting from an improvement in soil health, avoided conversion of native vegetation and the potential for restoration of native vegetation and regeneration of soil and degraded pastures, as producers comply with the Forest Code (TNC 2022).

SUPPORTING SUPPLIERS TO COMPLY WITH BRAZIL'S FOREST CODE

One company stated in the CDP questionnaire that it invests in a landscape initiative due to the risk of non-compliance from suppliers in the area. In interviews, companies stated that they engage in landscape and jurisdictional initiatives to support suppliers to comply with Brazil's Forest Code, including through restoration of native vegetation for legal compliance and in environmental regularization to support CAR implementation.

Most soy companies in Brazil require their suppliers to present a validated CAR, which increases assurance that the property complies with the Forest Code. However, in Brazil only 2% of all CAR registrations have been fully analysed by the environmental agencies (Climate Policy Initiative 2023).

The final stage of regularizing liabilities in permanent preservation areas and legal forest reserves by joining the Environmental Regularization Program remains a longer-term goal. Landscape and jurisdictional initiatives become an attractive option to accelerate this process.

3. HOW COMPANIES SUPPORT SOY LANDSCAPE INITIATIVES

3.1 TYPE OF ENGAGEMENT

JURISDICTIONAL PLATFORMS

When collaborating in jurisdictional platforms, companies rely on clear governance structures and know that shared goals are monitored regularly to demonstrate progress.

Three companies are engaged in landscape initiatives at the state and municipality level in Mato Grosso: AMAGGI is a founding member of the PCI Institute as the multi-stakeholder jurisdictional platform in Mato Grosso; AMAGGI and the Walmart Foundation fund activities of the PCI Institute; and a trader member of the SCF is a signatory of the PCI Sorriso, which is part of the PCI Mato Grosso.

BOX 3
MATO GROSSO'S PRODUCE, CONSERVE AND INCLUDE STRATEGY

Launched in 2015, the Produce, Conserve and Include Strategy (PCI Strategy) is a jurisdictional initiative for the sustainable development of the state of Mato Grosso. In 2019, the PCI Institute was established and mandated by the Mato Grosso state government to coordinate multiple actors in transparent and inclusive governance, identify fundraising opportunities and manage programmes and projects, among others (PCI Institute n.d. b).

In 2022, the PCI Institute and partners assessed the investment needed to meet the 2030 targets of the PCI Strategy and estimated that around BRL 205 billion ($42 billion) would be needed between 2021 and 2030. This estimate includes BRL 40.15 billion for the Produce axis, BRL 139.05 billion for Conserve and BRL 25.8 billion for Include (PCI Institute 2023).

A quarter of this is expected to be secured from initiatives already underway in the state, projected credits and the state budget. Since it was launched, the PCI Strategy has mobilized partners and investments that directly support the implementation of its goals. These include IDH with its landscape initiatives, REDD+ Early Movers (see Box 2), Partnership for Green Economy, World Bank , GIZ, Valuing the Forests of Mato Grosso, Climate Pathway Project, TerrAmaz and Sustainable Rural Project (PCI Institute n.d. a).

To engage more companies in contributing to the shared goals of the PCI Strategy and bring more investment, the PCI Institute published the Pitchbook 2023 to provide updates on 44 projects and actions underway in Mato Grosso (PCI Institute 2023).

The Pitchbook aims to help companies understand how to connect their efforts to the PCI Strategy and contribute to its success, while achieving their own supply chain goals. AMAGGI and Cargill are example of traders contributing directly to developing the region with sustainability projects and actions that link and contribute to PCI Strategy goals (PCI Institute 2023).

A new version of the PCI Pitchbook was launched later that year as an online platform, showcasing 51 projects and initiatives that could contribute to the state's goals.

COLLECTIVE ACTION

By collaborating to address common issues within a landscape, companies have a greater opportunity to create change. In 2023, two company-led coalitions combined forces to engage at landscape level to support a common interest: to source deforestation- and conversion-free soy in high-risk areas (CGF 2023).

Five members of the CGF FPCoA, namely Grupo Bimbo, Jeronimo Martins, Metro, Nestlé and Sainsbury's, engaged in three landscape initiatives, including the Western Mato Grosso initiative (CGF FPCoA 2023). Trader members of the SCF have also engaged in the Western Mato Grosso initiative alongside the retailers and manufacturers of the CGF FPCoA (see Box 4 for information about the initiative).

> **"IN 2023, TWO COMPANY-LED COALITIONS COMBINED FORCES TO ENGAGE AT LANDSCAPE LEVEL TO SUPPORT A COMMON INTEREST: TO SOURCE DEFORESTATION- AND CONVERSION-FREE SOY IN HIGH-RISK AREAS.**

BOX 4
COALITIONS COLLABORATING IN WESTERN MATO GROSSO

The Western Mato Grosso initiative, which started in 2021, is implemented by IPAM, Produzindo Certo, PCI and Proforest. In addition to support from members of CGF FPCoA and SCF, the initiative also receives a grant from the Land Innovation Fund for Sustainable Livelihoods, which will fund activities from 2023 to 2025.

The main goals are:

- Creating territorial governance for sustainable agriculture, low-carbon and deforestation-and conversion-free soy supply chains
- Increasing agricultural yields, sustainable income and carbon stocks
- Conserving, protecting and restoring native vegetation
- Engaging communities and the public and private sectors in strategies to reduce GHG emissions

IPAM is implementing CONSERV, which compensates producers for their involvement in forest conservation.

The project, part of the SCF's Farmers First Clusters initiative, will contribute to the protection of over 4,000 ha of native vegetation that are not legally protected in Mato Grosso. The project will also support restoration on around 100 ha of small and medium-sized properties – involving around 100 farmers – in soy producing municipalities.

3.2 ACTIONS SUPPORTED BY COMPANIES

This section highlights the four groups of actions most supported by companies, based on interviews conducted for this study and the limited submissions from companies on their engagement with qualifying initiatives to CDP in 2022.

PREVENTING NEW CONVERSION OF NATURAL ECOSYSTEMS

All four companies that were engaged in 2022 in initiatives qualifying under CDP's criteria support the goal of avoiding deforestation and conversion of natural ecosystems. However, only one company stated its intention to support land-use planning, landscape restoration and long-term protection as reason for engaging.

Companies are taking action to support conservation of natural ecosystems, including protecting native vegetation that can be legally cleared. This is carried out under projects such as CONSERV (see Box 4), which financially compensates farmers for protecting ecosystems. These actions are embedded in four landscape initiatives: Soy Chaco, PCI Mato Grosso, PCI Western Mato Grosso and Conservation International's initiative in Tocantins state in Brazil.

INCREASING PRODUCTION AND PRODUCTIVITY

Two companies stated in the CDP forest questionnaire of 2022 that they aim to support producers, producer groups and primary processors to improve their agricultural practices and technologies. Landscape-scale action supported by companies includes promoting soy expansion in pastureland, which avoids new deforestation and conversion for soy production.

Companies also promote restoration of degraded land with regenerative agriculture, low-carbon agriculture and systems that combine crops with livestock and forestry to incentivize farmers to transition towards sustainable land use. These types of action are observed in the landscape and jurisdictional initiatives in Tocantins (see Box 5), PCI Sorriso, Western Mato Grosso and PCI Mato Grosso.

BOX 5
LOW-CARBON REGENERATIVE COMMODITY PRODUCTION IN THE CERRADO BIOME

The landscape initiative in Tocantins, Brazil was launched in 2021 by Conservation International and the Brazilian Agricultural Research Corporation (Embrapa) supported by the ICLF Network.* The initiative has also received support from members of the CGF FPCoA from 2021, after the coalition established its Landscape Strategy. The landscape initiative aims to provide technical and financial incentives for soy farmers and cattle ranchers to increase productivity on existing farms and turn degraded land into productive areas in six priority municipalities in the Cerrado biome. Low-carbon production is promoted in two ways:

- Capacity building for local farmers and rural extension service workers to adopt and implement an integrated crop–livestock-forestry system, which is a sustainable production strategy that integrates farming, cattle and forestry activities by intercropping, succession or rotation. This model captures carbon in the soil while improving soil health, yields, water resilience and avoiding deforestation and conversion.
- Farmers and producers are provided with training and information on climate finance opportunities, which alert them to credit mechanisms and ways to access credit from local financial institutions.

** The ICLF Network is a public–private partnership formed by Embrapa, the Cocamar cooperative and the companies Bradesco, Ceptis, John Deere, Soesp and Syngenta. The goal is to accelerate adoption of the integrated crop–livestock–forest technologies by rural producers for sustainable intensification of Brazilian agriculture (Rede ILPF n.d.).*

TECHNICAL ASSISTANCE FOR RESPONSIBLE SOY PRODUCTION

Companies interviewed for the study stated that they were supporting soy farmers to increase verified sustainable soy production, for example in Sorriso municipality, Western Mato Grosso, and in Tocantins. Two companies also stated in the CDP questionnaire that their actions in the landscape are to support the uptake of certification, while one company intends to use preferential sourcing to support landscape or jurisdictional initiatives that are demonstrating progress.

BOX 6
SOY CHACO: CONTRIBUTING TO POSITIVE IMPACT IN THE GRAN CHACO, ARGENTINA

The Soy Chaco initiative in Argentina, established in 2021, supports deforestation- and conversion-free soy production and sourcing, nature conservation and restoration of crucial ecosystems. Soy Chaco is an initiative implemented by the International Union for the Conservation of Nature in partnership with Solidaridad, Fundación Vida Silvestre, Cefetra and Dutch Dairy. It works closely with the RTRS and service providers. Companies in the United Kingdom and other European buyers are in the process of joining (IUCN 2023).

Soy Chaco seeks to support farmers to produce at least 250,000 tonnes of responsible soy on 75,000 ha of farms, protect 7,000 ha of forests within these farms and restore 20,000 ha in a forest conservation area. The initiative matches certified producers in the Argentinian Chaco with traders and buyers interested in deforestation- and conversion-free soy in Europe and elsewhere (IUCN n.d.).

Alfonso via Wikimedia Commons

SMALLHOLDER INCLUSION

Companies support smallholders through landscape and jurisdictional initiatives by ensuring the rights of communities are respected and by developing and increasing access to market, as observed in PCI Sorriso, PCI Balsas and PCI Western Mato Grosso. Smallholders are also supported to comply with the Forest Code requirements for restoration and regeneration of degraded areas, for example in PCI Mato Grosso.

Companies also engage direct suppliers, such as aggregators and cooperatives, to collaborate in the landscape and participate in multi-stakeholder platforms. Aggregators are encouraged to engage their suppliers, sometimes smallholders, to practice responsible production on their farms and tackle deforestation and conversion.


© Marizilda Cruppe / Greenpeace

BOX 7
SMALLHOLDER INCLUSION UNDER PCI COMPACTS

The inclusion of smallholders is a key goal in landscape and jurisdictional efforts in the PCI approach. For example, shared goals under the PCI Sorriso, signed in 2019, include increasing access to technical assistance for 290 family farmers and regularize 100% of family farming plots by 2024 (the Include axis) (PCI Institute 2023).

CAT Sorriso, a CSO, and IDH provide technical assistance for family farmers and support for local associations and cooperatives to achieve responsible soy production (IDH Latam n.d. a). IDH is also setting up the Support Center for Rural Producers, where farmers can obtain advice on environmental and land regularization, georeferencing, environmental licences and the Rural Environmental Registry (CAR) (IDH 2023a). Farmers also learn about opportunities to access credit and take part in initiatives that improve soy production (IDH n.d.).

In the Balsas region, stakeholders agreed to support 12 municipalities to become sustainable sourcing areas for grains and family agriculture products, including soy and cotton (IDH n.d.). A Support Center for Rural Producers was also established in Balsas, partnering with Agerp (IDH 2023a). The smallholders receive technical assistance to increase the production of milk, cassava, cowpeas, rice, corn, sheep and goats.

3.3 MONITORING AND REPORTING ON LANDSCAPE PROGRESS

Implementers of landscape and jurisdictional initiatives report progress towards landscape goals using three frameworks. The first is the PCI Institute's dashboard[3], which tracks Mato Grosso's shared goals (see Box 3) and where three of the five soy landscape initiatives identified in this study are located.

The PCI Mato Grosso dashboard shows 21 metrics and has tracked 16 since 2015, with data for 2021 being the most recent. The PCI Institute, supported by GIZ, plans to expand its monitoring to 38 indicators and report on progress at municipality level, covering all of Mato Grosso's 141 municipalities. These include the municipalities that are part of the soy landscape initiatives in Sorriso and Western Mato Grosso. The second is the CGF FPCoA's landscape reporting framework, built on a model formulated for palm oil by Proforest and ISEAL for Unilever, PepsiCo and Nestlé, to monitor progress towards forest positive landscapes. This framework allows Coalition members to aggregate progress in landscape initiatives they engage in by using common metrics related to natural ecosystem conservation, farmer production and livelihoods and multi-stakeholder partnerships. In 2022, two landscape initiatives focusing on soy used this framework to report to the Coalition, namely those in Western Mato Grosso and Tocantins. PCI Sorriso and PCI Balsas have piloted the digital platform SourceUp, which was initiated by IDH to link landscape initiatives to companies around the globe.

3 A New PCI monitoring dashboard is under development, and should be launched the second half of 2024

4. PATHWAYS FOR CORPORATE ENGAGEMENT

Several key observations emerged from this study on downstream and midstream companies' engagement for sustainable soy production at landscape and jurisdictional scale. While the first jurisdictional initiative with soy sustainability as a shared target was established in Mato Grosso state in Brazil in 2015 with the PCI Strategy, the use of landscape and jurisdictional approaches did not expand to other states and jurisdictions until recently. Three of the six soy-focused landscape initiatives engaged by companies only began receiving this support from 2021 onwards – those in Tocantins and Western Mato Grosso in Brazil and in Argentina's Gran Chaco biome.

The rate of expansion of landscape-scale action in soy, which is less advanced compared with expansion in other commodities such as palm oil and cocoa (TFA et al. 2023a and b), could stem from the success of large-scale precompetitive sectoral initiatives such as the Amazon Soy Moratorium. The Moratorium has built trust among stakeholders (Section 1.2), which trust created a basis for increased on-the-ground collaboration. Nevertheless, companies have recently shown more interest in using landscape and jurisdictional approaches, particularly to address the challenge of limited traceability, particularly for indirect suppliers and embedded soy (see Section 2.2). The adoption of the EUDR, which requires soy entering the European Union to be traceable and proven deforestation-free from the end of 2024, will likely increase this appetite.

Sections 4.1, 4.2 and 4.3 present lessons learnt from company engagement in soy production landscapes, challenges in mobilizing more private sector action at landscape scale and recommendations for downstream and midstream companies and the wider community supporting the use of multi-stakeholder collaboration to achieve sustainability at landscape and jurisdictional scale.

4.1 LESSONS LEARNT AND OPPORTUNITIES

1. JURISDICTIONAL PLATFORMS AND COLLABORATION MOBILIZE LANDSCAPE-SCALE ACTION

In Mato Grosso, landscape action started with a jurisdictional platform across a large and diverse territory at the state level. To operationalize the PCI Strategy, the state focused on implementing local compacts in targeted municipalities in Mato Grosso. These compacts defined local goals, governance and the interventions needed on the ground. The long-term presence of the PCI Institute in Mato Grosso, which grew from the PCI Strategy, and its clear goals supported by a repository of initiatives to achieve them, have succeeded in attracting companies to support actions in the state and its municipalities.

> **"LANDSCAPE AND JURISDICTIONAL INITIATIVES CAN HELP COMPANIES COMPLY WITH REGULATIONS... AS THEY OFFER THE POTENTIAL TO ENGAGE FARMERS WHO OPERATE IN HEAVILY FRAGMENTED SUPPLY CHAINS SUCH AS SOY.**

In Maranhão state, landscape-scale action started with the development of PCI Balsas, which covers 12 municipalities, by IDH and 36 other signatories in 2020 (IDH Latam n.d .b). The initiative, co-led by IDH and Fapcen, includes local governance and the integration of farm-level interventions into a landscape strategy.

2. LANDSCAPE-SCALE ACTION CAN HELP COMPANIES COMPLY WITH REGULATIONS AND MEET THEIR OWN COMMITMENTS

Landscape and jurisdictional initiatives can help companies comply with regulations, such as Brazil's Forest Code and the EUDR, as they offer the potential to engage farmers who operate in heavily fragmented supply chains such as soy. Compliance with national regulation such as the Forest Code is a shared interest of companies, producers, governments and CSOs, and can therefore work well as a shared goal at jurisdictional scale.

Landscape and jurisdictional initiatives can also support companies in meeting their deforestation-

and conversion-free commitments and their nature, climate and people goals, which go beyond regulations in producer and consumer countries (CDP 2023). Landscape initiatives can provide farmers with incentives to protect all natural ecosystems and promote restoration and low-carbon agriculture activities, which can help companies meet their Forest, Land and Agriculture Science Based Targets. Finally, landscape initiatives can also serve as a platform to mitigate human rights risks in commodity production through collaboration with government to address the root causes of human rights abuses.

3. CHANGES IN POLITICAL LEADERSHIP AND ENVIRONMENTAL POLICIES CAN BRING POSITIVE IMPACTS

When Luiz Inácio Lula da Silva was sworn in as Brazilian president on 1 January 2023, one of his main commitments was to halt deforestation by 2030 (WWF Brazil 2022). In the first seven months of the new government, deforestation and conversion in the Amazon dropped by 42% compared to the same period of 2022 (Mongabay 2023). To support the new government, Germany, the United States, the United Kingdom, the European Union and Switzerland have committed BRL 3.4 billion to the Amazon Fund. By the end of 2023, only 2.9% of this funding had been delivered (ClimaInfo 2023).

However, in the Cerrado biome, deforestation and conversion increased in the first seven months of the new government (Mongabay 2023). The draft of PPCerrado, the Action Plan for the Prevention and Control of Deforestation in the Cerrado biome, went through a month-long public consultation from 13 September 2023 (MMA 2023) and was launched a few days before COP 28 in Dubai (Agência Brasil 2023). Civil society organizations, however, are concerned that there are weaknesses in the process for obtaining authorization from the local government to convert native vegetation (Observatório do Clima 2023).

4.2 CHALLENGES

The interviews with companies and implementers, as well as data analysis and the desktop review, highlighted challenges to further mobilize and scale up landscape action by downstream and midstream companies. Companies highlighted two key challenges:

> **“ SOME DOWNSTREAM COMPANIES HAVE ENGAGED IN LANDSCAPE INITIATIVES IN REGIONS WHERE THERE ARE RISKS OF DEFORESTATION AND CONVERSION, EVEN IF THEY CANNOT DEMONSTRATE THAT THE AREA IS DIRECTLY CONNECTED TO THEIR SUPPLY CHAINS.**

1. LACK OF CLARITY IN THE SOY SUPPLY CHAIN

Companies stated in interviews that the lack of traceability of embedded soy in particular is a key challenge when considering investment in landscape initiatives. As the companies do not know in which landscape or jurisdiction their soy originates, or how much they source, it is difficult to justify the budget internally and connect the potential impacts of these investments to a specific business, product or brand. Nevertheless, some downstream companies have engaged in landscape initiatives in regions where there are risks of deforestation and conversion, even if they cannot demonstrate that the area is directly connected to their supply chains. These companies see linkages to wider deforestation- and conversion-free soy production as sufficient value for their investments.

2. LACK OF CLEAR GOVERNANCE AND MONITORING OF PROGRESS IN LANDSCAPE APPROACHES

The general lack of landscape-level governance structures outside of areas like Mato Grosso could be a reason for the slower uptake of initiatives elsewhere. Robust governance structures, such as in the PCI Mato Grosso, have the opportunity to scale impact and attract more companies. Companies said that having a clear governance system at landscape and jurisdictional scale would significantly increase their confidence in supporting initiatives. Companies also want to be able to link their landscape contributions more directly to their commitments and footprint. Having a dashboard such as that in Mato Grosso (see Section 3.3) could further build companies' confidence in providing support.

4.3 RECOMMENDATIONS

This section provides a set of recommendations for midstream and downstream companies and a further set for all stakeholders interested in progressing towards sustainability at scale in soy production landscapes. These recommendations focus on actions that are most effective and impactful in the short term, meaning within the next three years, to mobilize more landscape-scale action from midstream and downstream companies.

RECOMMENDATIONS FOR COMPANIES

1. DEVELOP CLEAR PLANS TO TRANSFORM SOY PRODUCTION AT LANDSCAPE SCALE

Companies sourcing soy or its derivatives, whether directly or indirectly, should develop clear plans to transform production at landscape and jurisdictional scale. These plans should include action commensurate to the size of the company, the volume of soy they are sourcing and their long-term sustainability commitments.

Companies can also seek to integrate their existing sustainability programmes, for example those aligned with the Cerrado Manifesto, into landscape or jurisdictional initiatives. This will improve the likelihood of achieving sustainable soy production and wider sustainable land use at scale and in a cost-effective way.

> **"COMPANIES SOURCING SOY OR ITS DERIVATIVES, WHETHER DIRECTLY OR INDIRECTLY, SHOULD DEVELOP CLEAR PLANS TO TRANSFORM PRODUCTION AT LANDSCAPE AND JURISDICTIONAL SCALE.**

2. INCREASE COMPANY COLLABORATION IN LANDSCAPE-SCALE ACTION

Leading soy buyers that have already taken landscape-scale action can invite peers, suppliers and other companies in their supply chains, including those providing agricultural inputs (such as seeds, fertilizers and pesticides) to join their efforts and engage in landscape and jurisdictional initiatives. These companies have expertise and relationships with soy producers, local leaders and authorities, which have great influence on the implementation of landscape and jurisdictional-scale action. Soy buyers can also partner with other sectors, for example cattle, to join efforts to achieve sustainable land use across the landscape and jurisdiction.

This is critical as soy is often not a direct driver of deforestation and conversion; natural ecosystems are often converted first to pastureland for cattle and then planted with soy (TNC 2019). Cross-commodity action is essential to effectively address deforestation, conversion and social issues; this is reflected in existing collaboration, for example in the PCI Mato Grosso.

Companies could also collaborate with the finance sector to provide financial incentives for farmers to adopt practices that balance environmental, social and economic interests within the landscape or jurisdiction. One example is the support provided by Tesco, Sainsbury's and Waitrose to the Responsible Commodities Facility, which provides low-interest loans to soy farmers who commit to deforestation-free production.

3. ENGAGE NON-PRIVATE SECTOR ACTORS TO JOIN LANDSCAPE- AND JURISDICTIONAL-SCALE EFFORTS

Companies can engage local government agencies and CSOs in their priority landscapes or jurisdictions to help with the actions needed to ensure producers and suppliers meet their legal obligations and to address social and rights issues. If companies align their goals and action with the needs of other stakeholders, they could unlock sectoral and public solutions (systems, platforms, frameworks and protocols) around traceability, monitoring of social and environmental compliance and increased transparency of soy supply chains.

4. SUPPORT INCENTIVES TO PREVENT LEGAL DEFORESTATION AS PART OF LANDSCAPE-SCALE ACTION

Companies interviewed stated that their main reason for engaging at landscape and jurisdictional scale is to reduce the risk of deforestation and conversion of natural ecosystems from soy production. One of the key avenues to do this is to provide incentives that encourage soy producers to protect forests and other ecosystems that they may

legally convert under national laws. These incentives could be in the form or financial and non-financial support, such as payment for avoided deforestation or conversion, green loans, a premium price for certified soy and technical assistance on the use of sustainable regenerative agriculture to increase soy productivity.

RECOMMENDATIONS FOR ALL STAKEHOLDERS

1. ENGAGE SECTORAL REPRESENTATIVES AND COALITIONS IN LANDSCAPE AND JURISDICTIONAL EFFORTS

As described in Section 1.3, sectoral associations and coalitions, such as ViSec in Argentina, have helped to promote sustainable soy production and spearhead efforts to improve traceability and monitoring and halt deforestation and conversion. Company-led coalitions such as the ABIOVE also support soy producers to improve their management systems and practices.

Several companies interviewed for this study said that associations could be key partners in implementing landscape and jurisdictional approaches due to their experience in engaging and supporting companies, and the trust members place in them. These sectoral associations are able to represent collective interests and unite companies to work together to achieve shared goals. These associations should engage their members to invest in landscape initiatives and contribute to the goals of initiatives in the regions in which they operate.

2. ENABLE COMPANIES' LANDSCAPE ENGAGEMENTS TO CONTRIBUTE TO THEIR CLIMATE GOALS

Increasingly companies are committing to reduce their GHG emissions and are setting net zero targets using the Science Based Target initiative (SBTi), including goals linked to forest, land and agriculture. With land-use change being a major source of GHG emissions in the soy sector (see Section 1.2), opportunities exist to collaborate with peers, supply chain actors and local stakeholders to improve agricultural practices and to conserve and restore forests. For example, in Tocantins, Conservation International Brazil, in partnership with state agency Embrapa, is building the capacity of rural producers and extension officers to implement low-carbon, regenerative soy and beef farming practices. The

landscape initiative also helps increase producers' financial stability by improving access to credit, including by sharing information on climate finance opportunities. The PCI Western Mato Grosso also aims to define a long-term strategy based on climate finance to reduce GHG emissions in the landscape. The implementers plan to build the capacity of local stakeholders to obtain additional funding through carbon credits and other types of incentives for activities including improved agriculture and natural ecosystem conservation and restoration.

Guidance for corporate commitment to climate under SBTi is still being developed. Analysis conducted by several organizations found the draft guidance on the land sector and removals under the SBTi mechanism only allows companies to claim actions at the farm level for emission reductions (Conservation International et al. 2022).

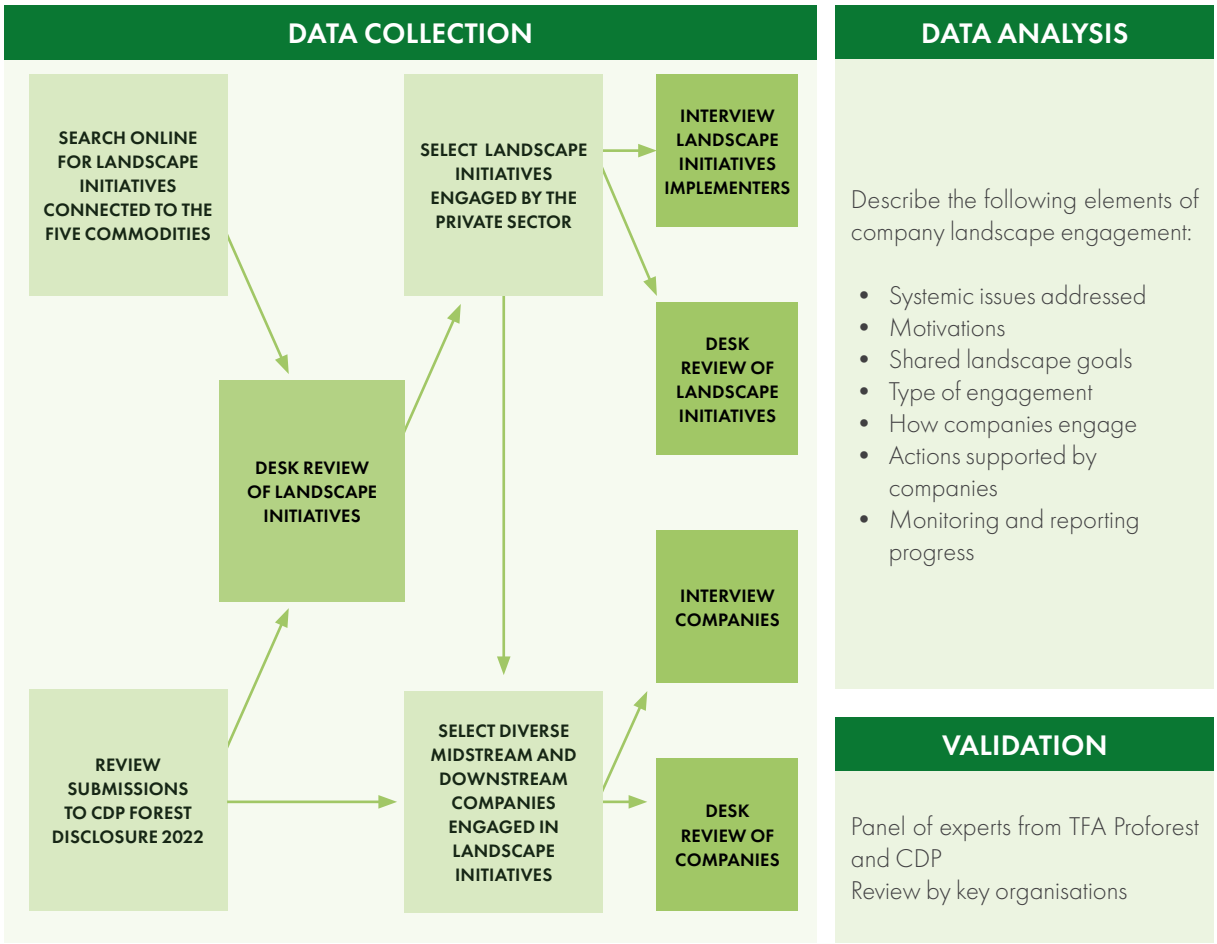
This does not incentivize companies to invest beyond their supply chains and misses an opportunity to create multi-stakeholder collaboration on the ground. SBTi is developing guidance for beyond value chain mitigation, a mechanism by which companies can contribute towards society's goal of achieving net zero emissions. Actions targeted at beyond value chain mitigation, however, will not count against companies' science-based targets (SBTi 2022). The possibility for companies to be able to count landscape-scale action at least partially against their climate and nature goals, and clarification of claims (see point 2) could unlock significant funding from companies sourcing commodities and also attract more from other companies.

ANNEX 1
METHODOLOGY

This paper is part of a global study on private sector engagement at landscape scale that aims to advance understanding of the use of landscape and jurisdictional approaches as a key corporate strategy towards nature-positive business.

The study also aims to map the way forward to mobilize more landscape-scale action by downstream and midstream companies and multi-stakeholder collaboration at scale. Through interviews, desktop research and analysis of company submissions to CDP's forests questionnaire in 2022, the study explores why and how manufacturers, retailers and traders have used landscape and jurisdictional approaches to address deforestation driven by palm oil, cocoa, soy, beef, and pulp and paper.

ANNEX FIGURE 1.1 METHODOLOGY FOR COMMODITY-SPECIFIC BRIEFS



Recognizing that landscape engagement is relatively new for many companies, CDP reviewed all submissions to assess whether the programmes met the basic CDP criteria for landscape and jurisdictional initiatives. Qualifying landscape initiatives are those that provide evidence of multi-stakeholder processes and collective goals for a defined territory.

ANNEX FIGURE 1.2 CDP CRITERIA FOR LANDSCAPE INITIATIVES

1. The scale of the approach is an environmental, productive, or geopolitical landscape/jurisdiction.
Heterogeneous land area composed of multiple and interacting ecosystems, people, functions, authorities, and land uses that are repeated in a similar form throughout.

BUILD BASED ON A **SHARED LONG-TERM VISION OF SUSTAINABILITY** AND INTEGRATED IN A **MANAGEMENT STRATEGY** OR **ACTION PLAN** WITH:

2. Multiple local stakeholder groups participate
in processes/platforms of discussion and decision making.

3. Collective goals and actions
on sustainable production (e.g. commodities), human well-being, and conservation.

4. Transparent reporting or information systems
on actions and progress are established and collectively acknowledged.

Source: CDP

The information provided by companies and the facilitators of landscape initiatives was codified, anonymized and analysed to identify lessons learnt, challenges and recommendations. A group of experts from CDP, TFA and Proforest provided inputs to preliminary findings and recommendations. The report also benefits from input into an advanced draft from representatives from the private sector, implementers of landscape initiatives and other experts.

ANNEX 2

COMPANIES TAKING LANDSCAPE-SCALE ACTION IN SOY

The study identified traders, manufacturers and retailers that have invested in landscape and jurisdictional initiatives focused on achieving sustainable land use and soy production at scale. The list of companies in Annex Table 2.1 is derived from desktop research, interviews and company submissions to CDP's forest questionnaire of 2022; it is not exhaustive.

ANNEX TABLE 2.1 COMPANIES TAKING LANDSCAPE-SCALE ACTION IN SOY

	COMPANY*	BUSINESS TYPE	COUNTRY OF ENGAGEMENT
1	ADM	Trader	Brazil
2	Agrex do Brasil	Trader	Brazil
3	AMAGGI	Trader, producer	Brazil
4	Bayer AG	Manufacturer	Brazil
5	Bunge	Trader	Brazil
6	Cargill	Trader	Brazil
7	Cefetra	Trader	Argentina
8	Grupo Bimbo	Retailer	Brazil
9	Jeronimo Martins	Retailer	Brazil
10	Louis Dreyfus	Trader	Brazil
11	Metro	Retailer	Brazil
12	Nestlé	Manufacturer	Brazil
13	Sainsbury's	Retailer	Brazil
14	Viterra	Trader	Brazil
15	Walmart	Retailer	Brazil

** Not all companies listed here reported to CDP's forest questionnaire of 2022.*
Source: Published corporate reports and interviews.

ANNEX 3

SOY LANDSCAPE INITIATIVES SUPPORTED BY COMPANIES

The following table is a non-exhaustive list of landscape initiatives supported by downstream, midstream and integrated companies sourcing soy (see Annex 2 for the list of companies). These landscape initiatives are aligned with the definition used in this study (Box 1) and focus on achieving shared sustainable goals for land use and soy production at scale and beyond individual corporate supply chains.

ANNEX TABLE 3.1 SOY LANDSCAPE INITIATIVES SUPPORTED BY COMPANIES

#	LANDSCAPE INITIATIVE	JURISDICTION	COUNTRY	IMPLEMENTER	COALITION/ PLATFORM	COMMODITY	STARTING YEAR
1	PCI Mato Grosso	Mato Grosso	Brazil	PCI Institute	n.a.	Soy, beef	2015
2	PCI Sorriso	Sorriso municipality, Mato Grosso	Brazil	IDH, Earthworm Foundation	n.a.	Soy, beef, cotton	2019
3	PCI Western Mato Grosso	Municipalities of Tangará da Serra, Sapezal, Campos de Julio, Campo Novo do Parecis, Alto Paraguai and Diamantino in Mato Grosso	Brazil	IPAM, Produzindo Certo, Proforest	CGF FPCoA, SCF	Soy	2022
4	Low-Carbon Regenerative Commodity Production in the Cerrado Biome	Tocantins	Brazil	Conservation International	CGF FPCoA	Soy, beef	2021
5	Soy Chaco	Chaco biome, Argentina	Argentina	IUCN-NL, Solidaridad	n.a.	Soy, beef	2021
6	PCI Balsas region	Municipalities of Pastos Bons, Alto Parnaíba, Nova Colinas, Riachão, Loreto, Fortaleza dos Nogueiras, São Raimundo das Mangabeiras, Sambaíba, Feira Nova do Maranhão, Carolina, Balsas and Tasso Fragos	Brazil	IDH, Fapcen, Solidaridad	n.a.	Soy, cotton	2020

Source: Published corporate reports and interviews.

ANNEX 4

SOY LANDSCAPE INITIATIVES YET TO BE SUPPORTED BY COMPANIES

The following table is a non-exhaustive list of landscape initiatives with shared goals for sustainable land use and soy production at landscape and jurisdictional scale that are not yet supported by midstream and downstream companies.

ANNEX TABLE 4.1 SOY LANDSCAPE INITIATIVES YET TO BE SUPPORTED BY COMPANIES

#	PROGRAMME UNDER DEVELOPMENT	JURISDICTION	COUNTRY	IMPLEMENTER	COMMODITY	STARTING YEAR
1	Food Systems, Land Use and Restoration (FOLUR) Paraguay	Chaco Region and Alto Paraná Atlantic Forest (Eastern Region)	Paraguay	United Nations Environment Programme	Soy, beef	2022
2	PCI Compact Barra do Garças, Mato Grosso	Barra do Garças municipality	Brazil	IDH	Beef, soy	2019
3	PCI Tangará da Serra, Mato Grosso	Tangará da Serra municipality	Brazil	PCI Institute	Beef, soy, cotton	2021

Source: Published reports and interviews.

REFERENCES

ABIOVE (Brazilian Association of Vegetable Oil Industries; Associação Brasileira das Indústrias de Óleas Vegetais), GTS (Grupo de Trabalho da Soja), INPE (Instituto Nacional de Pesquisa Espaciais) and Agrosatélite, 2023. *Soy Moratorium – Fifteenth Year Report.*

ABIOVE and ANEC (National Association of Grain Exporters; Associação Nacional dos Exportadores de Cereais), 2023. *Critérios Socioambientais para Gestão, Fomento da Produção e Compra de Soja no Brasil.*

*ADM, 2022. "*Responsible sourcing*".*

*Agência Brasil, 2023. "*Governo lança 4ª fase do plano de ação contra desmatamento do Cerrado*".*

*Agro Plus Brasil, n.d. "*About*".*

*Agro Plus Brasil, 2021. "*Technical assistance programme for soy production advances according to ABIOVE, 8,000 farmers attended*".*

*Agrosatélite and ABIOVE, 2022. "*Geospatial analysis of soy expansion in the Cerrado biome 2000–2021 *".*

*AMAGGI, n.d. "*Sustentabilidade AMAGGI: Estratégia ESG*"*

AMAGGI, 2022. *Certification Guide: Origins Field.*

AMAGGI, 2023. *Sustainability Report 2022: Development Allied to Sustainability Is Our Essence.*

*ANEC, n.d. "*Soy moratorium*".*

*Azevedo, Andrea A., Raoni Rajao, Marcelo A. Costa, Marcelo C.C. Stabile, Marcia N. Macedo, Tiago N.P. dos Reis, Ane Alencar, Britaldo S. Soares-Filho and Rayane Pacheco, 2016. "*Limits of Brazil's Forest Code as a means to end illegal deforestation*". Proceedings of the National Academy of Sciences 114 (29), 7653–58.*

*Brumatti, Livia Maria, Gabrielle Pires and Ana Beatriz Santos, 2020. "*Challenges to the Adaptation of Double Cropping Agricultural Systems in Brazil under Changes in Climate and Land Cover*". Atmosphere 11 (12), 1310.*

Bunge, 2022. *Non-Deforestation Commitment.*

Cargill, 2021. *Triple S™ (Sustainably Sourced and Supplied).*

*Cargill, 2022. "*Volume de soja certificada pelo Programa 3S cresce 11% com adesão voluntária de novos produtores*".*

*Canal Rural, 2023. "*Quais normas socioambientais os produtores de soja precisam cumprir?*".*

*CDP, n.d. "*Meeting nature goals: Landscape and Jurisdictional Approaches*".*

*Cefetra, n.d. "*Sustainability: CRS standard*".*

*CEPEA and ABIOVE, 2023a. "*PIB da cadeia de soja e biodiesel*".*

*CEPEA and ABIOVE, 2023b. "*CEPEA/ABIOVE: PIB da soja e do biodiesel em 2023 deve crescer mais de 20%*".*

*Cerrado Protocol, 2021. "*O Protocolo de Monitoramento Voluntário de Fornecedores de Gado no Cerrado*".*

*CGF (Consumer Goods Forum), 2023. "*How the Forest Positive Coalition and Soft Commodities Forum are aligning on landscape metrics*".*

CGF FPCoA (Consumer Goods Forum Forest Positive Coalition of Action), 2021, updated 2023. *Strategy for Collective Action in Production Landscapes: Version 1.0.*

CGF FPCoA, 2022. *Collective Action and Investment in Landscape Initiatives: The Business Case for Forest Positive Transformation.*

*CGF FPCoA, 2023. "*How businesses are creating landscapes that are #ForestPositiveForAll*".*

CJ Selecta, n.d. *Política de Sustentabilidade*

*ClimaInfo, 2023."*Fundo Amazônia recebeu menos de 3% dos novos recursos prometidos por países ricos (climainfo.org.br)*"*

*Climate Policy Initiative, 2023. "*Where does Brazil stand and where is it heading in the implementation of the Forest Code? Opportunities for the New Lula Administration*".*

*Coalizão Brasil, n.d. "*Traceability and Transparency*".*

COFCO, 2021. *Sustainable Soy Sourcing Policy.*

CONAB (Companhia Nacional de Abastecimento), 2017. *A produtividade da soja: análise e perspectivas.*

Conservation International, Emergent, EDF (Environmental Defense Fund), IDH, ISEAL, Proforest and TFA (Tropical Forest Alliance), 2022. *Feedback on the Greenhouse Gas Protocol Draft Land Sector and Removal Guidance: Incentivising Corporate Action at Landscape and Jurisdictional Scale.*

*De Siqueira, Elisa, Maria Franceschini, Gabriela Grisolia, Marilu Milanez and Stephanie Nasuti S, 2017. "*The Rural Environmental Registry (CAR) – an opportunity for integrated environmental land management for traditional peoples and communities in Brazil?*". Paper prepared for presentation at the World Bank Conference on Land and Poverty, Washington, DC, March 20–24.*

Dong, Lidong, Chao Fang, Qun Cheng, Tong Su, Kun Kou, Lingping Kong, Chunbao Zhang, Haiyang Li, Zhihong Hou, Yuhang Zhang, Liyu Chen, Lin Yue, Lingshuang Wang, Kai Wang, Yongli Li, Zhuoran Gan, Xiaohui Yuan, James L. Weller, Sijia Lu, Fanjiang Kong and Baohui Liu, 2021. "Genetic basis and adaptation trajectory of soybean from its temperate origin to tropics". Nature Communications 12, 5445.

Efeca and Proforest, 2020. Introduction to Sustainable Soy.

Embrapa, 2021. "Resultados".

European Commission, 2023. "Deforestation-free products".

FEFAC (European Feed Manufacturers' Federation), 2021. Soy Sourcing Guidelines 2021.

Goldman, E., M. J. Weisse, N. Harris and M. Schneider, 2020. "estimating the role of seven commodities in agriculture-linked deforestation: oil palm, soy, cattle, wood fiber, cocoa, coffee, and rubber".

ICV (Instituto Centro de Vida), 2015. "Pesquisadores defendem importância da moratória da soja no combate ao desmatamento".

IDH, n.d. "Balsas region, Maranhão: regional PCI Compact".

IDH, 2023a. "Exclusive centers are revolutionizing the way Brazilian farmers are served".

IDH, 2023b. "IDH and the Government of Mato Grosso renew partnership for investments in the state".

IDH Latam, n.d. a. "Pacto Regional PCI Sorriso Mato Grosso, Brasil".

IDH Latam, n.d. b. "Pacto Regional PCI Região de Balsas".

IISD (International Institute for Sustainable Development) and SSI (State of Sustainability Initiatives), 2020. Global Market Report: Soybeans.

INPE (National Institute for Spatial Research), 2024. "TerraBrasilis". Accessed 5 January 2024.

ISCC (International Sustainability and Carbon Certification), 2022. ISCC Impact Report 2022.

ISCC, 2023. "About: overview".

ISEAL (International Social and Environmental Accreditation and Labelling Alliance), 2022. Making Credible Jurisdictional Claims: Good Practice Guide v1.1 (2022).

IUCN (International Union for the Conservation of Nature), n.d. "Contributing to positive impact in the Gran Chaco of Argentina".

IUCN, 2023. "SoyChaco: A pilot project to support responsible production and nature conservation in the Argentine Chaco".

LDC (Louis Dreyfus Company), 2022. "Sustainable soy".

LTKL (Indonesia's Sustainable Districts Association; Lingkar Temu Kabupaten Lestari), 2022. Annual Report 2021/2022.

LTS International, 2019. Sustainable Sourcing of Soy: Summary Report.

MAPA (Ministério da Agricultura, Pecuária e Abastecimento), 2021. Plano Setorial para Adaptação à Mudança do Clima e Baixa Emissão de Carbono na Agropecuária com Vistas ao Desenvolvimento Sustentável (2020-2030): Visão Estratégica para um Novo Ciclo.

Mapbiomas, 2022. "MapBiomas".

Martinelli, Luiz Antonio, Mateus Batistella, Ramon Felipe Bicudo da Silva and Emilio Moran, 2017. "Soy expansion and socioeconomic development in municipalities of Brazil". Land, 6(3), 62.

McCarthy, Joe, 2022. "What Is the FOREST Act? Everything to know about the US bill to fight deforestation". Global Citizen.

Mendes, Rejane Marques, Eraldo Matricardi, Antônio Couto Junior, Denilson Passo, Carlos Luiz and Eder Miguel, 2022. "Regularidade ambiental das áreas de reserva legal do Cerrado Brasileiro". Caminhos de Geografia, 23(85), 330–49.

MMA (Ministério do Meio Ambiente), 2023. "Plano de Ação para Prevenção e Controle do Desmatamento e das Queimadas no Bioma Cerrado – PPCerrado".

Mongabay, 2023. "Six months into Lula's presidency, Amazon deforestation is dropping rapidly".

Observatório do Clima, 2023. "PPCerrado escorrega em proposta contra desmate autorizado".

OEC (The Observatory of Economic Complexity), 2021. "Soybeans".

OGL (Open Government Licence), 2023. Environmental Improvement Plan 2023: First Revision of the 25 Year Environment Plan.

Our World in Data, 2021. "Is our appetite for soy driving deforestation in the Amazon?"

Pacheco, P., K. Mo, N. Dudley, A. Shapiro, N. Aguilar-Amuchastegui, P.Y. Ling, C. Anderson and A. Marx, 2021. Deforestation Fronts: Drivers and Responses in a Changing World. WWF, Gland, Switzerland.

PCI Institute, n.d. a. "Investimentos PCI".

PCI Institute, n.d. b. "The PCI Institute".

PCI Institute, 2023. Pitchbook 2023: Projects with Scaling Potential Aligned with the Produce Conserve Include–Mato Grosso Strategy.

Pontes, Heráclito, Breno do Carmo and Arthur Porto, 2009. "Problemas logísticos na exportação brasileira da soja em grão". Revista Eletrônica Sistemas & Gestão 4(2), 155–81.

Produzindo Certo, n.d. "Agribusiness that respects rural workers".

Produzindo Certo, 2021. O ano da transformacao.

Produzindo Certo, 2023. "Producers".

Proforest, GEF (Global Environment Facility) and WWF (World Wide Fund for Nature), 2022. Soy Traceability and Supply Chain Transparency: The Soy Toolkit Briefing Note 02.A, Version 1.2.

ProTerra, 2019. ProTerra Standard: Social Responsibility and Environmental Sustainability: Version 4.1.

ProTerra, 2023. "ProTerra certified companies".

Raucci, Guilherme, Cindy Moreira, Priscila Alves, Francisco Mello, Leidivan Frazão, Carlos Eduardo Cerri and Carlos Cerri, 2015. "Greenhouse gas assessment of Brazilian soybean production: a case study of Mato Grosso State". Journal of Cleaner Production, 96, 418–25.

Rede ILPF, n.d. "Configurations".

REM Mato Grosso, 2023. "Home".

Reporter Brasil, 2022. The Trail of Destruction Caused by Soy in Brazil's Cerrado. 18 November.

RTRS (Round Table on Responsible Soy), 2021. "Impacto".

RTRS, 2023. "What is the Round Table on Responsible Soy Association?".

Sauer, Sergio, 2018. "Soy expansion into the agricultural frontiers of the Brazilian Amazon: The agribusiness economy and its social and environmental conflicts". Land Use Policy, 79, 326–38.

SBTi (Science Based Targets initiative), 2022. "Net-zero: urgent beyond value chain mitigation is essential".

Socioflorestal and TFA, 2022. Amazon Now: Private Sector Opportunities for a Low-Carbon Economy in Pará, Brazil.

SODRU, 2021. SODRU Soja Sustentável.

Solidaridad, 2019. Consultoría para el Análisis de Riesgos y Oportunidades en la Cadena de Soja Sustentable del Paraguay.

Solidaridad, 2021. Potencial Regional de Expansão da Soja No Matopiba.

Solidaridad, 2023. The Small Farmer Atlas.

Soy on Track, n.d. "Transparência".

TFA, 2019. A "Commodity-First" Approach to Identifying Landscapes for Private Sector Engagement.

TFA, 2023. Agriculture Sector Roadmap to 1.5°C: Reducing Emissions from Land Use Change.

TFA and Proforest, 2020. TFA Deep Dives: Geolocation & Traceability Session: Soy.

TFA, Proforest and CDP, 2023a. Company Landscape Engagement for Cocoa Sustainability: Progress and the Path Forward.

TFA, Proforest and CDP, 2023b. Sharing Responsibility and Success: Companies Collaborate to Support Palm Oil Landscapes.

TFA, World Wide Fund for Nature (WWF) and Proforest, 2020. Landscape-Scale Action for Forest, People and Sustainable Production.

TNC (The Nature Conservancy), 2019. Incentives for Sustainable Soy in the Cerrado.

TNC, 2022. Opções para alavancar o financiamento para a produção de soja e carne bovina livre de desmatamento e conversão via carbono na Amazônia e Cerrado.

Trase, 2020. "Brazilian soy supply chain".

UK Soy Manifesto, n. d. "The UK Soy Manifesto: to a deforestation and conversion free soy sector".

USDA (United States Department of Agriculture), 2023a. "Soybean explorer". Accessed 4 January 2024.

USDA, 2023b. "Brazil soybean area, yield and production".

ViSeC (Visión Sectorial del Gran Chaco Argentino), n.d. a. "Members".

ViSeC, n.d. b. "Promoting an environmentally responsible and economically viable value chain".

Viterra, 2022. "Soy sustainability policy for South America".

WBCSD (World Business Council for Sustainable Development), 2022a. Relatório de progresso do Soft Commodities Forum.

WBCSD, 2022b. "Six leading agribusinesses launch a financial model for deforestation-free soy in the Brazilian Cerrado".

WRI, 2020. "Seven commodities in agriculture-linked deforestation: oil palm, soy, cattle, wood fiber, cocoa, coffee, and rubber".

WWF, 2014. The Growth of Soy: Impacts and Solutions.

WWF, 2022. "Expansion of agriculture and livestock reduce biodiversity in the Cerrado and Amazon, study finds".

WWF Brazil, 2022. "Before the world, Lula commits to put Brazil on the path of zero deforestation by 2030".

ABOUT TROPICAL FOREST ALLIANCE

The Tropical Forest Alliance is a multi-stakeholder partnership platform initiated to support the implementation of private sector commitments to remove deforestation from palm oil, beef, soy, cocoa and pulp and paper supply chains. Hosted by the World Economic Forum, our 170+ alliance partners include companies, government entities, civil society, Indigenous Peoples, local communities and international organizations. With our partners, TFA works to mobilize collective action to advance the world's transition to deforestation-free commodity production. TFA hosts and manages the Jurisdictional Action Network of 2,200+ proponents of landscape and jurisdictional approaches to achieve sustainability at scale and the JA Resource Hub. Visit www.tropicalforestalliance.org.

proforest

ABOUT PROFOREST

Proforest is a global mission-driven organization, focused on the production base and supply chains of agricultural and forestry commodities including soy, sugar, rubber, palm oil, cocoa, coconut, beef and timber. We support companies with direct action to tackle environmental and social risks throughout a supply chain. We also work with governments, companies, and collaborative organisations, in order to address systemic issues beyond the supply chain, within a landscape or a sector, to deliver positive outcomes at scale for people, nature and climate. For more information: www.proforest.net or follow us @proforest.

ABOUT CDP

CDP is a global non-profit that runs the biggest 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 GHG emissions, safeguard water resources and protect forests. Fully TFCD aligned, 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. Visit cdp.net or follow @CDP to find out more.