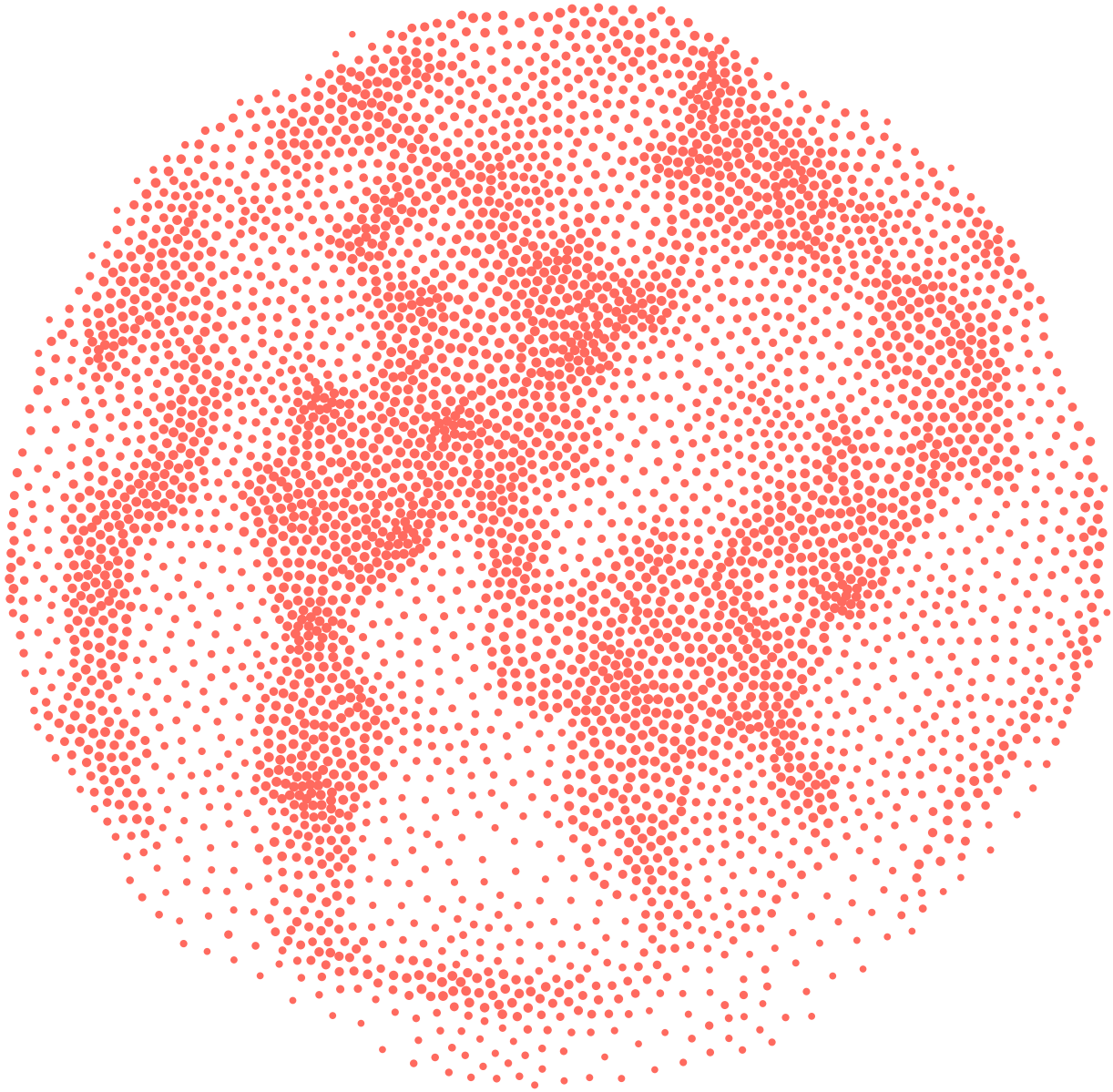
Intelligence for sustainable trade: Trase strategy 2025-2030



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Trase is a global partnership co-founded by the Stockholm Environment Institute and Global Canopy

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Foreword

Transparency is essential to sustainability. The challenges of deforestation and ecosystem conversion, climate change, biodiversity loss and human rights abuses are intricately linked to the production of agricultural commodities like beef, soy, palm oil and cocoa, which are globally traded and consumed around the world. For governments, businesses and civil society groups to take informed action, they need a market-wide understanding of these links – a lens which only transparency can provide.

For more than a decade, Trase has used its scientific expertise to shine a powerful spotlight on these systems to enable public scrutiny, hold companies to account and enable decision makers to take urgent action. The goal is to urgently transform systems of commodity production and trade into a force for good in protecting natural ecosystems and improving people's livelihoods.

Recent years have seen some progress in tackling deforestation in commodity supply chains, including through the landmark EU deforestation regulation (EUDR), for which Trase research played a pivotal role. Yet progress is limited, fragile and easily reversed. Even well-meaning supply chain interventions remain untested – how effective will they be, and could they have unintended consequences? While technology has progressed significantly, transparency also faces challenges from proliferating proprietary supply chain solutions. More broadly, economic and geopolitical challenges threaten to undermine the sustainability leadership shown by governments and businesses, while also eroding international consensus around the climate agenda and sustainable development.

Against this backdrop, the role of independent, science-based initiatives operating for the public good is particularly crucial. Trase, with its solid reputation as a trustworthy source of data and intelligence on commodity trade, has a vital role to play in breaking down information barriers that decision makers face. It is well-placed to galvanise more effective action against deforestation, scale up and accelerate delivery of supply chain sustainability measures, and support the fundamental transformation of global supply chains and commodity markets.

Trase's new strategy for 2025–2030 is anchored in its core mission to revolutionise the transparency of commodity supply chains, prioritise action and improve accountability. Thanks in part to Trase, few continue to accept the excuse that a lack of data or understanding should hold back supply chain action.

Soy plantation, Brazil. Alfribeiro/iStock.com

We welcome the new priority investments and innovations that this strategy sets out, including:

- Expanding Trase's data offering to cover more commodities at a larger scale
- Digging deeper into selected high-risk commodities and the conversion of non-forest ecosystems
- Exploring new frontiers including on human rights, biodiversity loss, impacts on water resources
- Focusing on the importance of emerging and domestic markets
- Exposing 'blindspots' in the sustainability of commodity supply chains and markets

The strong focus on providing actionable intelligence and practical guidance is key to catalyse and accelerate action and best practices by companies, financial institutions, governments, regulators and civil society.

Finally, we are excited by the potential to further strengthen and grow Trase's partnership of civil society and research organisations under the new strategy, helping ensure Trase's contribution is firmly rooted in key producer and consumer geographies and able catalyse the joined-up action that is so urgently needed.

Trase Advisory Group

Isabella Freire, Latin America Co-Director, Proforest (Chair)

Sabine Miltner, Program Director, Conservations and Markets Initiatives at Gordon and Betty Moore Foundation

Katie Caudle, Senior Supply Chains Policy Adviser, UK International Forest Unit

Nicola Ranger, Executive Director, Earth Capital Nexus and Professor in Practice, Natural Capital, Risk and Finance at The London School of Economics and Political Science (LSE)

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1. Driving transparency to end deforestation

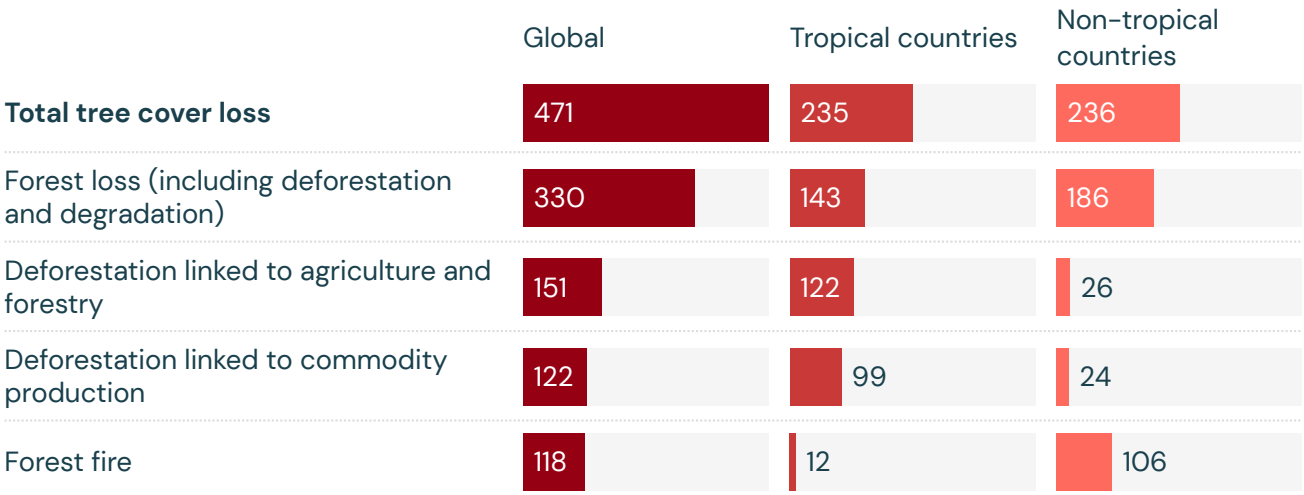
The world urgently needs to curb the loss of forests and other natural ecosystems, and transition to more sustainable and just ways of producing, trading and consuming food and other natural resources. Failure to do so threatens increasingly severe consequences for the climate, biodiversity, food security and the livelihoods of millions of the world's most vulnerable people.

Despite renewed pledges by global leaders to halt and reverse forest loss by 2030, the current outlook is bleak. Overall deforestation rates remain stubbornly high, especially in the tropics, and while there are notable recent successes in reducing deforestation rates, including in Brazil, Indonesia and Colombia, history makes clear that progress is often fragile and can be reversed.

The expansion of pasture and croplands for a handful of forest-risk commodities, including beef, soy, palm oil and cocoa, is directly responsible for the majority of global deforestation. While many underlying forces drive this deforestation, including land speculation, insecurity of land tenure and weak law enforcement, they are all underpinned by the exploitation of natural resources, whether for agriculture, timber or minerals. A fundamental shift in domestic and international commodity markets and supply chains is therefore an essential part of any solution to deliver sustained progress in reducing deforestation.

Providing insight into the drivers of deforestation

Tree cover loss by type and region, millions of hectares, 2001–2022



Source: Chandrakant Singh, U. Martin Persson. DeDuCE data available at: https://eartharxiv.org/repository/view/7000/

Over the past decade, many governments, businesses and civil society organisations have coalesced around a deforestation-free commodity supply chain agenda. This includes due diligence and reporting regulations, especially in the European Union (EU), that were almost unthinkable only a decade ago, as well as increased ambition in voluntary commitments and disclosure frameworks such as the Task Force on Nature-related Financial Disclosures (TNFD) and the Science Based Targets initiative (SBTi).

While welcome, existing measures fall short of what is needed. The urgency to translate existing commitments and supply chain interventions into on-the-ground benefits for people and nature has never been greater, as is the need to drive up ambition beyond the current agenda. Governments, businesses and civil society need to be clear about the biggest challenges facing efforts to deliver and sustain systemic change in commodity production, trade and consumption, and ensure that supply chain interventions are targeted towards the most promising opportunities for impact. These challenges are:

- Ensuring successful implementation of existing regulatory and voluntary supply chain policies, especially in an increasingly challenging political environment.
- Mitigating the risk that market segregation limits the on-the-ground impact of higher sustainability requirements in specific markets, the risk that ecosystem conversion shifts to other commodities and non-forest ecosystems, and the risk that smallholders are excluded from deforestation-free markets.
- Scaling the adoption of sustainable sourcing practices to all major consumer markets, including China and India, and domestic markets in tropical forest countries.
- Prioritising supply chain interventions that are capable of delivering systemic change across entire supplier networks and landscapes, not just individual farms and supply chains.
- Delivering a just transition that includes smallholders and vulnerable producers, secures the rights of local communities and indigenous peoples, and rewards engagement in high-risk regions.
- Being proactive and agile in tackling emerging risks, such as new deforestation frontiers and the demand for critical minerals.
- Championing a more transformative agenda capable of delivering solutions that go beyond the reach of purely market-based instruments, to foster the integration of supply chain and regional development policies, as well as efforts to tackle unsustainable levels of consumption and fundamental inequities in global supply chains.

> "Trase is instrumental in attributing the responsibility for deforestation and conversion to international and domestic markets and thereby turning embedded deforestation into a political argument. It's also an important tool for international cooperation to identify priority areas for action towards minimising deforestation and empowering smallholders."
>
> **Frankziska Rau,**
> Advisor on deforestation free supply chains, German International Cooperation Society (GIZ)

A vital ingredient for overcoming all these challenges is transparency: transparency of supply chain traceability and impacts, and transparency of the scope and effectiveness of interventions. Transparency is essential to demystify complex and opaque supply chains, prioritise and target actions, expose and undermine excuses, provide a common understanding of what success looks like and enable the public accountability needed to deliver this success.

The last few years have seen an explosion in the availability of data and information technologies targeted at supporting better decision making around commodity supply chains. This trend is only set to increase due to stronger regulatory requirements and the growth of artificial intelligence (AI).

However, this explosion of information also brings challenges of its own. Too often investments in new data technologies are made without first ensuring there is sufficient clarity on what data is needed to make decisions. Many new proprietary data solutions, corporate data disclosures, and national information systems are opaque and inaccessible, especially to less powerful actors. This limits the scope for third-party validation, and even where data is available, inadequate methods make it difficult to interpret the data, verify its quality and understand its limitations. The lack of public transparency and accountability combined with the growing complexity and fragmentation of data providers and solutions risks generating uncertainty, undermining trust, exacerbating existing asymmetries in access to information across different actors and ultimately delaying urgently needed action on the ground.

The Trase strategy for 2025–2030 is focused on providing the transparency and intelligence necessary to navigate this new reality and deliver on the priority actions that are needed to accelerate and scale impact, and ultimately help make supply chain interventions a force for good in protecting nature and people.

2. The role of Trase

Trase is a global science-based partnership of non-profit organisations providing open-access data and intelligence on the sustainability of forest-risk commodity production, trade and consumption.

Trase was founded in 2015 as a platform to prioritise action to curb deforestation by revolutionising the transparency of global trade in agricultural commodities linked to deforestation. From the outset, Trase's innovative data products have set themselves apart by connecting commodity markets to production impacts with the level of granularity needed to inform practical decision making and the scale needed to drive systemic change. Trase is the first initiative to integrate per-shipment trade data with supply chain, production and impact data, and to do so for entire sectors, such as Indonesia palm oil exports or Côte d'Ivoire cocoa exports. This innovation has brought a radically new level of transparency to commodity markets and supply chains.

From the beginning, we have acted as an independent, science-based provider of credible data and analysis, enabling leadership and practical action while also strengthening accountability around progress towards sustainability goals. In partnership with others in civil society, our unique data, analyses and guidance have demonstrated that action to curb commodity-driven deforestation is both necessary and possible. We have disarmed the excuse that supply chains are too opaque and complex, while motivating ambition and urgency, guiding interventions and evaluating progress.

Key milestones in the decade since Trase was founded

2015 Trase prototype presented at COP21 in Paris, demonstrating Trase's breakthrough innovation in mapping supply chains

2016 Trase officially launched at COP22 in Marrakech with first supply chain map of Brazil soy exports

2020 Trase covers majority of global trade in forest-risk commodities including soy, beef, palm oil and pulpwood

2021 Trase and WWF publish landmark report on EU deforestation footprint that helps mobilise support for EUDR

2021 Trase helps incubate *Do Pasto ao Prato*, bringing radical transparency to the Brazilian beef domestic market

2022 Trase develops soy deforestation risk dashboard for France's strategy to combat imported deforestation

2022 UK government adopts the Global Environmental Impacts of Consumption Indicator developed by Trase

2022 Greens/European Free Alliance in European Parliament uses Trase data to highlight impact of excluding Brazil's Cerrado from EUDR

2023 Trase helps incubate ForestIQ, a new data platform for financial institutions

2023 Consumer Goods Forum Forest Positive Coalition adopts Trase risk benchmarking method for soy and beef

2024 Trase publishes factsheets on deforestation exposure of EU27 member states for EUDR commodities

2024 Decisions of over 550 companies, financial institutions and civil society organisations enabled and influenced by Trase in 2021–2024

2025 Trase launches new strategy to drive interventions to successfully protect forests, other natural ecosystems, human rights and livelihoods by 2030

Trase's impact in numbers

Trase team

>50
Team members across 9 countries

>10
Research and civil society partners across Europe, Brazil, Indonesia and the US

Channels and outputs

12,433
Unique visitors to Trase website in 2024

3,126
Downloads of data and content from Trase website in 2024

14,900
Total subscribers to Trase social media and newsletter in 2024

96
Training sessions on using Trase data for civil society groups and investigation agencies in 2021–2024

Data and research

57%
Percentage of global trade in agricultural commodities covered by EUDR and mapped to subnational origin of production by Trase

46%
Percentage of tropical deforestation by agricultural commodities covered by Trase's subnational supply chains

68%
Percentage of tropical deforestation by agricultural commodities under EUDR covered by Trase's subnational supply chains

5,280
Number of subnational regions of production connected to global markets by Trase

16,038
Number of commodity trading companies mapped by Trase

5.5%
Percentage of production regions mapped by Trase that accounts for >80% of total commodity deforestation exposure

162
Trase briefings, insights and reports published in 2021–2024

Enabling action

>5
Governments directly supported by the Trase team in 2021–2024

>200
Civil society campaigns, media investigations and enforcement agency initiatives supported by Trase data in 2021–2024

>150
Companies whose efforts to tackle deforestation linked to supply chains have been enabled by Trase in 2021–2024

>200
Financial institutions whose actions on due diligence, portfolio screening, ESG reporting and analysis have been enabled by Trase in 2021–2024

Trase's strategic direction 2025–2030

Trase's original purpose – to enable impact and accountability through transparent data and intelligence – remains as relevant now as in 2015. Yet the context for our future work is starkly different. Trase's vision, mission and strategic direction have evolved in response to a decade working at the forefront of supply chain transparency.

Five lessons shaping our strategy

1. **Maintaining Trase's unique value-add.** Trase's role in simplifying and making transparent supply chain connections to drive systemic change for entire sectors is as unique today as it was in 2015 and more necessary than ever. This unique value add is grounded in two key elements of our approach. First, the importance of balancing detail and scale across our datasets, ensuring both sufficient granularity to guide decisions, and sufficient scale to enable the overall impact of any interventions to be assessed. Second, the importance of making the most of data that is available today – as imperfect as it is – to guide today's decisions while having the necessary agility to respond to changes in data and technology.
2. **Capacity to make sense of data.** The biggest technical barrier to action is often not a lack of data per se, but a critical gap in the technical capacity to collect, manage and evaluate available information, to know what data and tools to use and trust, and to guide implementation. Supporting users in making sense of a complex information landscape and interpreting data has become a critical part of our role to accelerate and enable the delivery of supply chain commitments.
3. **The value of open-access data.** Amid an explosion of proprietary, black-box data, Trase's role as a champion of credible, high-quality, open-access data has never been more important, underscoring the vital importance of a public-good model to sustain Trase's work.
4. **Responding to changes in data needs.** Trase's deeper dive subnational supply chain assessments and analyses are a key enabler of impact for the commodities, producer countries and markets that drive the majority of tropical deforestation. Demand has also surged for coarser grained yet actionable global coverage data on the links between commodity trade and deforestation, as well as more granular data on the sourcing patterns and risks linked to individual supply chain facilities in target countries. For some users our data is most impactful when integrated into third-party data products, such as for financial institutions through Trase's contribution to Forest IQ.
5. **The need to go beyond deforestation.** Increasing transparency around instances of human rights violations and the risks that smallholders are excluded from certain markets, including the EU, is particularly vital for protecting livelihoods and addressing the equity impacts of supply chain policies. Understanding how commodity production drives greenhouse gas emissions and impacts biodiversity and vital water resources are also essential to ensuring a smart mix of policies are in place.

Tropical forests in South Kalimantan, Indonesia. Image: Muslim Hanafi/Shutterstock.

Open-access data on the sustainability of commodity trade remains at the core of everything we do. However, an increasing component of our work is focused on providing evidence-based syntheses, insights and guidance to highlight risks and opportunities and inform action. Building on our strong foundation and the lessons of the past decade, our 2025–2030 strategy will invest further in five new areas:

1. **Diversifying our data offering.** We will continue to provide our flagship subnational supply chain and company risk exposure data for the world's most significant commodity-driven deforestation frontiers. However, we will also respond to changes in demand by investing in:
    - **Global data:** More comprehensive, but less granular global datasets on the environmental impacts of the production, trade and consumption of hundreds of further commodities.
    - **Asset-level data:** Geospatial data on commodity processing facilities, including capacity, ownership, operating contracts and sourcing patterns that enable comprehensive supply chain analysis and impact assessments.
    - **Impact data:** Working with science and civil society partners to expand our data on greenhouse gas emissions from land-use change to support higher integrity emissions accounting and scope three assessments, and link commodity trade flows to available data and metrics on livelihoods and human rights violations, water use and scarcity, biodiversity loss and climate impacts on agriculture and trade.
2. **Actionable intelligence.** We will invest more in the application of Trase's data and expertise to drive practical action. This will include work to evaluate the effectiveness of existing measures and interventions. It will also include deeper dive investigations on emerging deforestation frontiers, overlooked environmental and social impacts, and domestic and emerging markets and sectors, including critical minerals. We will also work to identify overlooked and poorly scrutinised opportunities for innovations in policy, data and technology to further accelerate progress towards more sustainable commodity systems.
3. **Scrutiny of emerging and domestic markets.** We will invest more in providing relevant data on commodity trade and consumption in domestic and emerging markets. In particular, we will continue to focus on Brazil's domestic beef market, the single largest forest-risk commodity market in the world, by working with our partner initiative, *Do Pasto ao Prato*, as well as highlighting the need for much greater attention on other key domestic markets, including biofuels and palm oil. We will significantly increase our engagement in China, the largest global import market of forest-risk commodities, with a focus on driving uptake of our data, methods and insights by Chinese stakeholders and trade partners. We will also help spotlight risks and opportunities linked to other key emerging markets, including India, Vietnam and the Middle East and North Africa region.
4. **Making sense of data.** We will respond to growing demand to provide actionable syntheses of Trase's unique sector-wide datasets to assess the overall status and trends in the sustainability of commodity supply chains linked to tropical deforestation. We will also be more deliberate in supporting and convening governments, businesses and civil society in making sense, not just of our data, but of the wider information landscape, to design, implement and evaluate interventions. This includes providing analysis and guidance on the adequacy of existing data sources and methods, and encouraging a pragmatic focus on outcomes

over what can sometimes be an uncritical focus on having the most granular data. It also includes being more propositional in calling out 'hard truths' regarding the limits of current interventions and data technologies, encouraging a more honest dialogue around what works and what does not.

5. **Being agile.** Across all our work we will focus on being more agile in response to changes in both the data and policy landscape, as well as increasing supply chain disruptions due to climate impacts and geopolitical dynamics, bringing a stronger focus on new and emerging impacts and opportunities.

Taken together, these investments represent an evolution of Trase that builds on our origin as an innovator in supply chain transparency to provide a mature, open-data and science-based platform focused on prioritising supply chain action and accountability at all scales. These investments also represent a step-up in our role as an independent thought leader, convenor and knowledge partner, helping raise ambition, strengthen accountability and scale impact.

Diversifying our data offering: A global perspective on commodity trade and deforestation

We will integrate and further invest in two interlinked global data products as part of Trase's data offering on the sustainability impacts of commodity production, trade and consumption: (1) the Global Environmental Impacts of Consumption (GEIC) Indicator, led by the University of York, which was proposed as a component indicator under Target 16 of the Convention on Biological Diversity under the Montreal-Kunming Global Biodiversity Framework and an official indicator of consumption impacts by the UK government; and (2) the Deforestation Driver and Carbon Emission (DeDuCE) model, led by Chalmers University of Technology, which is the world's most comprehensive assessment of the link between commodity expansion, deforestation and trade, and a go-to source of information to support the design and evaluation of supply chain policies (including EUDR) and global targets. In each case, Trase will continue to invest in the maintenance, development and analysis of these datasets, including to address new impacts and sectors, while ensuring that they remain open access. We will also continue to invest in strategic engagement to ensure these and other datasets are deployed effectively by governments, business and civil society.

Cattle ranching farm in Marabá, Pará State, Brazil. Image: Marcio Isensee.

Trase's theory of change

Trase vision

A world where global commodity markets and supply chains are a force for good in protecting forests, natural ecosystems, human rights and livelihoods.

Trase mission

We make sense of data to deliver transparency, prioritise action, improve accountability and drive systemic change in commodity markets, supply chains and production landscapes.

The problem we are tackling

The core problem Trase is trying to address is twofold. First, while governments and businesses are taking supply chain measures to curb commodity deforestation and improve the sustainability of production systems, their implementation is too slow, easily reversed and may have negative, unintended consequences. Second, the scale of the problem goes beyond what existing measures can tackle. They only cover a subset of supply chains, address a limited set of drivers and incentives, and it is far from proven that they will deliver lasting benefits to people and nature in the regions where commodities are produced. Moreover, resources and political will are in scant supply, meaning that the choices about what to do and where really matter.

The change that is needed

Supply chain interventions need to deliver system-level change. This means going beyond a narrow focus on the 'symptoms of the problem' – eliminating the impacts of individual supply chains – to focus on interventions that tackle underlying drivers. To deliver sustained sector-wide benefits for nature and people, interventions must incentivise sustainable and fair production practices.

To successfully deliver on this change, governments, companies and financial institutions must:

1. **Accelerate implementation** of the existing supply chain actions that are most likely to deliver positive outcomes for people and nature.
2. **Scale up the coverage and ambition** of existing actions to encompass new regions, commodities, markets and impacts.
3. **Achieve greater responsiveness** to lessons on the effectiveness and limits of existing interventions, as well as emerging risks and opportunities.

These three changes are the long-term outcomes at the heart of Trase's strategy. The first outcome, to accelerate implementation of existing agendas, is the focus of Objective 1 of our strategy, while the second and third outcomes, to scale up ambition and generate greater responsiveness, are the focus of Objective 2 (see Section 3).

Targets and pathways for impact

Trase's contribution to achieving these outcomes is rooted in the power of public transparency and open-access data to demystify complexity, remove excuses for inaction and enable improved cooperation and compliance by developing common benchmarks and building trust.

Trase's open-access data and intelligence solutions provide an enabling information environment to help influence and enable the behaviour of governments and businesses by:

- **Revealing** the exposure of individual companies and import markets to deforestation and other impacts, and making this uniquely granular information available to all.
- **Targeting** the most urgent priorities and entry points for action.
- **Evaluating** progress across entire sectors.

Trase's focus on risk-based approaches

Trase products are focused on leveraging pragmatic, risk-based approaches to identify the markets, companies, sourcing regions and commodities with the highest exposure to social and environmental impacts. This provides starting points for prioritising and targeting action and scrutiny to where it is most needed. Our approach is grounded in recognition that the urgent challenges we face require us to make the most of the information that is available to us now and not wait for ever-better data to make decisions.

Illegal burning in the Amazon, Mato Grosso State, Brazil. Image: Victor Moriyama/Rainforest Foundation.

The power of Trase data: connecting markets to impacts

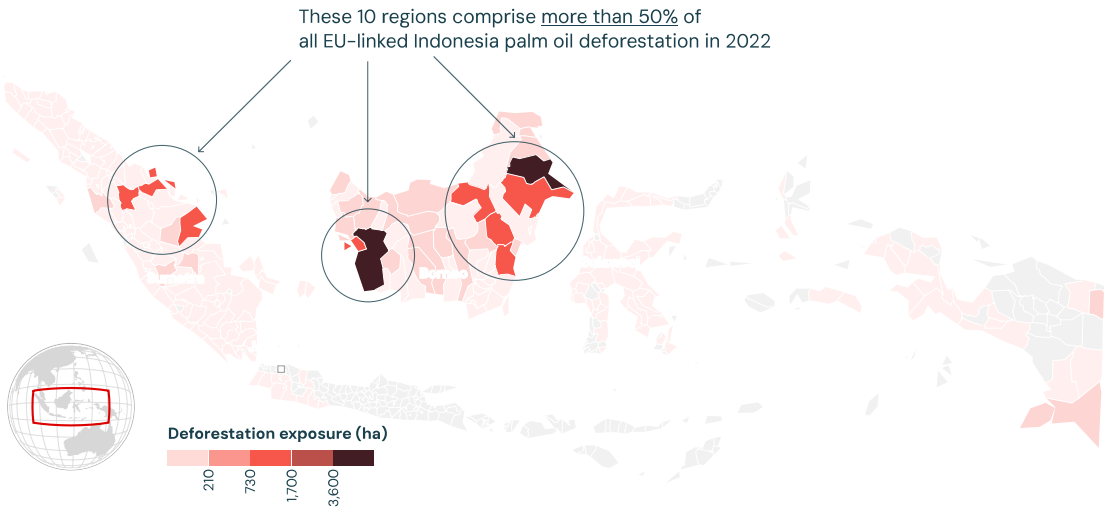
The expansion of plantations to produce palm oil is a key driver of deforestation in Indonesia. Trase's supply chain mapping shows that China, India and Indonesia's own domestic market accounted for around 75% of deforestation exposure for Indonesia palm oil in 2021–2022.

Sized by deforestation exposure, 2022

Source: Trase

The power of Trase data: targeting deforestation hotspots

Trase's subnational supply chain data links importing markets back to the regions of production where commodities were grown. It shows that just 10 production areas in Indonesia accounted for over 50% of the deforestation linked to EU imports in 2022.

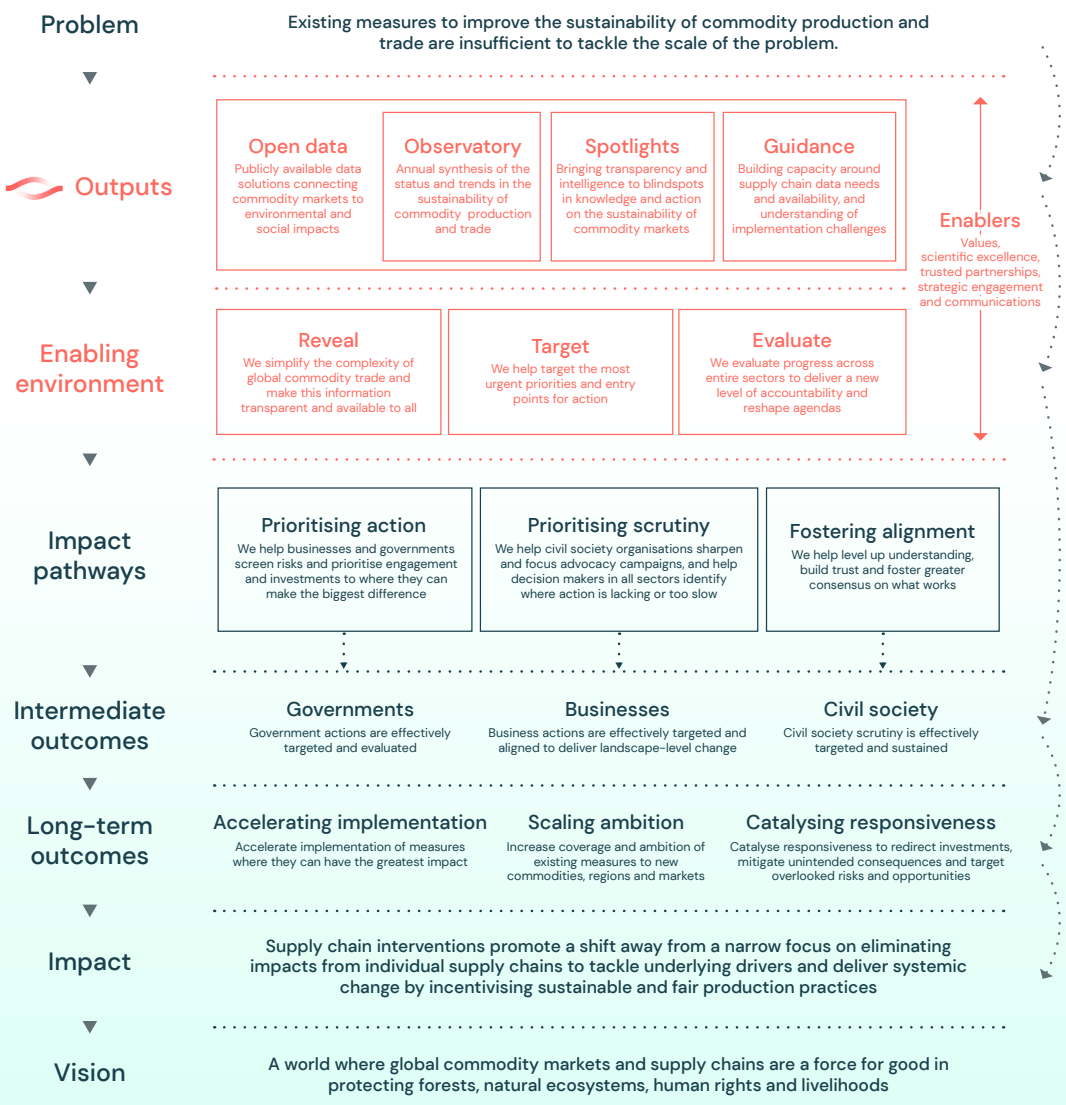


Source: Trase

Taken together, these capabilities provide a platform for prioritising and aligning actions across government, business and civil society, thus helping to accelerate implementation of positive supply chain action, scale up ambition and achieve greater agility in policy responses.

Trase's theory of change

Trase's theory of change is grounded in the power of transparency, open data and actionable insights to help companies, governments and civil society organisations prioritise action and scrutiny and foster greater alignment to scale ambition and impact. By more effectively prioritising and aligning action and independent scrutiny, Trase can help both enable and accelerate implementation efforts and catalyse responsiveness based on lessons learnt and emerging risks and opportunities. These changes can help scale up the scope of supply chain interventions and prioritise the interventions that are capable of delivering benefits to people and nature through sustained, system-level change.



Assumptions

Problem to outputs

A lack of transparent and open-access data and intelligence is a structural barrier facing efforts to translate supply chain commitments into long-term benefits for nature and people

Outputs to enabling environment

Open-access data and intelligence is a key part of the enabling environment to deliver actions that are targeted, aligned and accountable

Enabling environment to intermediate outcomes

By identifying priority regions, commodities, companies, markets and interventions, Trase provides a powerful entry point for action by governments and companies as well as independent scrutiny by civil society

Intermediate outcomes to long-term outcomes

Effective targeting and alignment of action and independent scrutiny helps accelerate both implementation and learning, ensuring limited resources are channelled towards where they can achieve greatest impact

Long-term outcomes to impact

Accelerated implementation, scaled-up ambition and greater responsiveness across all sectors provides the foundation for systemic change

Cacao workers in Duekoue, Côte d'Ivoire. Image: André Quillien/Alamy.

More specifically, Trase's data and intelligence is targeted at influencing and enabling:

- Policymakers that govern and regulate the consumption, trade and production of agricultural commodities in key domestic and international markets.
- Procurement, corporate governance and sustainability teams in companies that form the backbone of agricultural supply chains.
- Portfolio managers, corporate lending, stewardship and corporate reporting teams that finance companies in agricultural supply chains.
- Standard setters developing technical requirements to avoid and mitigate the nature, climate and social impacts linked to value chains.
- Civil society and media campaigners who play a critical role in advancing the wider commodity deforestation agenda.
- The research community working on new data solutions and evaluating the contribution of policy responses.

Our established expertise, networks and reputation as an independent, science-based, provider of credible data and analysis on the sustainability of commodity trade places Trase in a powerful position to reach these actors.

"Over the past decade Trase has helped to scale transparency for the most important food commodities, of which the production, sourcing and financing is often linked to deforestation. Trase has enabled public scrutiny of these links. Holding market actors accountable is important. Knowing where new risks are emerging in a rapidly shifting global environment is even more important. Trase's forward strategy will enable just that."

Sabine Miltner,
Programme Director, Conservation and Markets, Gordon and Betty Moore Foundation

We will work directly with these groups as well as via multipliers who have aligned goals, including consultancies, policy advisories, industry associations and civil society coalitions, to scale up our reach and change the behaviour of governments, businesses and civil society in each of the priority impact areas set out under our objectives (see Section 3). Trase's contribution to these impact areas is delivered through intermediate outcomes from one or more of three main impact pathways:

1. **Prioritising action** by more effectively triaging risks and highlighting opportunities in ways that:
    - Enable governments, companies and financial institutions to screen and compare the risk exposure of sourcing regions, suppliers, portfolios and assets, and target investments where they can make the biggest difference to reduce risk exposure and benefit nature and people.
    - Maintain a critical focus on landscapes over individual farms, and on entire supplier and consumer networks over individual supply chains.
    - Increase visibility and target attention towards the most effective measures as well as overlooked risks and opportunities.

2. **Prioritising independent scrutiny** on where action by governments and businesses is lacking or too slow in order to:
    - Establish public accountability, including by strengthening and better targeting civil society campaigns and media investigations.
    - Increase pressure and accountability on companies from financial institutions and downstream buyers through more targeted engagement and aligned asks.
    - Better evidence substantiated concerns and strategic litigation around regulatory non-compliance as well as supporting governments to better target enforcement efforts.
    - Increase visibility and target attention to overlooked impacts, risks and opportunities.

3. **Fostering alignment** across stakeholders by bringing transparent, credible data and intelligence on the sustainability of commodity trade that:
    - Helps level-up understanding, build trust and ultimately foster greater consensus on where action is needed, and what works and what does not.
    - Makes sense of a complex information environment to improve alignment and build consensus on the supply chain interventions that are essential to scale up action.

Taken together, these impact pathways and the intermediate outcomes they deliver through changes in behaviour of governments, businesses and civil society provide the basis for achieving systemic change via our three target long-term outcomes.

Priority action areas and key assumptions for Trase's three impact pathways

Impact pathway	Priority impact areas	Key assumptions for impact
Prioritising action	• Support monitoring of environmental and social impacts embedded in trade by governments (eg for national deforestation strategies, Forest Climate Leaders Partnership, Global Biodiversity Framework). • Support risk-based approaches to screening suppliers, portfolios, facilities and sourcing areas. • Help motivate, design and test sustainable supply chain initiatives in consumption markets that lack regulatory requirements. • Increase attention towards promising yet overlooked policy options and data innovations.	• Resource limitations are a key constraint for both public and private actors, so data that helps triage risk and target actions where they are most needed is necessary to increase effectiveness. • In a context where high-level and broad-coverage commitments and goals have consistently failed to deliver, a pragmatic but evidence-based approach is needed to target engagement and investment. • Supply chain actors are enabled and incentivised not to leave high-risk regions, including by effective benchmarking and investment in traceability systems where they are most needed.
Prioritising scrutiny	• Risk-based approaches for governments to target and implement compliance checks (eg EUDR). • 'Holding the line' and raising ambition on mandatory due diligence and disclosure requirements by governments (eg the Corporate Sustainability Due Diligence Directive, CSDDD). • Evaluate scope and effectiveness of existing private and public sector policies, expose limitations and implementation gaps (e.g. non-forest ecosystems, domestic markets) and increase the attention given to overlooked and emerging risks in new frontiers and sectors. • Support financial institutions and downstream buyers to more effectively engage clients and suppliers. • Support civil society to better evidence substantiated concerns and strategic litigation on regulatory non-compliance.	• Reputational and legal risks will continue to motivate company and government action, with the transparency agenda acting to enhance these risks. • Regulators and civil society can effectively target their limited resources, improving their efficiency and strengthening scrutiny and enforcement. • Shifting the burden of proof onto companies and governments through public transparency promotes more disclosure and removes excuses for inaction.
Fostering alignment	• Harmonisation of regional, national and global transparency, traceability and compliance systems (including via the Forest Agriculture and Commodity Trade – FACT – Dialogue). • Alignment on disclosure standards governments and companies (including via the Accountability Framework initiative). • Support market leaders by increasing transparency of success stories. • Understanding of data availability and needs between civil society organisations in supply and demand-side markets • Building a common evidence base on effectiveness of interventions and data solutions.	• Continued improvements to the transparency of market connections, social and environmental impacts and the success and failure of interventions foster trust and build consensus among stakeholders. • Increased evidence of success stories can help drive collaboration among market leaders.

3. Trase's 2030 goal and objectives

2030 goal: Trase data and intelligence will drive supply chain interventions that successfully protect forests, other natural ecosystems, human rights and livelihoods.

To deliver on this goal and our mission to drive systemic change in commodity markets, supply chains and landscapes our work will focus on two main objectives.

In Objective 1 we will focus on enabling and accelerating the delivery of existing supply chain commitments and interventions by helping prioritise the most effective actions, and monitoring and evaluating their overall impact on nature and people (Outcome 1 in our theory of change).

The supply chain interventions that are the focus of Objective 1 are a necessary step forward in efforts to deliver on forest, nature and climate goals. However, these measures still fall short of what is needed: they cover only a subset of supply chains, address a limited set of drivers and incentives, and may themselves have negative, unintended consequences.

Therefore, in Objective 2 we will focus on opportunities to scale up impact and ensure that decision makers are responsive to changing needs, new opportunities and evolving lessons on what does and does not work (Outcomes 2 and 3 in our theory of change).

Under each objective we set out the priority impact areas (including policy processes, fora and agendas) through which we will influence the behaviour of governments, companies and civil society by prioritising action and independent scrutiny and fostering greater alignment.

Palm oil production, Sumatra, Indonesia. Image: Auriga Nusantara.

Objective 1: Enabling and accelerating the delivery of existing supply chain commitments and interventions, and evaluating their impact on forests, nature and people

To deliver on this objective, our work will focus on enabling and influencing three main target groups – governments, businesses (including financial institutions) and civil society – to collectively maintain ambition and accelerate implementation of regulatory and voluntary initiatives that are already in place.

Trase's unique contribution to this objective is anchored in three things:

- Our focus on risk-based approaches that are designed to prioritise the places, businesses and markets that need the most attention.
- Our approach to making effective use of existing data and tools to drive action, removing excuses for delaying action on the promise of better data tomorrow.
- The ability of our open data and intelligence to provide transparent and independent monitoring of the implementation, impact and adequacy of supply chain interventions across entire commodity markets.

Public policy and regulatory agenda

Sub-objective 1.1 *We will enable governments to make sense of data and prioritise actions to ensure that existing market and trade-related policies which target the impacts of forest risk commodities on forests, nature and people are effectively designed, enforced and evaluated.*

Priorities for impact

- Motivate and support governments in key consumer markets to set and transparently report progress towards national and international targets, including the Glasgow Declaration on Forests and Land Use and the Global Biodiversity Framework, on reducing negative environmental and social impacts linked to commodity trade and consumption.
- Enable more effective enforcement by regulators, including for due diligence policies such as EUDR and the UK Forest Risk Commodities regulation, and legal enforcement actions in regions of production through the use of risk-based approaches to target and implement compliance checks.
- Support governments to evaluate the scope and effectiveness of current policies and assess opportunities to raise ambition, including by strengthening due diligence requirements on financial institutions and mitigating negative, unintended consequences of existing measures.
- Motivate and enable more effective partnerships between supply and demand-side governments, including by promoting and enabling alignment and harmonisation of regional, national and global transparency, traceability and compliance systems, and through investment in enabling conditions and incentives.

EUDR: Motivating and enabling world-first legislation to tackle commodity-driven deforestation

Evidencing the need for regulation

Demand-side regulations are essential to raise the floor on minimum standards for securing market access and to give an advantage to more responsible and sustainable supply chain companies and markets. The EU deforestation regulation (EUDR) is by far the most ambitious and wide-reaching regulation governing the import of commodities linked to deforestation ever to be introduced. Trase's data and research played a pivotal role in making the strategic argument that regulation was not just necessary, but also feasible to implement. Trase's uniquely comprehensive deforestation footprint data formed the backbone of the report Stepping up? The continuing impact of EU consumption on nature published by WWF, who convened the #Together4Forests campaign that successfully mobilised public support for the EUDR in April 2021 as the European Commission developed its legislative proposal.

By spotlighting the commodities, companies and regions most affected, Trase data and intelligence have helped shape the scope of the EU and UK regulations in terms of both commodities and ecosystems. A high-profile Trase report commissioned by the Greens/EFA group in the European Parliament brought to attention gaps in the regulation's coverage of the Cerrado, the world's most biodiverse savannah, and by far the largest hotspot of deforestation exposure of the EU's soy and beef imports. This helped ensure the inclusion of a review on extending the EUDR to 'other wooded lands' (the land designation used by the Food and Agriculture Organization) one year after entry into force.

Estimates of the UK's deforestation footprint through the GEIC indicator, developed by SEI York and Trase, were instrumental in setting the scope of the UK's Forest Risk Commodities legislation while also helping strengthen the work of campaigners.

Supporting operationalisation and monitoring impacts

With regulations in place, Trase is working to support European government agencies to operationalise legislation. This work includes helping triage risk and identifying regions and supply chains that require greater scrutiny and due diligence. In 2022, we helped the French Ministry of Ecological Transition develop a soy deforestation risk dashboard to support their national strategy to combat imported deforestation (SNDI). Similarly, we have worked closely with a number of European governments, including the UK, Germany and Belgium, to help them understand their deforestation and biodiversity footprints and to monitor how these are changing over time.

In 2024, Trase released the first editions of a series of 27 factsheets assessing the deforestation exposure for each EU member state via imports of commodities governed by the new regulation. These show the need for action and help identify smart, risk-based approaches to strengthen compliance checks for EU member states' enforcement authorities.

Port of Rotterdam in the Netherlands. Image: pixelABC/Adobe.

Private sector agenda

Sub-objective 1.2 *We will motivate and enable market-leading businesses and industry-wide initiatives to make sense of data and prioritise aligned actions to ensure that voluntary supply chain initiatives go beyond a narrow 'do-no-harm' focus on legal compliance and cleaning supply chains, and instead prioritise opportunities to drive systemic improvements across sectors, suppliers and landscapes, while also protecting livelihoods and human rights.*

Priorities for impact

- Enable companies and financial institutions to more effectively triage risks and opportunities, including by benchmarking sourcing regions and supply chain facilities, and helping promote alignment in methods and priorities for action across industry coalitions, standard setters and regulators.
- Motivate and enable greater ambition in the level of transparency, alignment and quality of private sector disclosures, including through mandated reporting requirements such as those required by the Corporate Sustainability Reporting Directive (CSRD), and voluntary requirements including on nature, scope three emissions and social impacts.
- Motivate and enable more ambitious leadership in the implementation of existing commitments and regulatory requirements by prioritising systemic change across supplier networks and landscapes rather than individual supply chains, and a just transition that is inclusive of smallholders and respects human rights.
- Help support market-leading businesses, initiatives and coalitions to sustain their front-runner status and motivate wider ambition by increasing transparency, awareness and recognition of examples of genuine progress, and an improved understanding of what is needed to achieve success.

"Trase offers companies implementing deforestation-free strategies access to curated open data, reviewed by a team of data scientists. Supply chain transparency not only strengthens accountability across supply chains but also serves as a cornerstone for achieving net zero climate pledges, making Trase a very relevant tool for responsible sourcing and impactful change."

Pedro Amaral,
Associate Director, Head of Cocoa Climate Sustainability

Enabling collective action on risk assessment by high-ambition coalitions

In 2023, Trase data helped deliver on the ambition of the Consumer Goods Forum Forest Positive Coalition (CGF-FPC), an initiative by 21 member companies, to leverage their collective influence to address commodity-driven deforestation in their supply chains and sourcing regions. As a science and data partner with Proforest and in consultation with the member companies, Trase developed a replicable method to benchmark soy municipalities in Brazil as 'negligible risk' and 'at risk' for soy conversion. This has been adopted in the guidance for the CGF Forest Positive Coalition Soy Roadmap and is being used by companies including Nestlé, Mars and Mondelēz to implement and report on their deforestation and conversion-free commitments. This method is now being used by the CGF beef working group at the national scale.

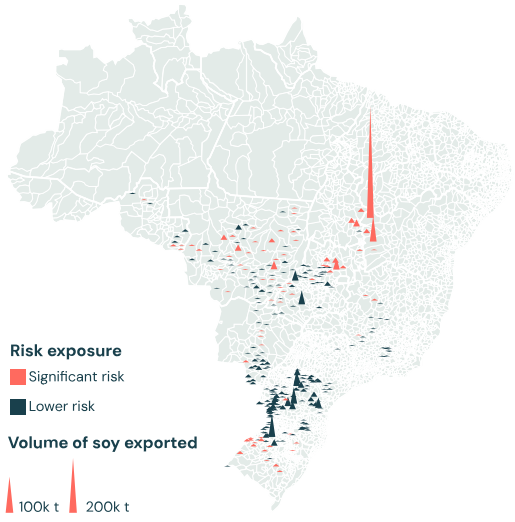
"Trase was a critical partner in the definition of an approach for negligible risk origins. Their expertise on data analysis and spatial modelling is enhanced by their capacity to identify data approaches guided by positive impact and adapted to sector feasibility."

Jane Lino,
Deputy Director at Proforest

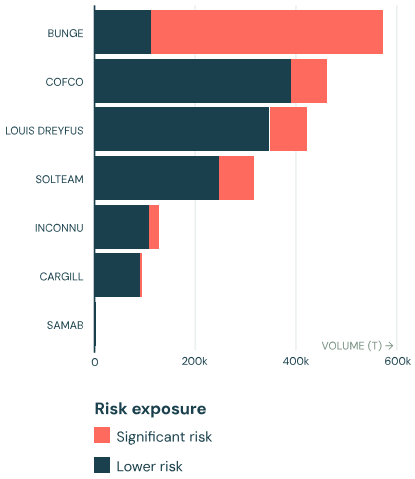
The power of Trase data: risk benchmarking

In 2022, Trase created a risk assessment dashboard for the French government to support its strategy against imported deforestation. It shows how much soy companies import into France and where in Brazil it is grown, differentiating between soy imports associated with low and high deforestation risks.

Exporting municipalities
By volume and risk exposure



Importing companies
By volume and risk exposure



Source: Trase

Forest IQ and Trase: Eliminating deforestation in investment portfolios

Forest IQ is a powerful new data platform for financial institutions that brings together aligned, best-in-class and actionable data on how more than 2,000 major companies manage risks associated with deforestation. It uses open data from Trase, Forest 500, SPOTT and the Roundtable on Sustainable Palm Oil, as well as offering a paid-for model with additional licensed data from CDP, financial identifiers and a bespoke interface. Its three core metrics on exposure, materiality and performance provide a simple and practical high-level company risk benchmark on deforestation.

Forest IQ was designed in close consultation with 10 financial institutions, including some of the world's largest and most exposed banks and asset managers. An important application of Forest IQ is to help financial institutions implement the recommendations for nature-related risk management and disclosure by the Taskforce on Nature-related Financial Disclosures (TNFD). Robeco, Schroders, Federated Hermes and Storebrand are among the financial institutions that have used Forest IQ to assess their deforestation exposure, enabling them to implement the TNFD recommendations.

> "Forest IQ will enable us to improve and expand our screening, risk assessment and stewardship, and help us in our efforts to eliminate commodity-driven deforestation from our investment portfolios."
>
> Storebrand Asset Management

Civil society agenda

Sub-objective 1.3. *We will enable civil society organisations to make sense of data and prioritise both advocacy and guidance work to ensure that governments and businesses remain under strong, credible and sustained scrutiny to deliver on existing commitments and address both the gaps and unintended consequences of these measures.*

Priorities for impact

- Enable civil society organisations and journalists to effectively expose where ambition and scope is lacking and/or implementation is too slow in both private and public sector action.
- Support civil society to target and better evidence substantiated concerns and strategic litigation around regulatory non-compliance.
- Enable alignment on the demands made of companies and governments by civil society organisations and industry initiatives by providing the data and intelligence necessary to define clear and consistent expectations on what is needed to deliver on sustainability goals.
- Enable more effective knowledge exchange and collaboration among civil society organisations in producer and consumer countries that are working to improve both sustainability and equity outcomes in commodity production and trade.

Strengthening accountability through civil society campaigns

Strengthening the accountability of governments and businesses for the negative environmental and social impacts of commodity production, trade and consumption has always been core to Trase's mission. Trase's open data on the exposure of trading companies and import markets to deforestation has become a go-to source of evidence by many campaigning organisations and journalists.

Trase data and analysis on the deforestation footprints of consumer markets supported calls by campaigning organisations for due diligence legislation on imported forest risk commodities. This included strengthening the #together4forests campaign that successfully advocated for the EU Deforestation Regulation and work highlighting the UK's ongoing exposure due to the delay in the Forest Risk Commodity secondary regulations, as well as the importance of the proposed FOREST Act to address US exposure to deforestation.

As regulations come into force, Trase data is increasingly being used by civil society organisations to help evidence legal complaints, such as work by ClientEarth to expose violations of national due diligence legislation and the Organisation for Economic Co-operation and Development's Guidelines for Multinational Enterprises.

Trase data has also been used to strengthen campaigns and media investigations into specific companies and value chains. These include Mighty Earth's campaign into Bunge's exposure to soy deforestation in the Cerrado, which led to action by a number of European supermarkets, as well as the Rapid Response programme led by Mighty Earth and Aidenvironment, which uses Trase data to rapidly screen priorities for more in-depth investigative work. Over the past five years, Trase data has been used in more than 200 civil society campaigns, media investigations and enforcement agency actions.

> **"Trase provides unique, reliable data that informs our global work to stop deforestation, protect nature, and fight climate change."**
>
> **Alex Armstrong,**
> Vice President of Programs, Mighty Earth

Objective 2: Scaling ambition and catalysing responsiveness to drive systemic change

To help achieve this objective, we will leverage Trase's data, expertise and networks to foster greater urgency and consensus around a transformative agenda for commodity markets and supply chains.

A key pillar of our work will be to channel attention and investment towards 'blindspots' in the sustainability of commodity production, trade and consumption. Blindspots exist wherever attention and investment is, for whatever reason, lacking. This includes the limits of existing tools and interventions, overlooked and emerging risks including the places (eg deforestation frontiers, emerging markets), sectors (eg critical minerals) and issues (eg water scarcity, biodiversity loss) that require more attention, and overlooked opportunities to raise ambition and catalyse new agendas that are most likely to deliver systemic change.

Trase's unique contribution to this objective is anchored in:

- Our transferable skills and expertise spanning data, research and engagement that provide an agile mechanism for critically appraising knowledge and data gaps.
- Trase's independent brand and ability to convene and engage the research community, together with practitioners and decision makers across civil society, government and business in both producer and consumer countries, enabling practical insights to be more effectively validated, tested and adopted.
- Our commitment to transparency, helping ensure that otherwise overlooked risks and opportunities are made more visible and able to attract the attention and action that is urgently needed.

Oil palm fruits, Indonesia. Image: KYTan/Shutterstock.

Priorities for impact

- Ensure that governments, business leaders and civil society understand the 'hard truths' when drawing conclusions around the limited impact of existing policies, data and technology solutions to deliver on sustainability goals, and the risks that these limits, when overlooked, can generate delays, opportunity costs and excuses for inaction.
- Ensure that governments, business leaders and civil society understand chronically overlooked and/or emerging risks in commodity production, trade and consumption, including:
  - specific impacts (eg smallholder exclusion and water scarcity)
  - regions (eg dry forests and grasslands) and emerging consumer markets (especially China, but also India, Vietnam and the Middle East and North Africa region)
  - major environmental disruptions (eg loss of agricultural productivity due to climate change)
  - disruptions and shifts in governance (eg trade deals and tariffs) that may dramatically alter not only the implementation of current governance measures but also their overall impact.
- Increase transparency and awareness of the importance of domestic markets in tropical forest countries, including for beef, palm oil and biofuels, and the need to improve regulatory requirements and incentives as well as industry commitments and sourcing standards.
- Ensure Chinese and international stakeholders, including civil society and research organisations working within China and with Chinese trading partners, are equipped with the data and actionable insights needed to be able to inform, influence and enable the Chinese government and private sector to take action to green their supply chains, including by benefiting from lessons learnt in other markets.
- Ensure that governments, business leaders and civil society understand the potential of overlooked and under-resourced opportunities to achieve impact, including by fostering positive side-effects from existing interventions (such as through government partnerships) to incentivise and reward sustainable production, the meaningful application of new data technologies and AI, as well as more radical policy solutions to curb commodity deforestation and address unsustainable levels of consumption.

4. Trase solutions

Trase will provide four inter-connected solutions that deliver the transparency and intelligence needed to achieve our objectives.

Open data

We believe that making data transparent and accessible is critical both to enabling market leaders and removing excuses for inaction. Over the last ten years we have firmly established ourselves as the go-to trusted provider of data linking commodity markets with areas of production and deforestation.

Trase specialises in making sense of fragmented and opaque data landscapes: we collect, verify, integrate and standardise data, then make it openly available in a structured format, accessible to a wide audience. We will prioritise efforts to ensure that Trase's data is aligned with user needs and can be easily embedded into third-party data products and tools.

Trase's commitment to open data

We see open data as an essential catalyst for impact. We will continue to invest in www.trase.earth as the go-to platform for open data on the connections between commodity trade and environmental and social impacts. As part of our open data strategy we commit to:

- Make as much of our data as possible available under the Creative Commons 4.0 attribution licence for both commercial and non-commercial use.
- Make our code base open access as much as possible, and over time open source our code, unlocking not only our data, but also our methods and expertise to drive innovation by the research community.
- Make our data available for download and accessible in a format that is easy to integrate into diverse applications.
- Provide clear and accessible explanations of our methods.
- Be responsive to data requests and queries.

"For the past decade, Trase data, toolkits and insights have been at the forefront of global efforts on supply chain transparency. The world needs actionable, relevant and high-quality intelligence to ensure economic resilience and sustainable commodity systems, and Trase is stepping to the fore."

Dr Nicola Ranger,
Director of the Resilient Planet Finance Lab of the University of Oxford, and co-Director of the UK Integrating Finance and Biodiversity Programme

The data landscape is constantly evolving, and we have built the expertise and agility to respond to these changes. We will expand our open-access data products available through the trase.earth platform, updated on an annual or biannual basis, to address critical demands for data in three main areas:

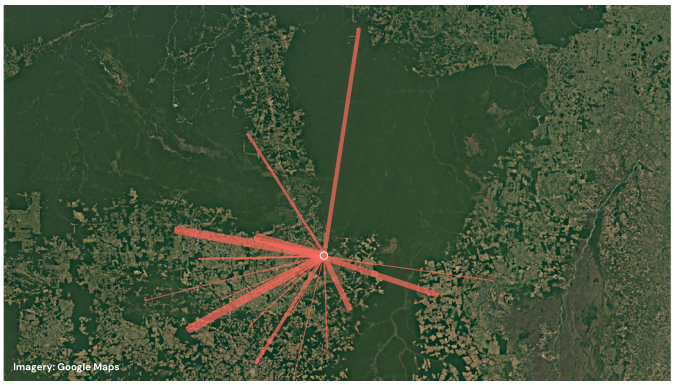
1. **Global markets.** These products respond to the need to 'zoom out' and provide reliable data on the links between commodity production, expansion, trade and consumption at a global level. We will invest in further developing world-leading datasets and research initiatives mapping the sustainability of commodity markets worldwide and maximising their uptake and impact by bringing them within Trase's product portfolio. This includes work on the Deforestation Drivers and Carbon Emissions (DeDuCE) global model and dataset developed at Chalmers University of Technology, a Trase science partner, providing annual country-level estimates of agriculture and forestry driven deforestation and carbon emissions for more than 180 commodities, with the potential to tailor regional estimates with best-available data. This work also includes the Global Environmental Impacts of Consumption indicator and Commodity Footprints database, which links the production of over 160 agricultural commodities 'embedded' within domestic and international supply chains to final consumption impacts on deforestation, greenhouse gas emissions, biodiversity and water.
2. **High-resolution subnational supply chain maps.** These products map trade flows of forest-risk commodities by linking regions of production to key supply chain hubs – storage, processing and export facilities – and on to international and domestic markets. Data products include supply chain maps of the five commodities (beef, soy, cocoa, palm oil and pulpwood) linked to the majority of deforestation, providing Trase's original sector-wide estimates of company and import market exposure to deforestation and other environmental and social impacts. In line with Trase's core value proposition, we will continue to invest in ways to improve the matching of per-shipment trade data with national and subnational sourcing patterns. This data is the backbone of diverse applications from risk benchmarking, compliance checks, civil society campaigns and independent performance evaluations. This work also includes a growing focus on domestic markets in producer countries with an emphasis on the Brazilian beef market. Here we will continue to support the development of *Do Pasto ao Prato*, a Trase partner initiative that provides radical new transparency on links between slaughterhouses and retailers in the Brazilian domestic meat market, enabling more sustainable sourcing and bringing a new level of scrutiny to the single largest market for forest-risk commodities globally.
3. **Territorial intelligence.** These products respond to the need to 'zoom in' on the links between supply chain facilities, deforestation, greenhouse gas emissions and other impacts within individual production regions. We will continue to invest in providing best-in-class open data on the location, capacity and ownership of supply chain facilities, as well as data and intelligence on the sourcing areas connected to these facilities, and the environmental and social impacts of production in these areas. This includes greater investment in assessing production impacts and supply chain exposure to greenhouse gas emissions, biodiversity loss and water use, as well as impacts on smallholder livelihoods and human rights. This data can enable more comprehensive and robust risk assessments, due diligence processes, monitoring systems and risk mitigation strategies for priority commodities and regions. It also provides building blocks for third-party data solutions in civil society, business and finance such as the work we have done to support ForestIQ, a Trase partner initiative that brings together aligned, best-in-class, and actionable data on more than 2,000 companies for financial institutions.

Trase data across scales

Trase is a unique source of open-access data linking impacts with markets at multiple scales. This example illustrates how Trase reveals:

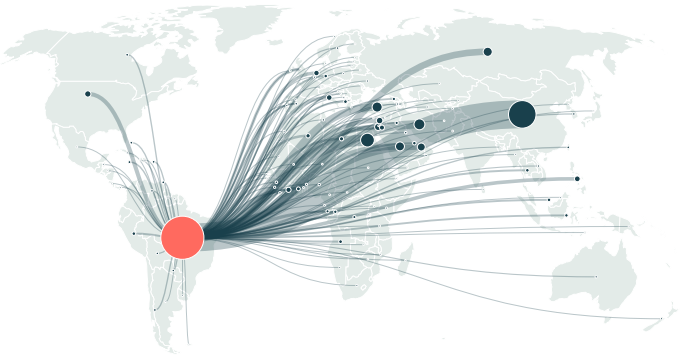
1 the location of cattle slaughterhouses in Brazil;

2 the supply shed for a single slaughterhouse in northern Brazil;



3 supply chain links between slaughterhouses and ports across Brazil; and

4 trade flows of beef from Brazil to countries around the world, sized by level of cattle deforestation exposure.



Trase and artificial intelligence (AI)

Trase actively engages with data scientists and innovators at the forefront of data-driven solutions to sustainability challenges. Where it is meaningful to do so, we will strategically implement AI-driven solutions in collaboration with expert partners, specifically targeting improvements in the robustness and efficiency of our data pipelines, data collection and supply chain analysis. This includes using AI to build faster and more accurate data matching processes, applying machine learning techniques to analyse trade flow dynamics and trade relationships, and automating data collection through image processing technologies like computer vision. In future, we will explore applications of AI to combine environmental and social data with commodity sourcing data to create comprehensive risk maps, enabling more cost-effective due diligence and compliance protocols and facilitating independent evaluation. We will leverage the power of AI to enable users to more effectively explore Trase data. While AI offers a powerful solution for improving the efficiency and robustness of supply chain data solutions, it is also open to misuse. Trase will continue to play a role in assessing the appropriateness and effectiveness of different solutions for driving real-world impacts, including those based on AI technologies.

Cueiras river, Amazonas State, Brazil. Image: Rogerio Assis.

Trase Observatory

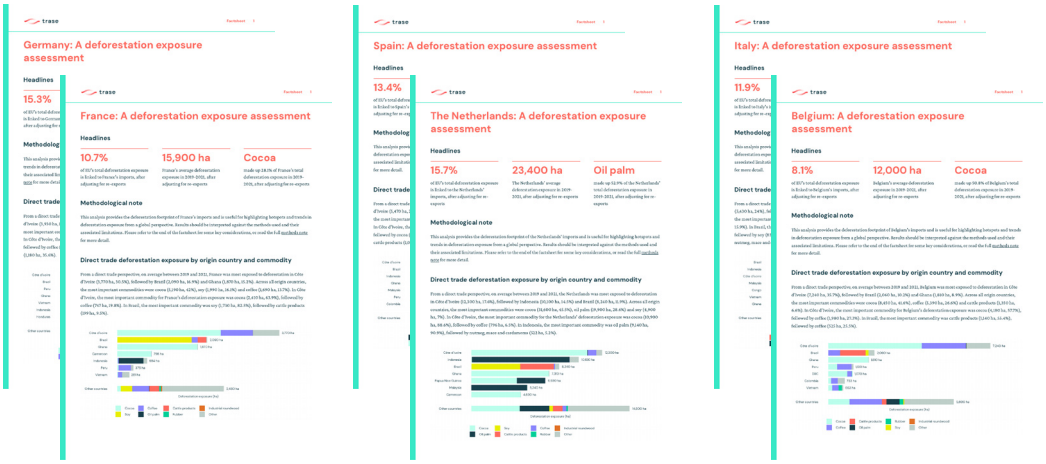
The Trase Observatory will be an annual product that synthesises Trase data, providing key indicators and analyses to show the status and trends in deforestation and forest-risk commodities markets, including comparisons across commodities, companies and markets, and in-depth analyses of specific sectors, markets and targets.

Priority actions

1. Provide an annual go-to synthesis of the status and trends in forest-risk commodity markets including key statistics on the deforestation and emissions exposure of commodities, regions, trading companies and import markets, as well as the environmental impacts of consumption.
2. Deliver tailored data syntheses that curate the most important statistics for key users (eg individual governments and use cases, such as an evaluation of the EU market for EUDR commodities).
3. Facilitate integration of key insights and statistics from the Trase Observatory into third-party independent reporting on progress against the goals of voluntary and multilateral environmental agreements.

Trase puts EU27 in the spotlight for deforestation exposure

In 2024, Trase published 27 country factsheets on the deforestation exposure of each EU member state. The results reveal striking differences as the countries prepare to implement the EUDR. For example, the Netherlands has three times the deforestation exposure of Spain due to the importance of the Port of Rotterdam for imports into the EU. Oil palm products are most significant for the Netherlands and Spain, whereas soy is most significant for Denmark, Slovenia and Romania.



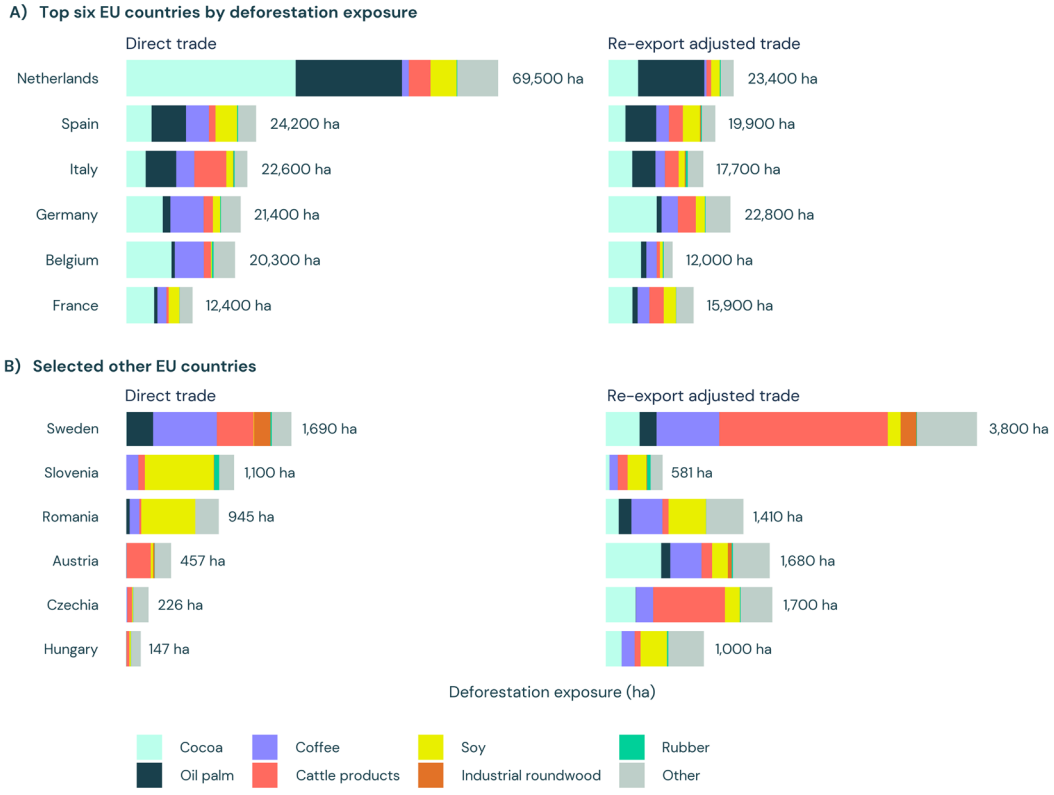


Figure shows deforestation exposure for selected EU countries by commodity in 2019–2021 for direct trade and adjusted for re-exports (Source: Trase analysis using data from UN FAO, UN Comtrade and DeDuCE).

Trase Spotlights

Trase Spotlights offers deep-dive analyses into blindspots in commodity market sustainability. This may include previously less well-investigated commodities (eg critical minerals) and supply chain impacts (eg water use, human rights violations), under-appreciated or unwillingly accepted hard truths around the limits of current policies and data technologies, and overlooked opportunities to scale up ambition and impact.

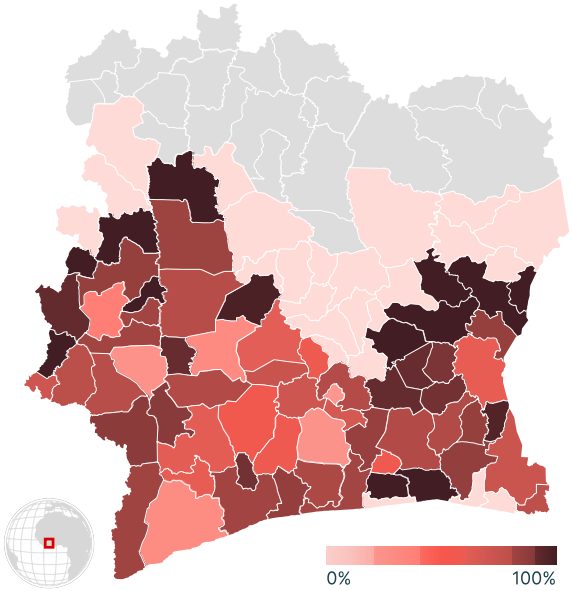
Spotlights will leverage expertise and original research from across the Trase partnership to generate new data and insights backed by strategic engagement and communications to drive impact. Spotlights will also provide a springboard for new initiatives and investments whether incubated by Trase or led by third parties.

Priority actions

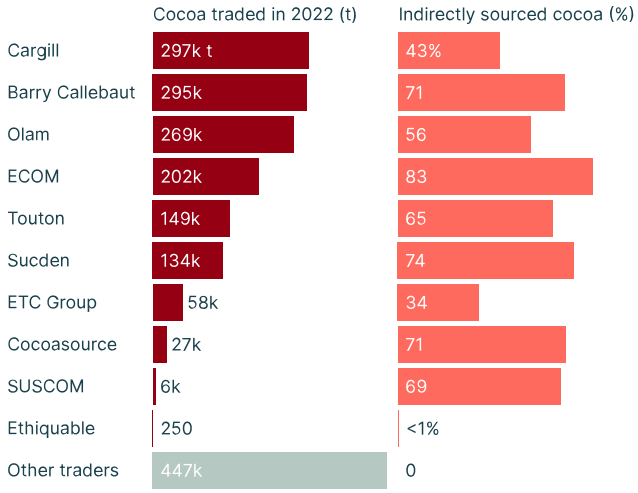
1. Provide an annual horizon scan of blindspots – critical gaps in knowledge and/or attention – in three areas: i) overlooked and emerging impacts, regions and markets; ii) 'hard truths' regarding the limits of existing policies as well as data and technology solutions; and iii) overlooked and under-resourced opportunities to achieve impact, including through the application of new data technologies as well as more radical policy solutions.
2. Lead new deep-dive assessments on key blindspots, such as indirect sourcing patterns, new commodity deforestation frontiers and sectors where transparency is critically lacking including mining and timber. We will prioritise giving attention to supply chain impacts where data quality has been consistently poor and scrutiny has been weak. This includes analyses of the impact of forest-risk commodities on local livelihoods and human rights, as well as biodiversity loss, water use and scarcity.
3. We will organise targeted convenings to increase awareness and facilitate dialogue on these blindspots, helping build stronger consensus on the current state of knowledge, identify actions needed to overcome systemic challenges, and deliver genuinely transformative change to markets and sectors.
4. Motivate and enable the uptake of Trase data and intelligence to address knowledge gaps with the wider civil society and scientific community.

Indirect sourcing in Côte d´Ivoire cocoa supply chains

Share of indirect cocoa sourcing by department in Côte d'Ivoire



Major cocoa traders in Côte d'Ivoire rely heavily on indirect sourcing

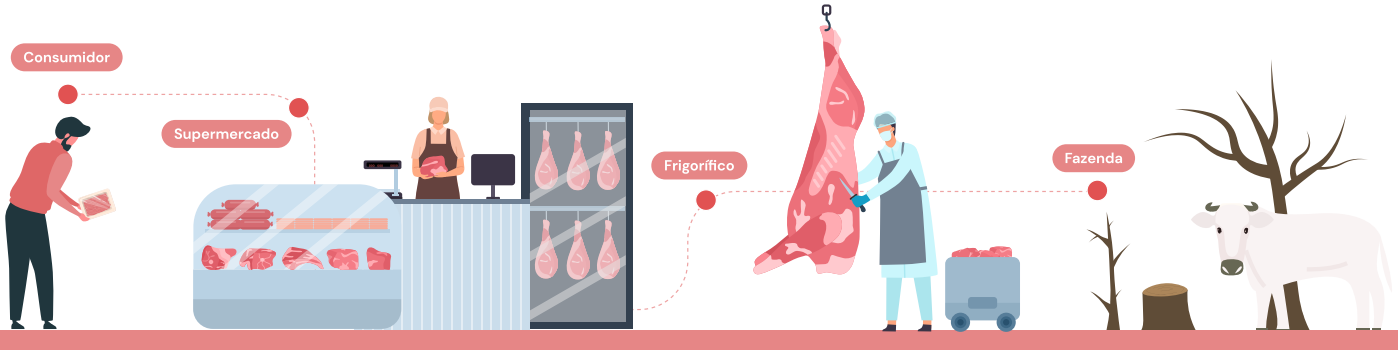


Source: Trase

Do Pasto ao Prato

Brazil's domestic beef market is the single largest forest-risk commodity in the world, associated with approximately one fifth of tropical deforestation and related emissions. It is also the largest blindspot in forest-risk supply chains globally.

Do Pasto ao Prato (From Pasture to Plate) is an initiative that brings new levels of transparency to the Brazilian domestic market for the meat industry. By gathering consumer purchase data using a mobile phone app, it maps the previously opaque links between slaughterhouses and retail locations, allowing consumers to make informed decisions. Initially incubated within Trase, it exemplifies how Trase can leverage data, expertise and networks to bring urgently needed attention to some of the biggest blindspots in supply chain sustainability.



Trusted guidance

Trase increasingly acts as a trusted knowledge exchange partner, connecting governments, industry coalitions and civil society organisations working on the same supply chain challenges, but situated in disparate markets and sectors. We will intensify this role, helping to build capacity, bridge mismatched expectations around data needs and availability, and fast-track understanding of implementation challenges. Trase is not a consultancy, and while we will be needs-driven in the guidance we provide, we focus on opportunities that can have an outsized impact. In particular, we will invest in providing pragmatic guidance that makes the most of currently available data to kick-start and catalyse action by identifying priorities, focusing attention where it is most urgently needed.

Priority actions

1. In markets where a policy framework is in place, Trase will act as a knowledge partner for key implementing stakeholders such as governments and industry coalitions. We will enable the use of risk-based approaches to accelerate existing supply chain measures and disclosure requirements, and strengthen capacity to scale up such approaches.
2. In markets with less robust sustainable sourcing requirements, such as China and domestic markets, we will deliver tailored analysis and guidance to bolster advocacy for stronger standards by third parties, including research and civil society organisations.
3. Build consensus and momentum around civil society recommendations including by bridging civil society partners in producer and consumer countries, and working with alignment initiatives such as the Accountability Framework initiative.
4. Provide public assessments of key supply chain and risk datasets and data providers to support stakeholders in making sense of the data landscape and critically evaluating data sources, gaps and results.
5. Further invest in Trase's historical convening function to develop a collaborative network with partners and international experts focused on key challenges. This network will have both a proactive and reactive 'help desk' function in addressing critical knowledge and capacity gaps, facilitate dialogue and build consensus on the enabling information environment needed to deliver on existing interventions and scale up impact.

5. How we work

Our team

At the heart of Trase lies its people. Founded and led by the Stockholm Environment Institute and Global Canopy, our team is made up of world-leading experts and specialists bringing an incredible depth of knowledge and experience from land-use, supply chain and data science as well as strategic policy engagement. We are bound by a collective desire to deliver innovative, interdisciplinary and pragmatic solutions that are capable of driving systemic change in commodity markets linked to deforestation. We are not afraid of trial and error. Diversity of lived experience, language, discipline, academic background, ethnicity and gender are core elements of the Trase team and are key to our success. We also benefit from the insight of our independent Advisory Group and the wider Trase Science Hub.

Trase values

The Trase team is motivated by an urgent need to bring transparency to the role of commodity supply chains in driving deforestation, environmental degradation and human-rights violations. Through all of our work, Trase strives to uphold the following values:

- **Innovative:** We take a highly interdisciplinary and data-driven approach to creatively solve difficult problems.
- **Pragmatic:** We are focused on delivering data solutions that help prioritise action and deliver progress quickly, while also striving for continuous improvement.
- **Grounded:** We partner with other organisations in producer and consumer countries, working together to increase the relevance and impact of our work.
- **Rigorous:** We are science-based and focused on producing high-quality data, research and analysis.
- **Catalytic:** We build on the work of others and proactively provide open data and transparent methods to increase impact.
- **Independent:** We are driven by what the data show us to assess options, inform choices and measure progress.
- **Disruptive:** We bring radical transparency to help drive systemic change in commodity supply chains and deliver positive sustainability outcomes on the ground.

Trase team members kick-starting the strategy, May 2025

The Trase partnership approach

Trase's partnership approach has been central to our identity and the main source of strength since our founding in 2015. This collaborative approach continues to this day. Building Trase as a global partnership has ensured that we draw on world-leading science while grounding our contribution in the realities of the policies, practices and places where action is most needed.

We will continue to invest in partnerships with both non-profit and for-profit organisations that strengthen our ability and legitimacy to work effectively across sectors, geographies and issues. We will also strengthen Trase's Science Hub, a network of research laboratories working at the forefront of applied research on sustainable land-use and trade, to ensure our work is informed by the best science while acting as a catalyst and enabler of applied science by the wider research community. We will specifically prioritise strengthening our partnerships and Science Hub in Brazil, China, India, Indonesia and West Africa.

Our partnership strategy is at the centre of our plans to expand the scope of Trase's work to issues beyond deforestation (eg social, water and biodiversity impacts), new markets (eg China) and new sectors (eg critical minerals), as well as to provide the wider evidence base needed to assess the limits of existing interventions and catalyse new agendas to drive the systemic change that is needed.

Trase as an innovation hub

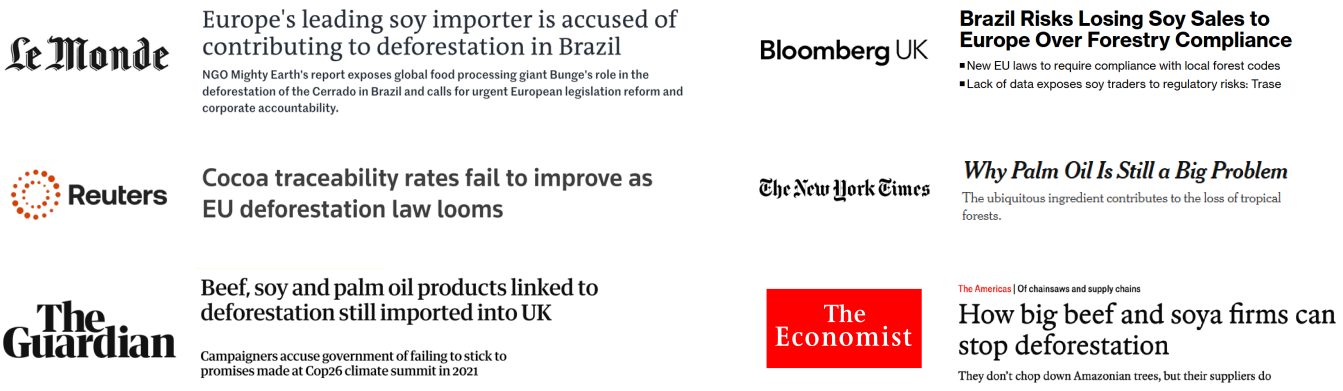
Innovation is a core Trase value. We will continue to find creative ways to use existing datasets to bring new transparency to commodity supply chains. We draw on expertise from across the Trase team, including data science, engineering, product development, thematic and engagement specialists, to identify opportunities where Trase can respond to pressing, unmet user needs, critically appraise the adequacy and effectiveness of current policies, and inspire new thinking to accelerate the delivery of our mission. We design flexible methods and data solutions that make creative use of information that is already available, while integrating new data products (eg through advances in satellite mapping and collaborative initiatives such as Mapbiomas) and utilising emerging technologies (including AI) that deliver improvements in the efficiency and accuracy of Trase's data products. Perhaps most critically, we are able to draw on Trase's broad and deep network of science and innovation partners and connections built from a decade at the forefront of supply chain transparency to ensure we remain on top of the initiatives and ideas that are constantly reshaping our space.

Training session in Indonesia by Trase partners Auriga and University of California, Santa Barbara.

Engagement networks

From the outset, Trase has sought to be an active partner in the design, implementation and evaluation of interventions across government, business and civil society. We have a wide network of trusted relationships with key practitioners and thought leaders in governments, companies, financial institutions, civil society and research institutions. This is critical for our understanding of user needs, challenges and priorities across vastly different perspectives. Similarly, many of Trase's core donors have been critical partners in our journey, helping shape our strategy and integrate Trase's work with that of other research and civil society initiatives focused on common goals.

Making the headlines: Trase data and insight supports investigative journalism



Maximising impact

Our future success depends on our ability to adapt. We face a volatile environment including political changes, growing nationalism, rising disinformation, rapid data and technological advances, global commitments on nature and emerging new regulatory frameworks on corporate environmental disclosure and due diligence.

To navigate this, we need to maintain an understanding of these trends and their implications for our strategy. We will prioritise solutions that deliver the biggest return on investment in terms of impact, and where necessary are scalable and replicable. We will favour agile approaches to our research and product development, and be prepared to adapt and sunset investments that have a diminishing impact. Perhaps most importantly, we will maintain a strong forward-looking focus on changing risks and opportunities in the sustainability of commodity production, trade and consumption.

We will continue to invest in our Monitoring, Evaluation and Learning (MEL) system to guide our strategy and deliver this agility, and have placed a learning agenda at the centre of our efforts to operationalise the strategy.

Resource mobilisation

Our independent, impact-driven, open-access value proposition can only be sustained at scale through a combination of government and philanthropic financing. Where we see outsized opportunities for impact, we will proactively partner with governments and multipliers in business and civil society who can scale uptake of our data, insights and guidance. This work is a key impact pathway for Trase and can in some instances help strengthen our overall financial sustainability, but core public-good financing is essential to ensure that Trase remains an independent provider of the transparency and intelligence needed to deliver on sustainability targets.

To learn more about our strategy, please contact Trase co-directors Toby Gardner (**toby.gardner@sei.org**) and Helen Bellfield (**h.bellfield@globalcanopy.org**)

Trase is a global partnership co-founded by the Stockholm Environment Institute and Global Canopy

SEI Stockholm Environment Institute

Global Canopy