Deforestation, *meet* transparency
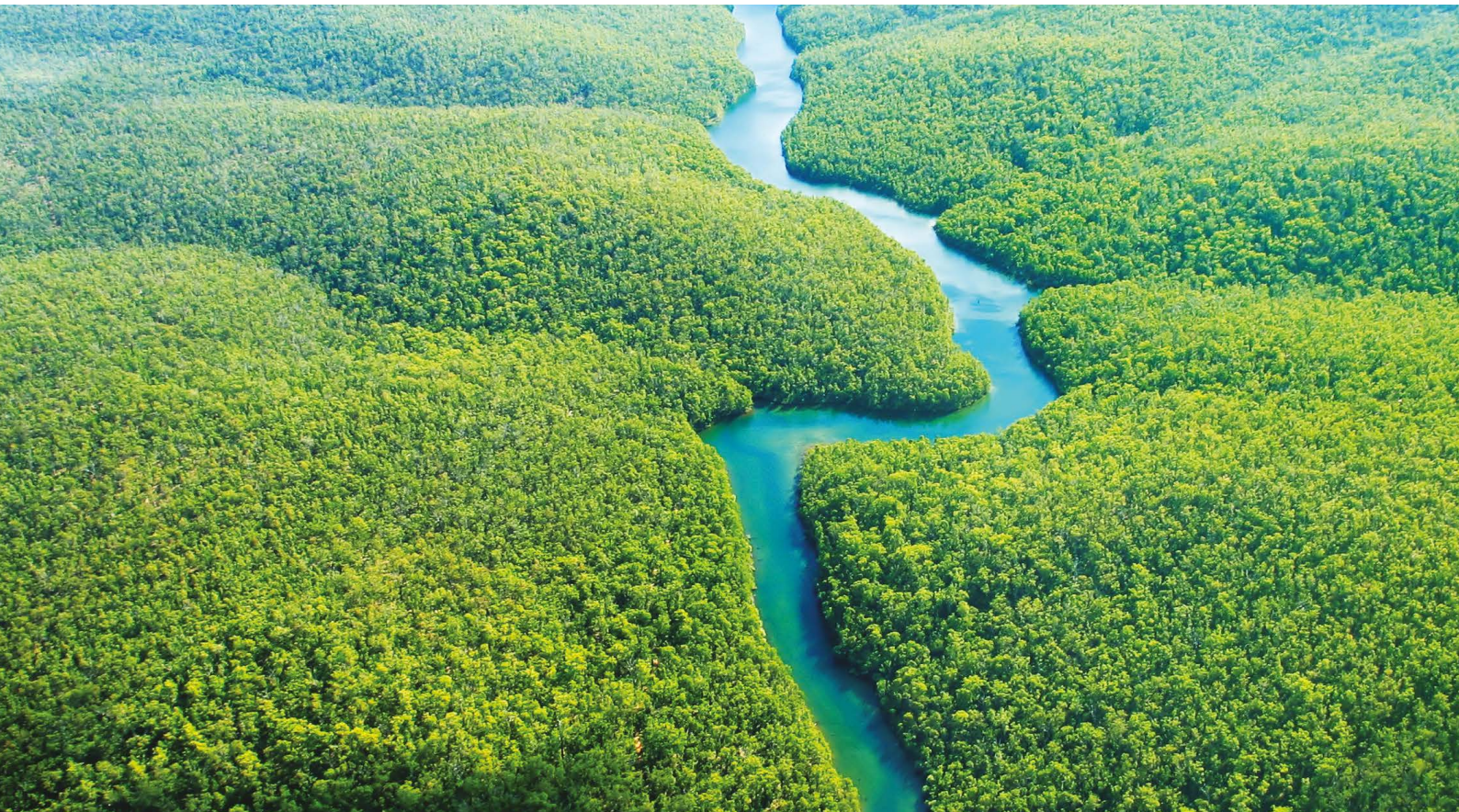
How regulation is reshaping global markets

Introduction

Accounting for about 30% of the Earth's surface, forests support 80% of the planet's biodiversity and 1.6 billion people. Acting as a sponge, forests hold up to 2.4 billion tons of carbon every year, as they provide clean air and water, and regulate climate.[1] While they are critical for the thriving of human beings, forests are currently under severe stress.

With 420 million hectares lost in the last 30 years - accounting for roughly 11% of the total forest area of the world - commodity driven deforestation produces ~444 million tons of CO_2 every year. This endangers our food and agricultural systems as the later indirectly contributes to lower crop yields thus accelerating the scarcity of some commodities.[2,3]

A striking example is the steading decline of West African cocoa harvests between July 2022 and Feb 2024 (8-10%). The resulted in a steep rise in price (136%)[4,5] Similarly, Ethiopian coffee yield is likely to drop by 30% around 2030.[6]

1. World Wildlife Federation (WWF)
2. Trase
3. EPA
4. UNCTAD
5. IFPRI
6. FoodNavigator

Europe alone is responsible for 10% of global deforestation, largely driven by its consumption of palm oil and soya.[7] To tackle the issue, the **European Deforestation-free Products Regulation (EUDR)** was brought into force in June 2023. Under EUDR, all companies importing or placing cocoa, coffee, palm oil, soy, cattle, rubber, wood, and some of their derivatives on the EU Market are to ensure these are deforestation-free. To elaborate, EUDR requires relevant companies to:

Establish traceability:

A chain of custody must be created to track products from consumers to sources using geolocation data. Plus, safeguards are to be implemented to prevent the mixing of compliant and non-compliant materials throughout the chain.

Implement a Due Diligence system:

Businesses must conduct risk assessments for compliance with the EUDR deforestation and illegality criteria.

Report on the conclusion of the due diligence:

Companies must create due diligence statements for imports and exports, detailing geolocation and risk assessments, with annual reporting required for compliance monitoring.

EUDR is in line with the EU's efforts to contain deforestation and forest degradation under the **EU Green Deal**, complementing other initiatives, such as **EU Biodiversity Strategy for 2030** and **Farm to Fork Strategy**. These measures could lead to a reduction in carbon emissions amounting to 32 million tons per year.[8]

The regulation is ambitious. Its comprehensive nature requires extensive changes in business practices, which need to be implemented before 2025, making compliance a notable task for economic players.

The regulation is bold in approach, ambitious in goals, and far-reaching in consequences.

10%

of global deforestation, largely driven by its consumption of palm oil and soya

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7. *European Parliament*
8. *Regulation on Deforestation-free Products*

An urgent need for businesses to comply with a complex regulation

Companies have less than a year to comply to EUDR large set of requirements deemed difficult to implement in tough economical landscapes and strenuous chains of custody.

Delivering accurate first-mile traceability

The regulation is built on the principle of strict traceability, requiring companies to collect precise information on where commodities originate. However, this is challenging as at the "first mile," significant traceability risks arise. Commodities are often sourced from economically disadvantaged regions. This incentivizes producers and market middlemen to launder products by physically infiltrating non-compliant merchandise in deforestation-free chains as well as falsifying traceability records to evade detection.
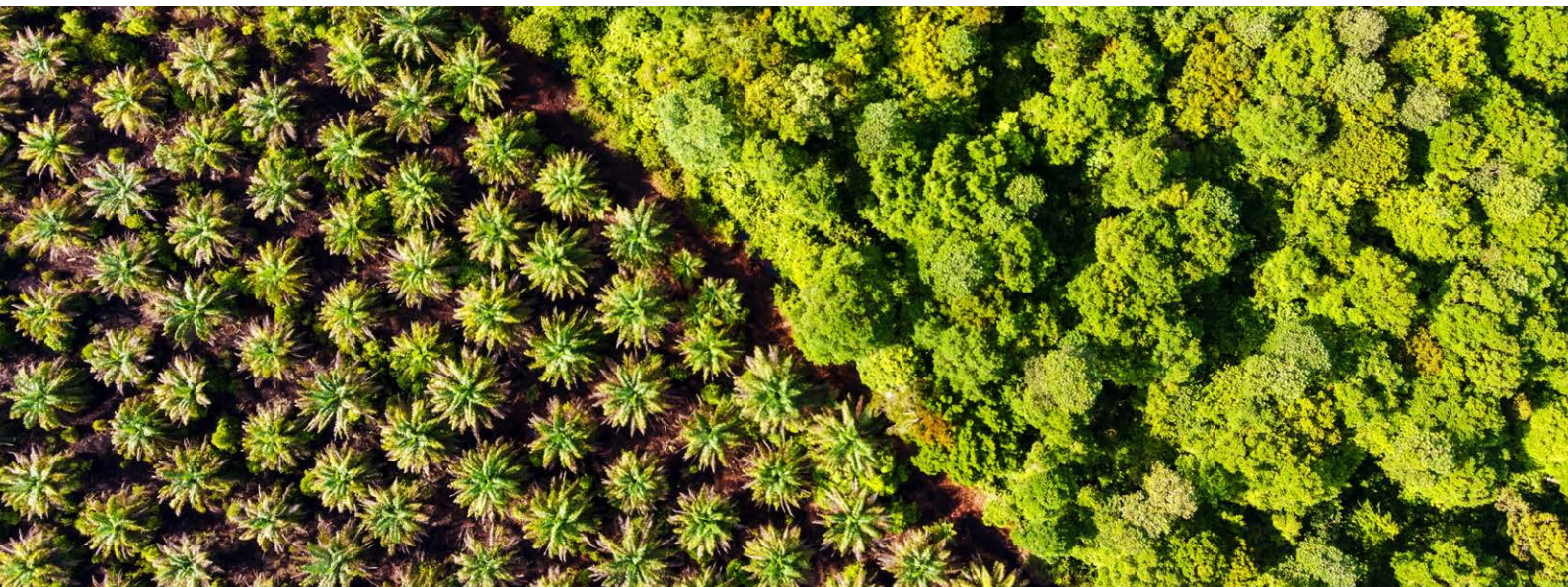
Discontinuity in data flows

The EUDR mandates the collection, organization, and sharing of extensive data, including detailed materials characteristics, origins of components, and tier one to N details. This is essential to perform due diligences and to create associated statements at custom clearance. To avoid slowing down the flow of goods, businesses need this data to be accessible in real time. Ensuring data integrity and immediate availability poses challenges because data volume grows as it goes down the supply chain. In a non-streamlined flow of material, each movement amplifies the data volume, triggering additional records and potentially overwhelming systems.

Raw material scarcity

Due to the local farming practices, inadequate infrastructure, and proximity of major supply regions to rainforests, substantial portions of commodity volumes are expected to be discarded from the European market, leaving relevant players short of supply. The chain reaction can disrupt critical nodes of supply chain networks, jeopardizing business continuity of Europe based sites.

To tackle these challenges, companies need to strategically consider how implementing due diligence and reporting requirements will sharpen their focus on strategy, operations, and data management.

Adopting long term approaches and investing in robust capabilities are key success factors

The multiplicity of compliance measures can strain resources and increase operational burdens. Therefore, it is necessary to avoid shortcuts when designing and implementing EUDR solutions.

Using technologies to perform independent verifications on data

While the responsibility of collecting first-mile traceability data lies with the first buyer, all actors of the chain should exercise due diligence. They must conduct independent verifications on producer and origin data to identify inconsistencies, such as duplicate entries, overstated yields, or offshore plot locations, etc. On top of ground audits delegated to certification bodies, automating scans on data sets are imperative. Also, it is vital to leverage satellite imagery to monitor tree cutting activities on a large scale and in real time. This enables timely identification of non-compliant commodities infiltrating deforestation-free supply chains and facilitates the right sourcing decisions.
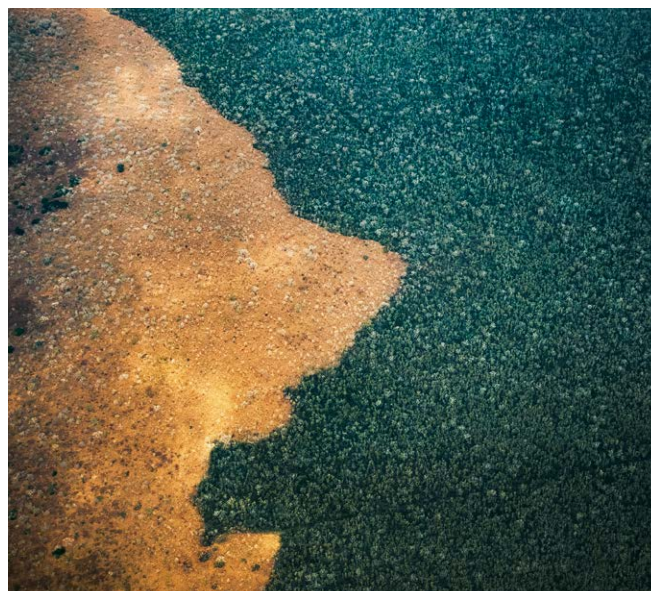
Built-in robustness and adaptability in IS and IT solutions

Effective traceability and reporting necessitate seamless data transfer between actors. Standardizing data exchange by adhering to industry conventions and considering interfaces with external data sources is essential when designing IT solutions. Additionally, adaptable systems are crucial, as they allow reporting processes to scale across regions or commodities and to swiftly respond to evolving regulatory requirements. By investing in data governance, scalable IT infrastructure, and data sharing solutions while fostering responsible sourcing partnerships, companies can not only meet the requirements of EUDR but also gain a competitive edge.

Increase the resilience of your upstream supply chain

To ensure system interoperability, synchronizing efforts with upstream and downstream partners is essential, primarily through enhanced collaboration. Companies will first have to increase visibility over their upstream suppliers through chain of custody mapping. By analyzing historical data on supplier performance (delivery times, quality, pricing, etc.), businesses can identify trends and predict which suppliers are more reliable or prone to delays. This supports strategic sourcing and derisking by securing stronger, more resilient partnerships.

Addressing these challenges will entail significant compliance costs for businesses. However, this investment can enhance market positioning if firms effectively create value out of their sustainability efforts.

Beyond compliance, EUDR helps create value by powering sustainable sourcing

The EUDR arrives at a time when consumer demand for environmentally and socially responsible practices is growing, providing favorable conditions to transform the cost of compliance into a competitive advantage. Multiple options are available to achieve this transformation.

Capitalize on EUDR capabilities for other upcoming regulations

As organizations address EUDR, they will become prepared for the upcoming Digital Product Passport (DPP). The data collection and tracking systems needed to trace raw materials can be leveraged to establish comprehensive product information throughout the lifecycle. Implementing EUDR equips companies for Corporate Sustainability Due Diligence Directive (CS3D) by establishing robust due diligence processes.

Using "EUDR Compliant" claim to develop sustainable products and services

Companies should focus on developing sustainable products and services by offering certified goods, traceability solutions, and deforestation monitoring as a service. This can be achieved by leveraging compliance attributes to secure sustainable certifications and labels. By expanding their service and product portfolio, organizations can capture additional demand and position themselves as leaders in sustainability, driving value through environmental responsibility.

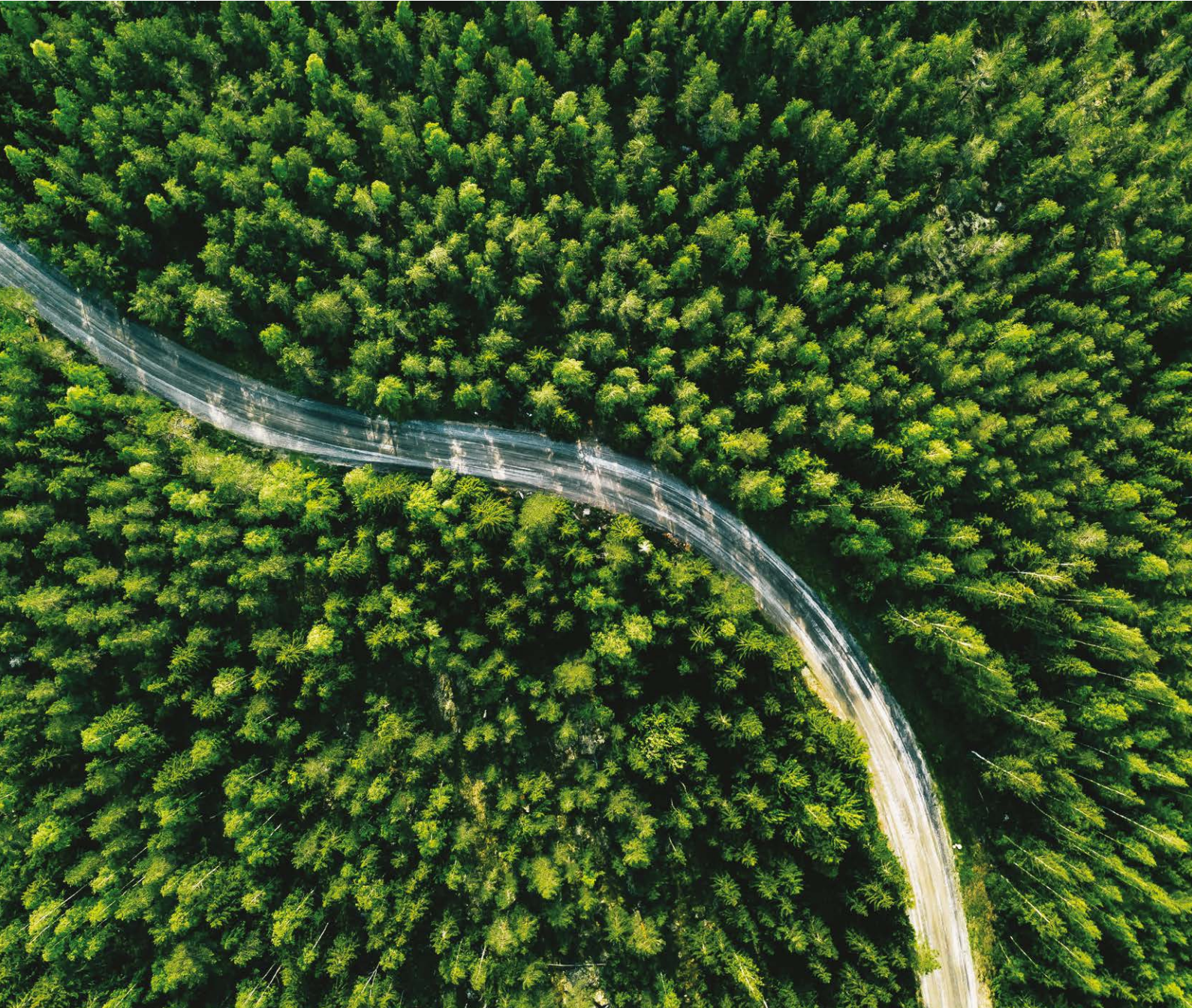## Leveraging collected data to improve farming and sourcing practices

Traceability data provides extensive insights that can be transformed into valuable business intelligence. By evaluating the geographical distribution and proximity of suppliers, businesses can minimize transportation costs and reduce carbon emissions by sourcing from nearby suppliers or identifying new ones in optimal locations. Analyzing farm boundaries or supplier regions using satellite imagery facilitates the monitoring of land-use efficiency. Low yields in certain areas may indicate poor farming practices, degraded soil, or water scarcity. Tracking this data can inform decisions on farming practices, such as crop rotation, soil conservation, or irrigation investments. Yield data can be leveraged to

optimize resource allocation, including fertilizers, seeds, and labor, thereby helping businesses improve resource planning and cost control.

Organizations would benefit immensely by viewing EUDR as a strategic endeavor, leveraging it to drive innovation and competitive advantage, rather than merely treating it as a compliance obligation.

Conclusion

The European Union Deforestation Regulation (EUDR) represents a transformative milestone in the global shift towards transparent and responsible sourcing. While the regulation poses significant challenges, particularly in terms of traceability, and supply chain reorganization, it also offers businesses a unique opportunity to innovate and lead. Furthermore, leveraging the power of traceability data enables businesses to drive insights, optimize operations, and reduce risks and costs. The path to compliance may be complex, but with the right strategies and technological investments, EUDR can become a catalyst for long-term value and environmental responsibility.

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