



Meeting Deforestation Requirements

- exploring the role of SeloVerde, Pará and Minas Gerais in meeting emerging market requirements on legal compliance and zero deforestation -

1 Introduction

Background

The ADP is an informal partnership of frontrunner European countries with the aim to promote sustainable agriculture by eliminating deforestation in relation to agriculture commodities. Recognising that supply chain initiatives and frontrunner companies alone cannot drive sectoral change, the ADP countries strongly support the development of regulation to halt deforestation such as the [UK Environment Act](#) and the [EU proposal on deforestation](#) (and wider [corporate sustainability due diligence regulation](#)). These regulations require at a minimum full legal compliance. The EU regulation also demands compliance with a cut-off date for deforestation. To meet these requirements, supply chain actors need to provide evidence throughout the supply chain to enable companies to place deforestation-free products related to six commodities on the Union market.

This policy brief explores if, how and to what extent a national system or initiative related for legal compliance and/or sustainability can contribute to (1) assuring compliance with domestic and demand side regulations; and (2) facilitating the due diligence information requirements. In this policy brief the initiative *SeloVerde* (green label), pioneered by the State of Pará, Brazil, and also under adoption by Minas Gerais, has been analysed as an encouraging and innovative tool (complementing other important initiatives). *SeloVerde* is a governmental socio-environmental traceability tool, that is both universal and transparent (see next). The Brief has been drafted by Mr. Peter de Koning from the ADP Support Unit in collaboration with Prof. Raoni Rajão from the Federal University of Minas Gerais and Fellow at the Wilson Center, who led the developed *SeloVerde's information system* and Mr. Raul Protázio Romão¹ from the State of Pará, implementing *SeloVerde* as part of the government sustainable development policies. **Because the ADP is an informal partnership no formal commitment or agreements should be expected nor does this analysis commit ADP governments or the State of Pará to formal decisions or actions.**

Dialogue

This policy brief also captures and addresses previous discussions with Brazilian stakeholders including the State of Pará in bilateral meetings, the 2022 ADP Multi-Stakeholder Meeting, and the cattle seminar on 25th of August 2022 in Brasilia hosted by the Dutch embassy as chair of the ADP. The brief is part of an engagement and dialogue process with the State of Pará and other stakeholders involved in *SeloVerde* to strengthen mutual understanding and

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identify opportunities and actions for alignment. The process is part of an effort to build a positive collaboration agenda, influence the sector as a whole towards sustainability, and reduce the administrative, monitoring, and financial burden for producers, operators, exporting countries and EU Member States.

Very important to note is that a traceability system such as *SeloVerde* does not absolve the supply chain actors of proper due diligence processes and legal compliance. They retain final responsibility for compliance. This could involve using additional data sources, checks and initiatives. Therefore, it is worth noting other important initiatives that jointly (could) help to reach deforestation and conflict-free, sustainable cattle ranching in Brazil, such as: the Terms of Adjustment of Conduct between meatpackers and the Federal Public Prosecutor's Offices ([link](#)); the Brazilian Tracking Service of Bovines and Bubalus (SISBOV, which is mandatory for farmers wishing to export to countries that require traceability such as the EU. However only 0.5% of Brazilian farms are registered). ['Beef-on-Track'](#) on monitoring; [Visipec](#) traceability tool; the Forest Positive Coalition Beef Sector Roadmap ([link](#)), the multi-stakeholder Grupo de Trabalho de Pecuária Sustentável ([GTPS](#)) and the voluntary Monitoring Protocol for Cattle Suppliers in the Cerrado ([link](#)).

2 Proposed demand-side regulations related to deforestation

The UK Environment Act

The first part of the environmental legislation by the United Kingdom was adopted 10th of November 2021. The secondary legislation is now being defined after a public consultation earlier 2022. This broader [UK Environment Act](#) is set out to support the transition of the UK to a more circular economy but also address deforestation overseas. The Act prohibits forest risk commodities in commercial activities ([schedule 17](#)) that are produced illegally under local law. Local law means any law having effect in the country or territory where the source organisms was grown, raised, or cultivated.

A regulated person in relation to a forest risk commodity who uses that commodity, or a product derived from that commodity in their UK commercial activities must establish and implement a due diligence system in relation to that commodity. A due diligence system in relation to a forest risk commodity, means a system for (a) identifying, and obtaining information about, that commodity; (b) assessing the risk that relevant local laws were not complied with in relation to that commodity, and (c) mitigating that risk.

The proposed EU regulation on deforestation

The November 2021 proposal by the European Commission was presented and discussed by the Council of the European Union in late June 2022. The European Parliament adopted its position on the Commission proposal for a regulation on deforestation-free products in mid-September 2022. Early December the Trilogue negotiations between the Commission, Council and Parliament was finalised ([article](#)) and a [final text](#) was made public early 2023. The expectation is that the regulation will be adopted in June 2023 and come into force in 2024. The text in this analysis used is the draft negotiated text (#16298/22) of 21 December 2022.

Scope of the regulation (Art.1)

Regulation for placing and making available on the Union market as well as export from the Union market of products related to cattle, cocoa, coffee, oil palm, rubber, soya, and wood.



It's annex 1 provides a list of derived products. The regulation shall not apply to products produced before its entry into force.

Prohibition (Art.3)

Relevant commodities and products shall not be placed or made available on the Union market, or exported from the Union market, unless they are (1) deforestation-free; (2) produced in accordance with the relevant legislation of the country of production; (3) covered by a due diligence statement (to be supplied by traders or operators).

EU Definitions (Art.2)

Important definitions in this article are:

'Forest'² means land spanning more than 0,5 hectares with trees higher than 5 meters and a canopy cover of more than 10%, or trees able to reach those thresholds in situ, excluding land that is predominantly under agricultural or urban land use (FAO). *This definition includes natural forests (primary and secondary forests) as well as plantation forests and planted forests.*

'Deforestation' means the conversion of forests to agriculture use, whether human-induced or not.

'Deforestation-free' means (a) that the relevant products contain, have been fed with or have been made using commodities that were produced on land that has not been subject to deforestation after December 31, 2020; and (b) in case of relevant products that contain or have been made using wood, that the wood has been harvested from forests without inducing forest degradation after December 31, 2020.

'Agricultural use' means the use of land for the purpose of agriculture, including for agricultural plantations, and includes livestock and set-aside agricultural areas.

'Forest degradation' means structural changes to forest cover, taking the form of the conversion of primary forests *or* naturally regenerating forests into plantation forests or into other wooded land and the conversion of primary forests into planted forests.

'Other wooded land' means land not classified as 'forest' spanning more than 0,5 hectares with trees higher than 5 metres and a canopy cover of 5 to 10%, or trees able to reach these thresholds in situ, or with a combined cover of shrubs, bushes and trees above 10 percent, excluding land that is predominantly under agricultural or urban land use;

'Operator' means any natural or legal person who, in the course of a commercial activity, places relevant products on the Union market or exports them from the Union market.

'Plot of land' is an extension of land within a single real-estate property, as recognised by the laws of the country of production and which enjoys sufficiently homogenous conditions as to allow to evaluate on the aggregate level the risk of deforestation and forest degradation associated with commodities produced on that extension of land. *For example: farm boundaries declared to the environmental registry - CAR - in Brazil. Here also the reference to 'risk' is important. The definition of risk may follow standards already established in producing countries (e.g., tolerance*

² UK Environment Act (schedule 17): "An area of land of more than 0.5 hectares with a tree canopy cover of at least 10% (excluding trees planted for the purpose of producing timber or other commodities)."



of up to 6.25ha due to uncertainties in deforestation detection through satellite images).

‘Geolocation’ means the geographical location of a plot of land described by means of latitude and longitude coordinates corresponding to at least one latitude and longitude point and using at least six decimal digits. For relevant commodities other than cattle, for plots of land or more than 4 hectares, the geographical location shall be provided using polygons, meaning sufficient latitude and longitude points to describe the perimeter of each of plot of land.

‘Negligible risk’ is a full assessment of both the product-specific and the general information on compliance by relevant products no cause for concern that the relevant products may not be compliant.

‘Relevant legislation of the country of production’ means the laws applicable in the country of production concerning the legal status of the area of production in terms of: () land use rights; () environmental protection; () forest-related regulation including forest management and biodiversity conservation, where directly related to wood harvesting; () third parties’ rights; () labour rights; () human rights protected under international law; () the principle of Free, Prior, and Informed Consent, including as set out in the United Nations Declaration and on the Rights of Indigenous Peoples; () tax, anti-corruption, trade and customs regulations.

The EU Observatory

The Commission will establish an EU Observatory on deforestation, forest degradation, changes in the world’s forest cover and associated drivers (par22). The Observatory should facilitate access to information on supply chains for all stakeholders. As such it will become the go-to platform to assess whether a commodity is at risk or not. The Observatory should cooperate with stakeholders and build on already existing monitoring tools, including Copernicus tools and other publicly or privately available sources (e.g. SeloVerde).

In general

The regulation establishes a chain of responsibility, with a difference between micro-small-medium (SME) and large operators and traders. Operators shall not place relevant products (Art.3) on the union market nor export them without prior submission of a due diligence statement (Art.4). They can mandate an authorised representative but do retain responsibility for compliance (Art.5). All operators placing in-scope goods on or exporting them from the EU market would be subject to the regulation and need to exercise due diligence. Large companies have to be full and actively involved in the chain of responsibility. There are some reduced due diligence requirements for SME, and they have 24 months to comply, whereas all other operators have 12 months.

The due diligence procedure (Art.8), negligible risk and mitigation measures

The due diligence procedure includes three elements: information requirements (Art9. See below), a risk assessment (Art10), and mitigation measures (Art. 10a). On the basis of the gathered information, operators should carry out a risk assessment, The risk assessment (Art.10) is also coupled with a country benchmarking system that tailors due diligence obligations based on risk classification of countries and parts thereof (subnational regions). Where a risk is identified, operators should mitigate such risk to achieve no or negligible risk (see definition above). There is no description about the level of allowed risk of both the product-specific and the general information on compliance by relevant products (no cause



for concern). Risk mitigation (Art. 10a). This may include requiring additional information, data or documents, undertaking independent surveys or audits or other measures pertaining to information requirements set out in Article 9. This may also include supporting the compliance with this Regulation of their suppliers, in particular smallholders, through capacity building and investments. To reduce risk of non-compliance, these measures seem to allow for national/jurisdictional initiatives such as *SeloVerde* to provide additional information on risk.

Information requirements (Art.9): the Due Diligence Statement

The due diligence statement requires certain information (Art.9). The main, difficult issues within Art 9. are:

- (d) **“geolocation of all plots of land** where the relevant commodities that the relevant product contains, or has been made using were produced, as well as date or time range of production. Where a relevant product contains or has been made with relevant commodities produced in different plots of land, the geolocation of all different plots of land shall be included. [...] **For relevant products that contain or have been made using cattle, and for such relevant products that have been fed with relevant products, the geolocation shall refer to all the establishments where the cattle were kept.**” The regulation does not allow mixing of compliant and non-compliant volumes. Quite often it is not possible to establish the exact origin of products, as commodities are mixed in silos and/or containers along the supply chain. In the end the shipment that enters Europe has to be compliant with negligible risk. The proposed legislation can be interpreted as requiring the reporting of all plots of land where specific shipment has been produced with an assessment of ‘negligible’ risk. Therefore, as long as all farms that contribute to the supply chain of a specific operator are compliant (from first point of collection onward), physical segregation of these volumes will not be necessary.
- (e) “name, email and address of any business or person from whom they have been supplied with the relevant products”. This information shall remain confidential and anonymised, in line with personal data protection laws in the EU. Companies have argued that some supplier information is commercial confidential. One could argue that as long as there is a verified negligible risk there is no need for full disclosure, and it is up to the operator to act upon a risk towards their suppliers.
- (g) “adequately conclusive and verifiable information that the relevant products are deforestation-free”. Based on the geolocation and other information provided, it must be possible for the EU authorities to independently reassess evidence, based on which the operator has provided its due diligence process. This could be done, for instance, by comparing the evidence from different monitoring systems (e.g., PRODES in Brazil vs EU Forest Observatory) and, maybe, assurance through a sub-national verification system.
- (h) “adequately conclusive and verifiable information that the production of relevant commodities has been conducted in accordance with the relevant legislation of the country of production, including any arrangement conferring the right to use the respective area for the purposes of the production of the relevant commodity”. Ultimately local governments must be able to assess the level of compliance of farmers to the country’s own legislation. However, quite often governments lack resources, capability, transparency and/or political will. International cooperation will be key to overcome these obstacles and in doing so, parties could also acknowledge the (legal) role of local communities in protecting forests. While the proposed regulation includes an article on cooperation with producer countries to facilitate compliance (Art.28), the

extent and ambition of this support has not been formulated yet. Furthermore, without incentives for producers or regions that are non-compliant or high risk, there is a risk that the legislation will not positively influence deforestation in regions of greatest concern.

Risk-based controls (Art. 14,15,16) and information infrastructure

The competent authorities will have to assess the information provided by the companies and conduct checks. Each Member State shall ensure that annual checks cover at least 3% of the operators. The proportion of checks on operators will be performed according to a country's risk level (Art.14): 9% of the operators and volume for high-risk; 3% of the operators for standard risk; and 1% of the operators for low risk. For high-risk countries, also 9% of the total volumes will need to be checked.

There will be an enormous number of shipments and due diligence statements to monitor by custom and competent authorities, which of course cannot be done manually. Thus, the capacity of enforcement agencies to assess compliance, in terms of access to the necessary data and the likely huge volume of information in due diligence submissions is a legitimate concern. The Commission will set up and manage an EU Single Window (Art. 26), an information system to support the process. The information system should also be accessible for a wider public, with the anonymised data provided in an open and machine-readable format in line with the Union's Open Data Policy. However, this system should be in place five years from the date of entry into force (app. 2029!).

3 *SeloVerde* initiative in Brazil

SeloVerde is currently the most advanced socioenvironmental traceability tool in Brazil to assess illegality and support due diligence of deforestation-free agricultural supply chains³. The beta version of *SeloVerde* online platform was launched by the State government of Pará in April 2021, and one year later the state of Minas Gerais also joined the initiative. Together, the states of Pará and Minas Gerais host about 20% of Brazil's cattle herd. Progress on (illegal) deforestation in the State of Pará is important as together with the State of Mato Grosso, these states entail the vast majority of deforestation in Brazil ([GFW](#)). The implementation of *SeloVerde* is currently expanding to the other states of the Brazilian Legal Amazon, following a request to the state of Pará by the Forum of Environmental Secretaries of the Legal Amazon, and growing interest from the incoming administration at federal level. Below, *SeloVerde* is analysed as a response to market concerns regarding deforestation, environment, and human rights such as the EU and UK Environment Act (and in the future USA legislation).

Introduction

SeloVerde is Brazil's first public and transparent traceability system to assess illegal deforestation in both direct and indirect cattle suppliers and may also be extended to include other commodities (soya's monitoring of indirect suppliers is under development) *SeloVerde* brings together databases including (a) satellite-based deforestation monitoring; (b) indigenous and conservation areas; (c) state-level and national land cadastre of private properties; (d) environmental fines and embargoes of producers; (e) on involvement in slave analogous labour practices; (f) cattle movement (GTA animal transport records). *SeloVerde* can therefore:

1. Assess the location and land tenure situation of the rural property.

³ <https://umsoplaneta.globo.com/energia/noticia/2021/05/03/selo-verde-permite-identificar-produtores-que-sujam-a-cadeia-do-gado-no-para.ghtml>



2. Assess legal compliance with the Brazilian Forest Code for each rural property (e.g. deforestation after 2008 and on-farm conservation of riparian forests).
3. Assess infringement and land grabbing of indigenous and conservation areas.
4. Assess existence of public records on slave labour practices.
5. Track and assess environmental compliance of indirect cattle suppliers (5 tiers back) of a given direct provider.

The platform provides evidence-based information to support environmentally sound agricultural production. Prior to *SeloVerde*, markets had to rely on private certifications, which are usually unaffordable to (small)farmers (many of them indirect suppliers), covered only a small share of properties and lacked transparency in general. Furthermore, such certificates lack the legitimacy to attest full legal compliance. In addition to being affordable and including smallholders, *SeloVerde* assesses legal compliance issues since it is an official government policy that automatically monitors all farms based on the rural environmental registry (CAR) within the state and cattle movement authorization (GTA) records. CAR is a national public database created under the revised Forest Code, mandatory for all landowners and designed to support environmental compliance, tackle illegal deforestation, and reduce monitoring and enforcement costs by government institutions (see box 1). GTA is a mandatory document required by all farmers selling and buying cattle as part of the country's sanitary control policies. By integrating different governmental datasets (some with sensible personal information outside the public domain), *SeloVerde* is able to show information not only from the direct suppliers (i.e., the ones directly consulted in the online platform) but also shows whether that specific ranch has acquired cattle contaminated with deforestation or interacted directly or indirectly with non-compliant suppliers at some point of the supply chain.

Box 1: Brazil's Environmental Rural Registry (CAR)

The revision of the Forest Code in 2012, made it mandatory for all rural properties and possessions to be registered in the Rural Environmental Registry (Cadastro Ambiental Rural, or [CAR](#) in Portuguese). Each CAR is a georeferenced polygon that represent an independent agricultural production unity (farm or rural property⁴) comprised of multiple contiguous plots that may be dedicated to different crops and livestock. The CAR overlays rural parcels with environmental land use information, enabling in this way the enforcement Brazilian forest law, i.e compliance with the mandatory Legal Reserves and the Areas of Permanent Conservation (APP) around rivers and at hill tops. The first step is a self-declaration by landowners or squatters with the boundaries of the parcel and its land use. Subsequently, the state environmental agencies must validate CAR by checking for the coherence of declared land use maps and by identifying potential overlaps with protected areas and other CAR registries. This government validation is key for effective enforcement of the Brazilian Forest Code and implementation of state Environmental Regularisation Programmes (PRA), which oblige landowners and squatters to restore illegally deforested areas.

Source: [SFB, 2022](#); [IBGE, 2017](#)

How *SeloVerde* works

The current version of *SeloVerde* in Pará contains information of 250 thousand farms and can be accessed from the Secretary of Environment's website ([link](#)). The system is being developed by the Federal University of Minas Gerais (UFMG) and the Center for Territorial

⁴ Rural property = a continuous area, whatever its location, which is intended or may be intended for agricultural, livestock, vegetable, forestry or agro-industrial extraction.



Intelligence (CIT), with the financial support from Norway, United Kingdom, and European Commission (under assessment). The current version of *SeloVerde* in Pará analyses and integrates with daily updates 30 datasets from 12 federal and state-level governmental agencies to provide in a single system most of the information required to perform the initial step of the due diligence process. *SeloVerde* is the only free public platform tracing agricultural products that covers the entire supply chain under one state's jurisdiction. Since *SeloVerde* is a governmental system, it draws upon personal and sensitive data that are not available to private certifications and commercial systems currently adopted by most traders and slaughterhouses. Therefore, *SeloVerde* is able to show relevant information pertaining the environmental and social status of individual farms, while safeguarding personal data of farmers.

To integrate both spatial and non-spatial data sources and update the system on a daily basis, *SeloVerde* works closely with *Dinamica EGO*, a free software developed by UFMG that applies parallel computing techniques to process large spatial datasets ([link](#)). Using built-in *Dinamica EGO* algorithms, *SeloVerde* analyses the land use features of individual farms (e.g., springs, rivers, native vegetation, croplands, deforestation, etc.) to automatically check compliance with the Brazilian Forest Code's requirements (see box 2). In this way, *SeloVerde* is able to not only indicate whether there has been deforestation in a given plot of land, but also if that deforestation is compliant with the rules set by Brazil's main environmental legislation, which mandates how and where native vegetation remnants can be suppressed or conserved. In addition, the platform can identify potential illegal land occupation within Conservation Units and Indigenous Lands such as private properties overlapping public areas, also following the guidelines of the Federal Public Prosecutor's Office cattle monitoring protocol⁵.

Box 2: Brazilian legislation relevant for forests

The *Brazilian Forest Code of 2012 (No. 12651)* includes the CAR (box 1) and several other instruments. The Forest Code identifies Areas of Permanent Protection (APP), Legal Reserves and Areas of Restricted Use. The APP is a protected area covered by native vegetation or not, with the environmental function to preserve water resources, landscapes, geological stability and biodiversity (e.g. riparian areas, hills and mountains). Legal reserves are portions of native habitat on a property of land the owner must be set aside and preserve (depending on property size and location):

- *Legal Amazon Forest*: 80% preserved, 20% productive use
- *Legal Amazon Cerrado*: 35% preserved, 65% productive use
- *Legal Amazon grasslands*: 20% preserved, 80% productive use
- *Rest of Brazil*: 20% preserved, 80% productive use

Medium and large landowners who deforested / converted more than allowed before 22 July 2008 are obliged to either (a) restore their legal reserves on the property; or (b) 'offset' that area through an area of equivalent size (various options). Civil society organisations criticize the lack of implementation (like the CAR), the transparency of data, and enforcement since 2012. In general, permanent deforestation figures have risen in Brazil (#1 globally), mostly illegal deforestation.

Source: IPAM ([link](#))

⁵ <https://www.mpf.mp.br/atuacao-tematica/ccr4/dados-da-atuacao/grupos-de-trabalho/amazonia-legal/Protocolodemonitoramentodegadov.12.05.2020.pdf/view>



Importantly, *SeloVerde* is a platform for data integration and transparency and therefore does not require additional input from individual farmers. Thus, all 1.2 million farms in Pará and Minas Gerais which already declared to the mandatory rural environmental registry (CAR) are automatically assessed by *SeloVerde*. While CAR and other public datasets have a significant number of inconsistencies, *SeloVerde* assumes that it makes more sense show the information highlighting its issues while investing in improving these systems and policies, rather than build a parallel data collection system.

Process and information requirements

SeloVerde makes the main socio-environmental criteria of a state's agricultural production publicly available. By integrating data from both federal and state institutions, satellite image maps, and geospatial analysis, the *SeloVerde* platform provides detailed reports on the social and environmental compliance of farms registered under the CAR system. Registration in the CAR is the first step towards obtaining environmental compliance for the property. *SeloVerde*'s analyses begins, therefore, by applying the rules and requirements of the Forest Code to each private property obtained from the CAR database. In addition to informing estimates of forest surpluses and deficits, it also tracks direct soybean suppliers and direct and indirect suppliers in the case of cattle ranching, indicating the occurrence of deforestation and any socioenvironmental non-compliance (i.e., overlap with protected areas and/or the occurrence of slave labour). This information can be accessed in two ways. Firstly, via an interactive map showing all the rural private properties in the state, it is possible to focus on a specific farm to check its environmental compliance and agricultural production (cattle or soya). The second is by entering the CAR code for any given rural property a buyer would like to source from, to access the report provided by the platform. This report shows farm's compliance with the Forest Code and provides detailed information on land use, environmental impact, cattle traceability, socio-environmental law enforcement, and overlap of the property with other areas. No confidential or protected personal information about the landowners is available on the platform, so their identity and privacy are protected.

Essentially, *SeloVerde* allows searching for any farm or browse an interactive map to select farms of interest with their plots-of-land. Thus, the user can check the social and environmental status of a farm and find out the level of deforestation, the deficit and surplus of legal reserves (i.e., native vegetation as required by law), any overlaps with other farms or protected areas (i.e., Indigenous Lands). The user can also check the portions of land used for agricultural crops (e.g., soybeans), all of which can be verified through free high-resolution images made available on the platform. The system goes even further by supporting landowners to regularize their properties if infringements are identified, such as unauthorized deforestation after 2008⁶ (i.e., the timeframe for determining illegal deforestation on private properties in Brazil), directing such farms to the Environmental Regularization Program (PRA).

Cattle laundering is the - quite common - practice of moving cattle from "dirty" farms linked to illegal deforestation to reputable ones, before then sending to slaughterhouses suggesting the cattle is fully compliant. *SeloVerde* maps all movements and transactions to the fifth tier of indirect suppliers - based on the GTA - between direct and indirect suppliers and includes indicators that can help to identify and overcome cattle laundering. This entails rural properties with the same landowner whereby the owner could move cattle from farms with

⁶ Illegal deforestation taken place after that date must be restored according to the Forest Code.

illegal deforestation to the farm that is legally compliant. Also, farms labelled as having cattle indirectly contaminated by deforestation along the supply chain can also be further investigated for other forms of cattle laundering (e.g., cattle raised in protected areas,).

A new version of the *SeloVerde* platform (under development) will allow API (Application Programming Interface) access to previously registered stakeholders, including suppliers, consumers, and logistical systems, in order to increase data integration and transparency in forest-risk supply chains. This not only may contribute to greater transparency of the supply chain at national level and with a focus on corporate sustainability policies and targets, such as good practices for the sector and metrics in line with ESG and SBTi requirements, but may also contribute to greater standardisation and reliability of the information to be transmitted (within and between countries) by the electronic interface system of customs authorities, in addition to facilitating cooperation with third countries, as provided for in Art.24, 25 and 26 of the Council regulation. This electronic interface (Art.26) shall be in place at the latest four years from the date of adoption of the regulation. Therefore, the *SeloVerde* platform anticipates and is aligned with the requirements of European regulation and can also be adapted to future needs for information exchange between parties.

4 Assuring legal compliance, no deforestation, and human rights

Assuring legal compliance

The UK and EU regulation demands full legal compliance, including environmental and social laws: Both refer to relevant legislation of the country of production. In the EU regulation this includes the rules applicable in the country of production concerning the legal status of the area of production in terms of land use rights, environmental protection, sustainable forest management, third parties' rights, labour rights and human rights protected under international law, including as set out in the United Nations Declaration on the Rights of Indigenous Peoples, and relevant tax, anti-corruption, trade and customs regulations under the legal framework applicable in the country of production.

The operator is required to provide information on legal compliance through its due diligence system. Basically, this means the government needs to provide a statement or evidence that the producer is fully legally compliant. In many producer countries there is still a significant amount of illegal deforestation and/or producers are not (yet) fully legally compliant especially regarding proofing they have legal land tenure rights.

Environmental laws: In the context of land-related issues, Brazil's Forest Code with the Rural Environmental Registry system (CAR) is very relevant. In Brazil, the cut-off date for illegal deforestation is 2008. The CAR is used to:

- Ascertain legal rights to the rural property
- Assess the status of deforestation
- Assess infringement of protected areas
- Assess infringement of territories used / occupied by indigenous peoples

The system currently covers self-declared data from around 6.7 million rural properties. These land-use data must be confirmed through a governmental CAR validation process, which has experienced serious delays by state environmental agencies (less than 0.5% of properties validated). The continuation of the validation process is crucial to get government assurance



for legal compliance (as required by EU, UK and probably USA legislation). The CAR represents a solid basis to build a due diligence information system, as long as government validates the claims, and it is continuously improved over time. *SeloVerde* overcomes the limitations of the validation process by filling in the perimeter of each declared rural property with data from state-of-the-art remote sensing and other relevant human rights related datasets. *SeloVerde* enables the detection of of risk of non-compliance even in farms that have not been yet validated by the state-level environmental agencies.

Social laws: *SeloVerde* only includes part of the information on compliance with social (labour laws), i.e the list of properties suspected or fined for slave labour.

Assuring no deforestation

The intention of the CAR - and the purpose of *SeloVerde* - is to ensure no illegal deforestation has taken place. *SeloVerde* registers actual deforestation, whether legal or illegal, and could therefore include an assessment on deforestation as required by emerging market regulations and limit the risk of deforestation. *SeloVerde* also maps indirect providers by calculating the volume of cattle acquired by a given farm in the last 12 months. If there is a significant risk (i.e. more than 20% of acquisitions) of the heard being linked to deforestation, then the system considers that the entire heard of that specific farm is contaminated with deforestation. The 20% threshold was developed in order to account for uncertainties in the sanitary traceability data, as well as considering the need to express the notion of “negligible risk” found in the EU legislation. Future versions of *SeloVerde* could consider different thresholds in order to align with market specifications.

To attest to deforestation-free production, *SeloVerde* integrates annual deforestation maps from PRODES⁷ — Brazil's official detection and monitoring system in the Amazon and *Cerrado* biomes. PRODES provides raw data containing clearings with 1 hectare or less. However, given the limitations of the mapping scale (1:100,000), the resolution of the images used (10-30 meters) and the methodological decision to monitor only clear-cut deforestation, PRODES annual rates excludes isolated clearings smaller than 6.25 ha. In the same line, Brazil's Federal Prosecutor's Office have decided to adopt a tolerance of 6.25 ha in the implementation of the Cattle Agreement. *SeloVerde* adopts PRODES and Prosecutor's Office procedures and also ignores clearings smaller than 6.25 ha. This procedure also minimizes the edge effects, mapping uncertainties and cartographic projection errors that may falsely attribute deforestation to a given farm. In comparison, the Soya Moratorium that currently allows soy expansion into forested areas of up to 25 ha.

The EU Observatory to be established will (probably) be based on the EU's EGNOS-Gallileo (GPS data) and Copernicus-Sentinel satellite (spatial data with a potential high resolution of 10m to 60m) for geolocation data (par.33). This has however not been specified yet. *SeloVerde* draws mainly from PRODES, Brazil's official monitoring system developed by the National Space Research Institute. Prodes uses Sentinel imagery alongside Landsat and Brazil's own satellites to detect deforestation.

⁷ <http://terrabrasilis.dpi.inpe.br/>

Assuring international human rights and regulation on indigenous peoples

Legal compliance as defined by the EU legislation includes compliance with international human rights and FPIC under the United Nations Declaration on the Rights of Indigenous Peoples. To attest the respect for human rights, especially the absence of illegal occupation of public areas (i.e., Full Protection Conservation Units) and indigenous territories, *SeloVerde* cross-references official land ownership and land title regularization maps, flagging properties that overlap with non-private land. *Seloverde* enables operators and EU authorities to check if specific commodities have been produced in areas with high risk of infringement with indigenous areas and land right. Being publicly available, *SeloVerde* also contributes to giving local communities a voice in demanding compliance with and enforcement of national and international legal requirements. They could therefore also lodge a ‘substantiated concern’ in relation to EU regulation if a commodity is exported to Europe.

5 Analysis of issues and potential synergy

The previous paragraphs provided some background information on the overlap or gaps of basic technical information such as definitions of rural property and plot-of-land. On these aspects further discussion and alignment can be sought. Below, some other issues are presented to be discussed further with stakeholders.

In conclusion

On legal compliance *SeloVerde* contains information on the (a) Brazilian Forest Code; (b) environmental fines and embargoes; (c) Indigenous areas; (d) slave labour law. Therefore, it cannot meet all demands regarding (a) full legal compliance and (b) no deforestation after a cut-of date by all suppliers. The platform does contain information on all deforestation, and is able to distinguish between legal and illegal deforestation for each CAR-registered property based upon certain data. As such, the developers of *SeloVerde* expect that in the future the platform could become a key compliance tool for EU and UK regulation in Brazil.

SeloVerde includes information on direct and indirect suppliers (5 tiers back). However, because Brazil only requires group transport permits (GTA) and not transport permits for each individual animal (too expensive⁸) it cannot trace back an animal 5 tiers back to a specific farm. Rather, it circumvents that by assessing the risk of non-compliance by looking at the flow of animals in a network of commercial relations between farms. A such, it should not be regarded as a traceability tool operating at individual animals but rather as risk assessment able to identify the existence or not of negligible risk of deforestation in the supply chain.

SeloVerde does not contain all relevant producer related legislation especially those related to social (labour) issues. It is possible to integrate *SeloVerde* with other labour related datasets, such as the ones containing fines and lawsuits against farmers. However, it cannot provide an assessment and assure full compliance with labour laws without an on-the-ground law inspection action and subsequent registration of compliance.

Issue 1: Jurisdictional initiatives as mitigation measure of (negligible) risk

The emerging EU market regulation demands ‘mitigation measures’ by companies if a risk of non-compliance is perceived and to reduce the risk to the extent possible up to the point it

⁸ Cattle farmers supplying the European market have implemented the mandatory SISBOV (Tracking Service of Bovines and Bubalus). In general, about 0.5% of all Brazilian ranches have this system.

becomes negligible. It is still unclear how exactly “negligible” is defined, but it is likely to involve a measurement of the deforestation rates within a given jurisdiction, and the measures taken to avoid the sourcing of commodities from areas with non-compliant or recently deforested parcels. *SeloVerde* could maybe be interpreted as a mitigation measure that enables a risk assessment of the suppliers. It may even enable compliant farmers to sell their produce from a high-risk region. PCI (Produce, Conserve and Include) from the state of Mato Grosso is another example of a multi-stakeholder jurisdictional approach in Brazil that could be regarded as a mitigation measure. It has not (yet) been fully assessed yet, but it does not include a sector-wide transparency / monitoring platform or assessment of compliance or risk of producers. The state government of Mato Grosso has recently launched the Passport Verde (green passport) initiative aiming to monitor the cattle ranching sector. The system only includes the monitoring of direct suppliers.

Issue 2: Indirect providers and risk assessment

The proposed EU legislation is very clear that all plots of land where the relevant commodities were produced must be monitored. This includes not only the direct providers that sell their produce to slaughterhouses and other traders, but also indirect providers. This is particularly relevant in the beef supply chain as most illegalities are to be found at indirect providers, that are responsible for breeding and calving. Quite often ranches with illegal deforestation triangulate their sells via farms that comply with the legislation in order to avoid the controls from slaughterhouses that currently only have access to direct providers. *SeloVerde* offers a solution for this issue by crossing land ownership and sanitary data, and informing whether a given farm has acquired cattle from other farms in the last 12 months that were involved in deforestation. The platform also raises a flag if the a given supplier owns other farms, then the one declared as the seller, with evidence of non-compliance. It must be highlighted, however, that *SeloVerde* is not able to trace the specific indirect supplier that has produced a given ton of meat (cow). Instead, it measures the risk of involvement with deforestation of a given set of suppliers considering their commercial relations. This could align with definition of ‘negligible’ risk in the EU regulation.

Given the technical challenges and high cost involved in tracing individual batches of products (vs commercial relations), it is more feasible for the legislators to require from operators a list of farms (and their plots-of-land) from which they sourced, and where thus a certain volume of non-compliant commodity could have been produced, instead of requiring full traceability of each volume to each plot-of-land. As stated before, the EU regulation does allow mixing of compliant volumes. This solution is also likely to bring more environmental benefits as suppliers will likely strive to clean their entire supply-chains instead of building a specific, physically segregated chain, to export to the EU. It will also support striving for regional or jurisdictional compliance (for example on the level of the State of Pará).

Issue 3: Time-lapses and users’ decision making

Cattle are slaughtered on average at 3 years of age and it is highly unlikely an animal moves from the indirect suppliers tiers to the direct supplier within one year. The *SeloVerde* platform decided on 12-month periods for practical reasons. The GTA only tracks groups of animals (20 heads of cattle on average) rather than individuals. A 3-year period would become complex and include many uncertainties and assumptions regarding an individual animal originating from indirect suppliers. Hence, the risk-based approach regarding indirect suppliers described earlier. Also, next year the Federal Prosecutor’s office in Pará will start fining slaughterhouses



with indirect deforestation. Formal audits use 12-month periods, and the prosecutors can only fine a company based on available data. The 12-month period provides suppliers and buyers predictability and assurance. The 12-month period also allows slaughterhouses and ranchers to see the risks and impact of their buying practices relatively soon, and enables them to organise better, respond to risks, implement mitigation measures, and cleaning up its suppliers.

Issue 4: Trust and transparency

To monitor deforestation and legal compliance, full disclosure is probably not needed, as long as the competent authority in Europe has the required information to assess the due diligence statement provided. But to build trust between parties and in the system, some transparency is needed to allow for external third-party monitoring and the lodging of substantiated concerns. This could be achieved with data sharing at two levels. In a more general level, it is important that the geolocation of the plots of land commodities originate from and are exported to the EU is reported to an anonymized but publicly accessible repository, as already required by the proposed legislation. Here *SeloVerde* plays a role as it provides an easy-to-use tool for different stakeholders to check the compliance of specific plots of land based on the geolocation reported to the EU Repository. However, there are also personal and commercially sensitive information (e.g. sanitary data, farmer's names, etc) that are not shown in *SeloVerde* and are still important for in-depth investigation if required by the competent authorities. As such, it would be important to adopt a similar procedure already in place for sanitary monitoring systems whereby the EU assesses regularly the reliability of the systems, while not necessarily having full access to sensitive information.

Issue 5: Information transfer along the supply chain

An important aspect of the current proposal is Art.5 on authorised representatives. Operators or traders may mandate an authorised representative to make available the due diligence statement, but they retain responsibility for compliance. This could mean an authorised representative - trusted by all parties - verifies through a system - like *SeloVerde* - full compliance and provides all necessary information for the Due Diligence Statement. An example is the beef chain, which has many supply chain intermediaries and will be monitored with the implementation of the framework that underpins the *SeloVerde*. Once the required information is provided in a correct and transparent fashion for each transaction at the start and throughout the supply chain, monitoring by authorized representatives would not be a complicating factor for the verification of the origin of the products of interest. Given the long tail of the supply chain it is important to have a functioning electronic interface that allows for the exchange of information between different actors in the production, monitoring, import/export, and admission/shipping processes to/from the producer to the importer ('operator' for the EU market). As pointed in the previous issue, the protection of personal and commercial sensitive data is also paramount, while providing a sufficient level of transparency to build trust and ensure accountability.

Issue 6: Alignment of remote sensing to monitor deforestation

The EU Observatory will become an important go-to instrument for companies and CSOs to check compliance on deforestation. During the implementation of the EU legislation the Observatory will cooperate closely with relevant international organisations, research institutes and third countries (par.22). As mentioned above, *SeloVerde* currently uses PRODES, as the officially recognized deforestation monitoring system in Brazil. Yet, *SeloVerde* can be

extended to adopt data sources in the future in order to also take into account forest degradation and other high resolution monitoring systems.

A related issue is the definition of forests. The EU regulation proposal defines forests as land spanning at least 0.5 hectares, with trees higher than 5 metres and a canopy cover of at least 10%. This definition does not align with the Brazilian Forest Code and PRODES. The Brazilian Forest Code also defines ‘conversion’ in the Cerrado as ‘deforestation’ and therefore also includes the FAO definition of Other Wooded Land. PRODES monitors in the Cerrado biome all different types of vegetation (including woodland savannah and natural grasslands). But while the definition of forest is key to verification of compliance of deforestation with the legislation’s cut-off date, the EU and UK regulations demand full legal compliance so all types of illegal clearings (including in non-forested biomes) prohibit putting commodities on the market.

Issue 7: Legitimacy of legality assessments (legal assurance)

Current commercial agreements, such as the Soya Moratorium, are based on binary assessments of whether a given area has been deforested or not after a cut-off date using satellite images. The compliance evaluation is done by a company hired by the Brazilian Association of Vegetable Oil Industries (ABIOVE) and overseen by a group of civil society organizations. This multi-party verification works well for these voluntary commitments.

A similar approach led by industry and CSOs is less likely to be successful in the implementation of the EU legislation because in addition to verifying whether or not deforestation occurred after a given cut-off date, it will also be necessary to establish the compliance of a supplier with the country’s environmental, labour and land tenure legislations.

And operators need legal assurance because they remain legally responsible for every product in scope of the regulation they put on the European market. In this context, (local) governments have a central role since they hold sensitive non-public data and most importantly, are the only legitimate authority to evaluate and assure legal compliance. In this context civil society and labour unions will still play an important role keeping local governments accountable for their actions and facilitate substantiated concerns if illegalities occur. *SeloVerde* can be robust solution being both a governmental and transparent system that allows for third-party verification. On labour laws maybe additional measures are needed.

6 Next steps?

The first step would be to engage other knowledgeable stakeholders to provide feedback on this analysis. Their responses will be compiled for further dialogue. Subsequently, a multi-stakeholder technical meeting(s) with interested and relevant government entities, donor agencies, competent authorities, supply chain stakeholders and civil society will be organised early 2023. After that meeting a more elaborate document will be made public. The purpose is to enhance mutual understanding and explore obstacles and opportunities to enhance sustainable production and trade with the EU and UK markets. In due time this enhanced understanding and dialogue may facilitate further discussion between the appropriate, responsible authorities.