The Global Language of Business

GS1 European Union Deforestation Regulation Standard

EUDR requirements for trading partner transparency for EUDR implementation

Release P, Provisional Standard, Sep 2025

Document Summary

Document Item	Current Value
Document Name	GS1 European Union Deforestation Regulation Standard
Document Date	Sep 2025
Document Version	P
Document Issue	
Document Status	Provisional Standard
Document Description	EUDR requirements for trading partner transparency for EUDR implementation

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Log of Changes

Release	Date of Change	Changed By	Summary of Change
P	Sep 2025	Piergiorgio Licciardello	WR 25-000112 Initial version

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1 Introduction

Regulatory requirements have become a key driver in enhancing transparency related to sustainability, and stricter rules on sustainability reporting have created an urgent need for accurate and verifiable data about company operations. The European Union (EU) is leading the way with a number of regulatory initiatives, spearheaded by the European Green Deal. The European Union Deforestation Regulation, 2023/1115, is one of these initiatives, aiming to limit the impact of EU trade on global deforestation and promoting the consumption of "deforestation-free" products.

The scope of the regulation impacts seven commodities and the derived product:

Wood: Includes timber products

Rubber: Includes natural rubber products

Palm oil: Includes palm nuts and palm oil derivatives

Soy: Includes soybeans and soy-bean flour and oil

Cattle: Includes beef and leather

Cocoa: Includes chocolate

Coffee: Includes roasted coffee beans

Depending on the role in the supply chain and their size the economic operators will have to be compliant with some specific requirements and perform verification and assessment activities to attest that the products they are introducing in the market or trading are, effectively, "deforestation-free", have been produced in accordance with local legislation and are covered by a due diligence statement.

One important obligation for operators introducing a product in the market, and non-SME traders is the submission of **a Due Diligence Statement (DDS)**, including a set of data specified in the Annex II, on a centralised system, a dedicated module on the **Trade Control and Expert System (Traces)**, developed by the European Commission.

When a Due Diligence Statement is submitted and accepted, the Traces system returns two numbers: the **Reference Number** and the **Verification Number.**

These two numbers are the keys to verify the existence of a valid Due Diligence Statement and have access to the data contained into it.

The two numbers are also needed, when submitting a DDS, to include a reference to previously submitted diligence statements by upstream parties. An example is a non-SME retailer submitting a DDS for a traded product, referencing the DDS submitted by the supplier. Consequently, the two numbers must be, then, shared with downstream supply chain partners to make possible, for them, to fulfil their specific requirements.

This standard will provide guidance on how to leverage GS1 Data Sharing standards to share the DDS numbers, as well as other context data important to allow a correct processing of them.

It will also support multiple level of granularity, enabling trading partners to share the data at batch or serial level as well as at product level, if compatible with the specific process.

The technical solution will support the GS1 identification keys like: GTIN for product identification, GLN for parties and location identification and SSCC for logistic units identification.

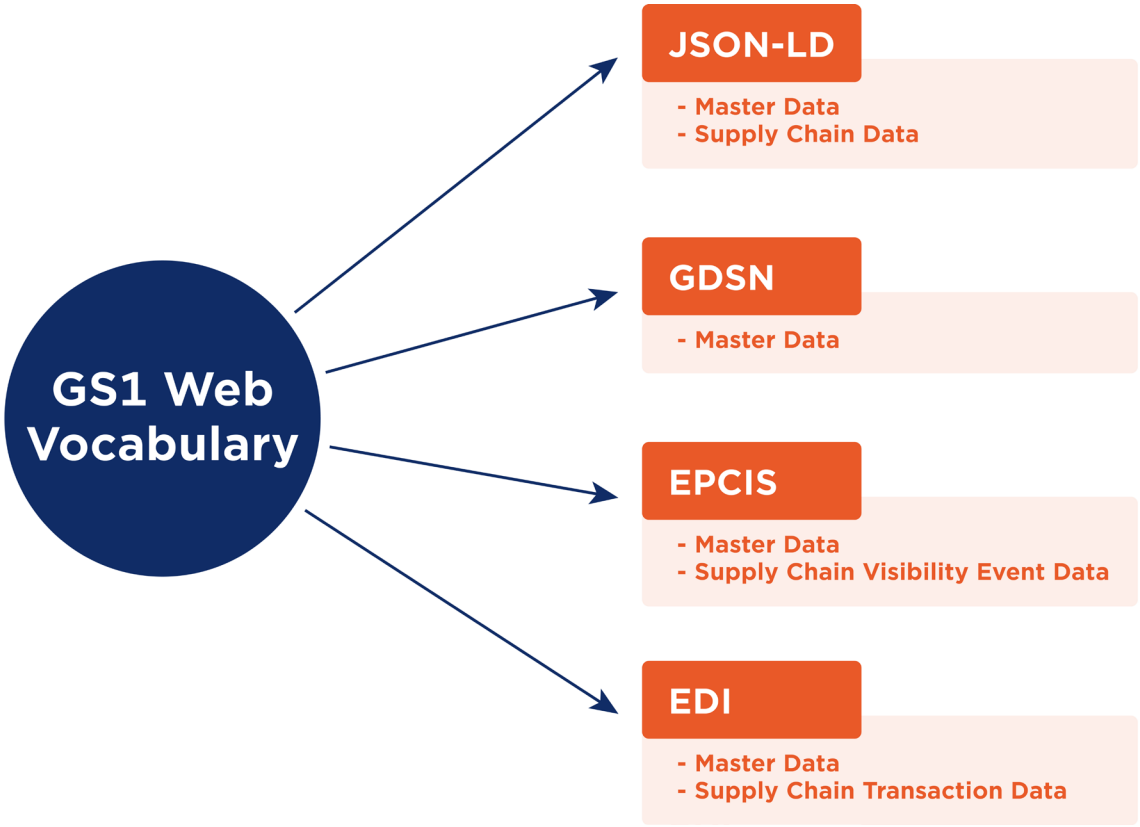
2 GS1 Data Sharing ecosystem

GS1 provides several data sharing solutions, mapping different steps in the supply chain and supporting different operators.

The development of GS1 data sharing standards to facilitate regulatory compliance depends on a common semantic model and core business rules.

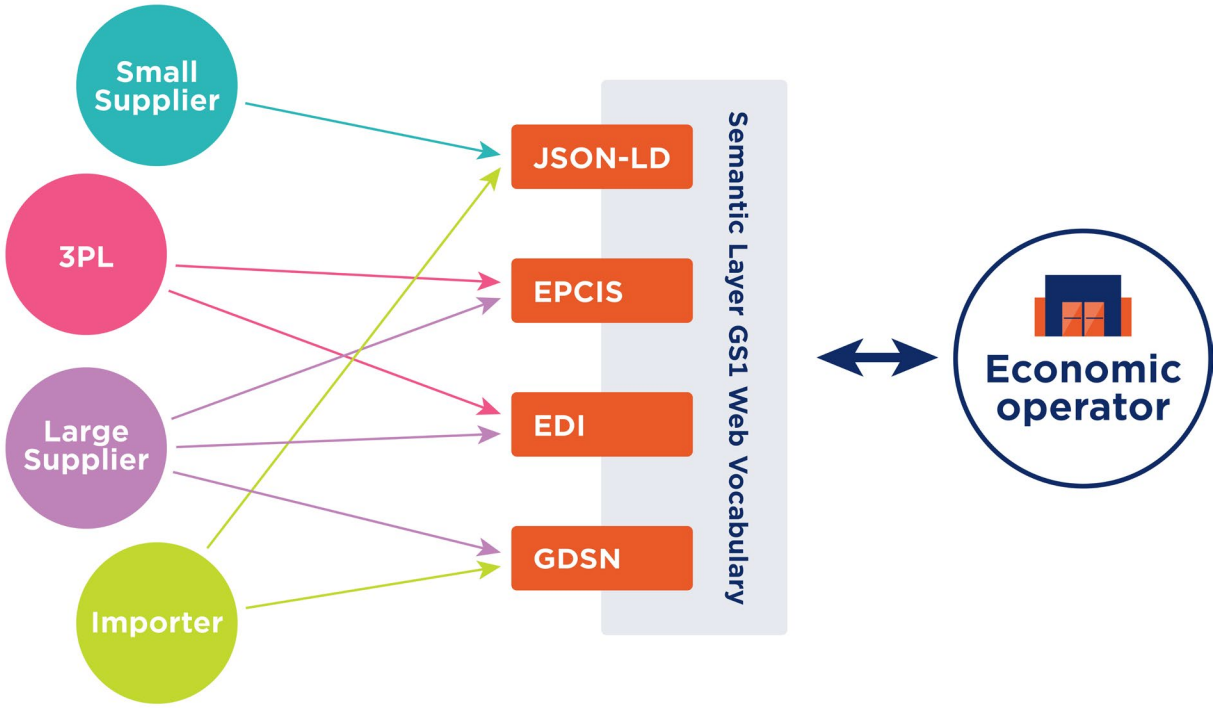
This semantic anchor, in the GS1 ecosystem, is the GS1 Web Vocabulary.

The data model defined in GS1 Web Vocabulary is, conceptually, "syntax neutral", meaning that it is not designed to support specifically a particular technology but provides the semantic layer on top of which the data sharing technical solutions can be developed.



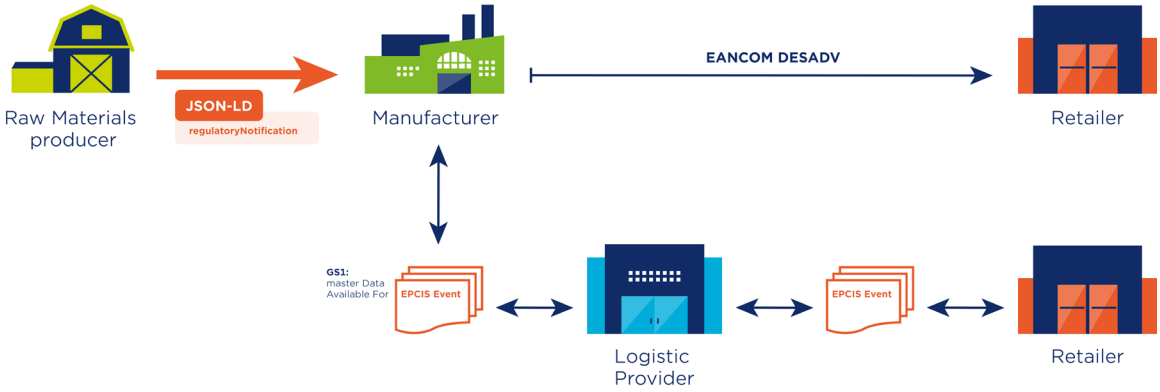
The GS1 Web Vocabulary layer plays a key role in enabling interoperability across diverse data-sharing solutions. By providing a common semantic framework, it allows operators in the supply chain to connect with partners through multiple coherent solutions, making it easier to achieve critical mass and broader adoption. While some technical standards may only support part of the GS1 Web Vocabulary data model—depending on their specific capabilities or the level of granularity required—this does not limit its overall value. Even partial adoption delivers significant alignment and consistency, helping different systems "speak the same language" and ensuring smoother collaboration across the supply chain.

An example of application scenario for EUDR regulation is represented in the figure below:



An economic operator will be able to support multiple interfaces, all consistent with the semantic anchor, with no need to force the partners to use only one specific technical solution.

For instance, in a product manufacturing and trading supply chain, we may have different approaches depending on the party role.



A small raw materials producer, for instance supplying cocoa to a chocolate manufacturer, may leverage the simple JSON-LD regulatory notification message to share the two DDS numbers.

The manufacturer may then have a multi-step supply chain with some customers, involving logistic providers, where the EPCIS solution can be used to improve the logistic visibility. At the same time messages like the EANCOM DESADV can be used with customers that have an active EDI infrastructure.

The overall consistency and interoperability are enabled by the common semantic anchor provided by the GS1 Web Vocabulary data model.

3 GS1 Web Vocabulary Data Model

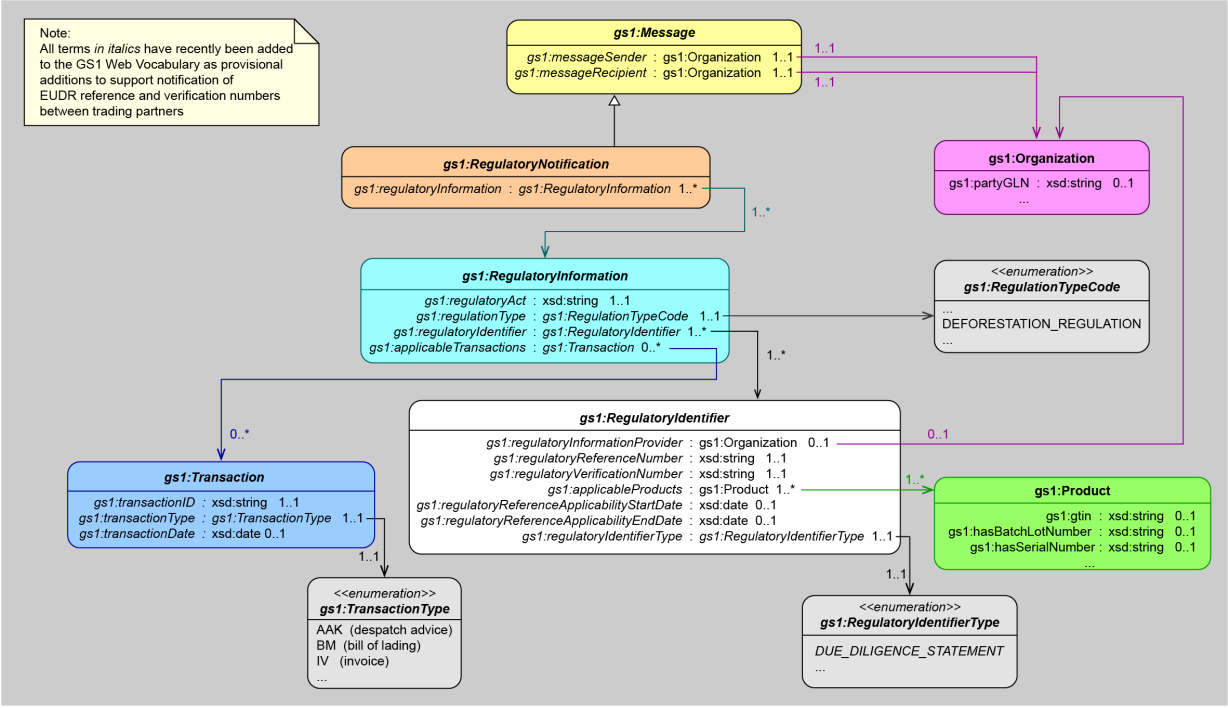
To support the exchange of the Due Diligence Statement Reference and Verification numbers, the GS1 Web Vocabulary **gs1:RegulatoryNotification** class is the semantic anchor.

This data class has been designed to support regulatory or legislative data sharing needs.

A particularly important use case is when parties are required to submit a document or dataset to a specific information system, which returns a confirmation of receipt that contains a reference number and possibly a verification number.

Those numbers, together with other relevant data, may be shared with the downstream partner to enable the fulfilment of that partner's regulatory obligations.

This is the UML class diagram from the perspective of the GS1 Web Vocabulary:



The following provides further explanation about how these are connected:

At the highest level, a new class ***gs1:Message*** (shown in yellow on the UML class diagram) provides two properties, ***gs1:messageSender*** and ***gs1:messageRecipient***, both of which expect exactly one instance of the existing **gs1:Organization** class.

Through the existing **gs1:Organization** class, an organization may be identified either using the existing **gs1:partyGLN** property or via the corresponding GS1 Digital Link URI, based on /417/ followed by the 13 digit party GLN.

The ***gs1:Message*** class has a subclass, ***gs1:RegulatoryNotificatio***n (shown in orange on the diagram) which inherits the ***gs1:messageSender*** and ***gs1:messageRecipient*** properties from the superclass ***gs1:Message*** and introduces a further property, ***gs1:regulatoryInformation***,which expects one or more instances of the ***gs1:RegulatoryInformation*** class (shown in cyanin the UML diagram).

Within the ***gs1:RegulatoryInformation*** class, the following properties are defined:

- ***gs1:regulatoryAct*** expects an xsd:string value, which precisely identifies the regulation or legislation involved. In the case of EUDR, the appropriate string value to use is "EU 2023/1115.87”
- ***gs1:regulationType*** expects exactly one value from the code list ***gs1:RegulationTypeCode***. In the case of EUDR, the appropriate code value is "DEFORESTATION_REGULATION".

- **gs1:regulatoryIdentifier** expects one or more instances of the gs1:RegulatoryIdentifier class (see below for further details).
- **gs1:applicableTransactions** expects 0 or more instances of the **gs1:Transaction** class.

  The ***gs1:Transaction*** class defines two mandatory properties:

  - ***gs1:transactionID***, which expects an xsd:string and provides the transaction identifier.
  - ***gs1:transactionType***, which expects a code value from a standardized code list, **gs1:TransactionType**, with code values such as "IV" for invoice etc., to indicate which type of transaction the identifier corresponds to.

  The ***gs1:Transaction*** class also defines one optional property:

  - ***gs1:transactionDate***, which expects an xsd:date value, corresponding to the date of the transaction.

The ***gs1:RegulatoryIdentifier*** class is shown as a white box in the UML diagram. Within this class, the following properties are defined:

- ***gs1:regulatoryInformationProvider*** is an optional property that expects zero or one instance of the existing **gs1:Organization** class, through which the provider of the due diligence statement may be identified either using the existing **gs1:partyGLN** property, which expects a 13-digit numeric string value for the party GLN – or using the corresponding GS1 Digital Link URI that contains /417/ followed by the 13-digit numeric string value of the party GLN. This property can be omitted in case the due diligence statement provider is the same as the **gs1:messageSender**.
- **gs1:regulatoryReferenceNumber and gs1:regulatoryVerificationNumber** are both mandatory properties that are used to express the string values for reference number and verification number that are provided by the TRACES information system upon successful receipt of a submitted EUDR due diligence statement.
- **gs1:regulatoryReferenceApplicabilityStartDate** and **gs1:regulatoryReferenceApplicabilityEndDate** are optional properties. Both expect an xsd:date value. These may be used to express a date range during which the referenced due diligence statement is considered to be valid.
- ***gs1:regulatoryIdentifierType*** is a mandatory property that expects a code value from the ***gs1:RegulatoryIdentifierType*** code list. In the case of EUDR, the code value to be used is "DUE_DILIGENCE_STATEMENT".
- ***gs1:applicableProducts*** is a property that expects one or more instances of the existing **gs1:Product** class. When used within this lightweight regulatory notification message in JSON format, the property ***gs1:applicableProducts*** is considered to be mandatory. Within the **gs1:Product** class, a product may be identified either using a GS1 Digital Link URI (see below for further details) or by using the existing **gs1:gtin** property, which expects a 14-digit numeric string value.
  - If there is a need to specify product identifiers at finer granularity than class-level GTIN, the existing optional properties **gs1:hasBatchLotNumber** or **gs1:hasSerialNumber** may be used, to express a batch/lot identifier (corresponding to GS1 Application Identifier (10)) or a serial number (corresponding to GS1 Application Identifier (21)), each of which permit alphanumeric strings of up to 20 characters from the GS1 AI encodable character set 82, defined in the GS1 General Specifications.
  - As a valid and forward-looking alternative to using the properties **gs1:gtin**, **gs1:hasBatchLotNumber** and **gs1:hasSerialNumber**, the product identifiers may be specified using GS1 Digital Link URIs based on /01/ followed by the 14-digit numeric string of the GTIN, optionally followed by further primary key qualifiers such as /10/ followed by batch/lot ID and/or /21/ followed by the serial number.
- GS1 Digital Link URIs should be formatted in accordance with the **GS1 Digital Link URI Syntax standard.**

The data that can be exchanged, relevant to the EUDR context, is detailed in the table below.

The table will also include the reference to the technical standards that can be used to transfer the data between the trading partners.

✓ = Supported

N/A = Not Applicable

N/S = Not Supported

Property	Usage/Definition	JSON-LD	EPCIS	GDSN	EANCOM	GS1 XML
messageSender	The sender of the data set. It can correspond to the owner of the DDS but there are use cases where the DDS submitter is another player	✓	✓****	✓	✓	✓
messageRecipient	The intended recipient of the data set.	✓	✓****	✓	✓	✓
regulationType	The type of regulation the data exchange applies to (e.g DEFORESTATION_REGULATION)	✓	✓	✓	N/A *	N/A *
regulatoryAct	Reference to the specific regulatory act (e.g EU 2023/1115.87 for EUDR)	✓	✓	✓	N/A *	N/A *
regulatoryReferenceNumber	Reference number relevant to the regulation (e.g. DDS Reference Number)	✓	✓	✓	✓	✓
regulatoryVerificationNumber	Reference number relevant to the regulation (e.g. DDS Verification Number)	✓	✓	✓	✓	✓
applicableProducts	Identification of the products the regulatory notification refers to	✓	✓	✓	✓	✓
regulatoryReferenceApplicabilityStartDate and *regulatoryReferenceApplicabilityEndDate*	The interval of date into which the references are applicable	✓	✓	✓	✓ **	N/S
hasBatchLotNumber hasSerialNumber	Lots and serials related to the references provided	✓	✓	N/A	✓	✓
regulatoryInformationProvider	The organisation having the ownership of the references provided in the message	✓	✓	✓***	✓	✓***

(*) *the EDI technical solution implemented is specific to EUDR. No need to specify the regulation*

(**) *The possibility to provide an interval of dates varies with the EANCOM message*

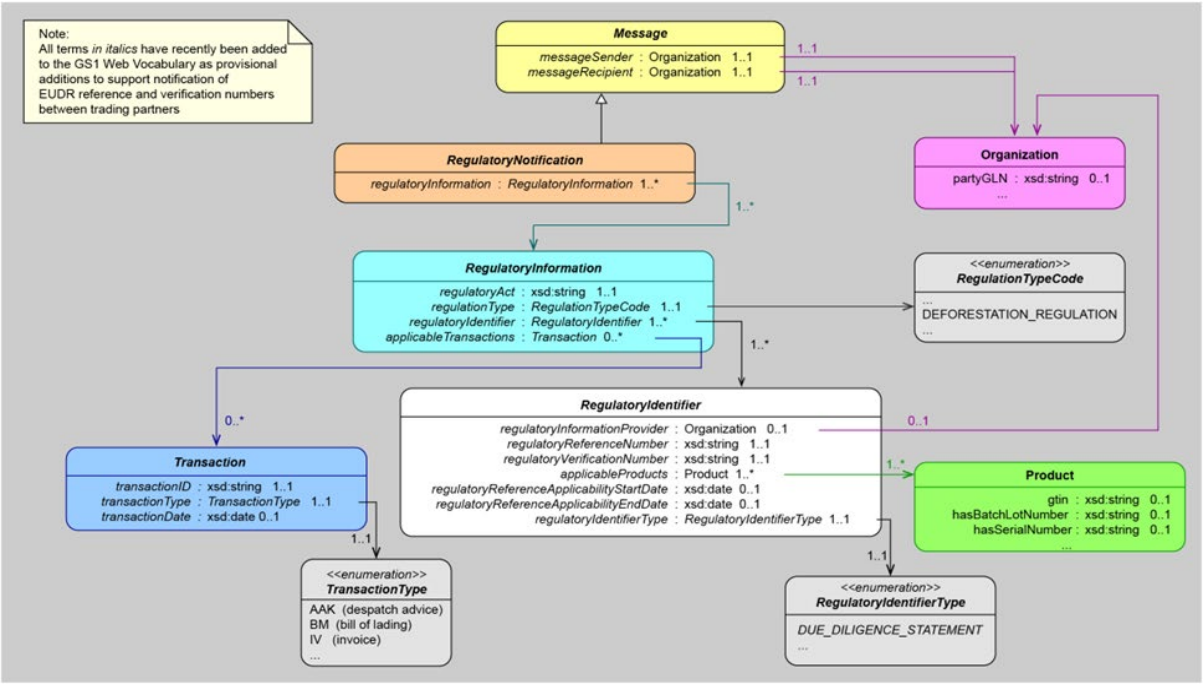
(***) *The supported use case is the one where the regulatory information provider corresponds to the party owning the full message (e.g. the seller in a GS1 XML despatch advice)*

(****) Note also that when EPCIS documents are used in an EDI-like approach, the XML format for EPCIS may make use of Standard Business Document Header (SBDH) fields to indicate a message sender and recipient, while the JSON format for EPCIS can make use of epcis:sender and epcis:receiver fields defined within the EPCIS ontology, to optionally indicate a sender and recipient. Neither the XML nor JSON format for EPCIS documents would make use of the gs1:messageSender and gs1:messageRecipient properties, although equivalent functionality exists, as described above.

4 JSON/JSON-LD simple exchange

A simplified JSON / JSON-LD exchange format, specifically intended for micro and small players in the supply chain.

This is the UML class diagram from the perspective of the JSON syntax used in the notification messages:



4.1 The JSON-LD context resource in more detail

To make the regulatory notification message structure easier to read and easier for software to process as JSON data, a JSON-LD context resource has been developed. This takes care of all appropriate expansion of JSON keys and values to corresponding Web URIs within the GS1 Web Vocabulary, as well as data type casting of values, for values that should be interpreted as URIs or values that should be cast to specific formats such as xsd:date. This file is also provided as one of the normative artefacts.

The JSON-LD context resource file performs the following:

1. Maps the alias "type" to the special JSON-LD keyword "@type"
2. Maps the alias "id" to the special JSON-LD keyword "@id"
3. Declares the following namespace mappings for Compact URI Expression (CURIE) prefixes:
   a. "**gs1**": "https://ref.gs1.org/voc/"
   b. "**xsd**": "http://www.w3.org/2001/XMLSchema#"
4. Maps the following JSON fields to properties within the GS1 Web Vocabulary:

applicableTransactions	**gs1:applicableTransactions**
hasBatchLotNumber	**gs1:hasBatchLotNumber**
gtin	**gs1:gtin**
partyGLN	**gs1:partyGLN**
regulatoryReferenceNumber	**gs1:regulatoryReferenceNumber**
regulatoryAct	**gs1:regulatoryAct**

regulatoryIdentifier	**gs1:regulatoryIdentifier**
hasSerialNumber	**gs1:hasSerialNumber**
transactionID	**gs1:transactionID**
regulatoryVerificationNumber	**gs1:regulatoryVerificationNumber**

5. Maps the following JSON fields to properties within the GS1 Web Vocabulary and ensures that any string values are cast to URIs ("@type": "@id"):

applicableProducts	**gs1:applicableProducts**
messageRecipient	**gs1:messageRecipient**
messageSender	**gs1:messageSender**
regulatoryInformationProvider	**gs1:regulatoryInformationProvider**

6. Maps the JSON field **transactionDate** to the **gs1:transactionDate** property in the GS1 Web Vocabulary and ensures that its string value is case to an xsd:date format.
7. Maps the JSON field **transactionType** to the **gs1:transactionType** property in the GS1 Web Vocabulary and maps the following 'bare string' code values to the corresponding code value URIs within the GS1 Web Vocabulary:

AAK	gs1:TransactionType-AAK
AID	gs1:TransactionType-AID
ALO	gs1:TransactionType-ALO
AUJ	gs1:TransactionType-AUJ
AXO	gs1:TransactionType-AXO
BM	gs1:TransactionType-BM
BN	gs1:TransactionType-BN
IV	gs1:TransactionType-IV
MH	gs1:TransactionType-MH
ON	gs1:TransactionType-ON
VN	gs1:TransactionType-VN

8. Maps the JSON field regulatoryInformation to the **gs1:regulatoryInformation** property in the GS1 Web Vocabulary and within its value, maps the following JSON fields to the corresponding properties in the GS1 Web Vocabulary and ensures that their values are cast to xsd:date values:

regulatoryReferenceApplicabilityStartDate	**gs1:regulatoryReferenceApplicabilityStartDate**
regulatoryReferenceApplicabilityEndDate	**gs1:regulatoryReferenceApplicabilityEndDate**

9. Maps the JSON field **regulationType** to the **gs1:regulationType** property in the GS1 Web Vocabulary and within its value, maps the following 'bare string' code values to the corresponding code value URIs within the GS1 Web Vocabulary:

DEFORESTATION_REGULATION	**gs1:regulationType-DEFORESTATION_REGULATION**

10. Maps the JSON field **regulatoryIdentifierType** to the **gs1:regulatoryIdentifierType** property in the GS1 Web Vocabulary and within its value, maps the following 'bare string' code values to the corresponding code value URIs within the GS1 Web Vocabulary:

DUE_DILIGENCE_STATEMENT	**gs1:regulatoryIdentifierType-DUE_DILIGENCE_STATEMENT**

4.2 The JSON Schema validation artefact in more detail

To support validation of the notification messages a JSON Schema validation file has been developed – see https://ref.gs1.org/guidelines/eudr/json-schema.json

This will enable users to check that the regulatory notification messages that they send and receive are correctly formatted.

The JSON Schema performs the following checks on the EUDR Notification Message:

1. Checks that the message is a JSON object that specifies the following mandatory fields:
   a. **"@context"**

      (required to have a URI value:

      `https://ref.gs1.org/guidelines/eudr/context.jsonld`)

   b. **"type"**

      (required to have a string value that is "RegulatoryNotification")

   c. **"messageSender"**

      (required to be either a GS1 Digital Link URI containing /417/ followed by 13 digits or an object in which the partyGLN field must specify a 13 digit numeric string)

   d. **"messageRecipient"**

      (required to be either a GS1 Digital Link URI containing /417/ followed by 13 digits or an object in which the partyGLN field must specify a 13-digit numeric string)

   e. **"regulatoryInformation"**

      (required to be an object that validates against the definition for RegulatoryInformationObject - or an array list of such objects) - see (2) below:

2. Performs the following checks that the value of "**regulatoryInformation**" is formatted against the definition of RegulatoryInformationObject, checking the following:
   a. Mandatory fields within RegulatoryInformationObject:
      i. **"regulatoryAct"**

         (required to have a string value that exactly matches "EU 2023/1115")

      ii. **"regulationType"**

         (required to have a string value that exactly matches "DEFORESTATION_REGULATION")

      iii. **"regulatoryIdentifier"**

         (required to be an object that validates against the definition for RegulatoryIdentifierObject - or an array list of such objects) - see (3) below:

   b. Optional fields within RegulatoryInformationObject:
      i. **"applicableTransactions"**

(required to be an object that validates against the definition for TransactionObject - or an array list of such objects) – see (4) below:

3. Performs the following checks that the value of "**regulatoryIdentifier**" is formatted against the definition of RegulatoryIdentifierObject, checking the following:
   a. Mandatory fields within RegulatoryIdentifierObject:
      i. **"regulatoryReferenceNumber"** (required to have a string value)
      ii. **"regulatoryVerificationNumber"** (required to have a string value)
      iii. **"regulatoryIdentifierType"**

      (required to have a string value that exactly matches "DUE_DILIGENCE_STATEMENT")
      iv. **"applicableProducts"**

      (required to be an object that validates against the definition for ProductIdentifier - or an array list of such objects) - see (5) below:
   b. Optional fields within RegulatoryIdentifierObject:
      i. **"regulatoryInformationProvider"**

      (required to be either a GS1 Digital Link URI containing /417/ followed by 13 digits or an object in which the partyGLN field must specify a 13 digit numeric string)
      ii. **"regulatoryReferenceApplicabilityStartDate"** (required to have a string value in xsd:date format, i.e. YYYY-MM-DD)
      iii. **"regulatoryReferenceApplicabilityEndDate"** (required to have a string value in xsd:date format, i.e. YYYY-MM-DD)
4. Performs the following checks that the value of "**applicableTransactions**" is formatted against the definition of TransactionObject, checking the following:
   a. Mandatory fields within TransactionObject:
      i. **"transactionID"** (required to have a string value)
      ii. **"transactionType"** (required to have a string value)
   b. Optional fields within RegulatoryInformationObject:
      i. **transactionDate**

      (required to have a string value in xsd:date format, i.e. YYYY-MM-DD)
5. Performs the following checks that the value of "**applicableProducts**" is formatted against the definition of ProductIdentifier, for which each specified value is required to be either:
   a. A GS1 Digital Link URI containing /01/ followed by a 14 digit numeric string expressing the value of a Global Trade Item Number (GTIN).

      Note that further GS1 Digital Link URI 'key qualifiers' may be expressed within the URI path information to constrain to a specific batch/lot, using /10/ - or to a specific serial number, using /21/

OR

   b. An object in which the "gtin" field must be present and specified as a 14 digit numeric string for the GTIN value.

      Note that within the same object, the "hasBatchLotNumber" field may also be present to specify a specific batch/lot identifier and/or the "hasSerialNumber" field may also be present to specify a specific serial number. If specified, the values for "hasBatchLotNumber" or "hasSerialNumber" are each required to be 1-20 characters in length and all from the GS1 AI encodable character set 82.

5 EPCIS event data

5.1 Overview

The GS1 Web Vocabulary approach can, in turn, easily be leveraged by EPCIS, version 2.0 and later. The "gs1:RegulatoryInformation" class and properties defined within it can be used to capture the required information in EPCIS visibility event data.

Note that EPCIS does not require the "gs1:Message" class. This is because an EPCIS Event is not intended as a message transmitted 1:1 between a message sender and message recipient, but rather as a snapshot of the physical supply chain which might be queried by authorised stakeholders further downstream. Note also that when EPCIS documents are used in an EDI-like approach, the XML format for EPCIS may make use of Standard Business Document Header (SBDH) fields to indicate a message sender and recipient, while the JSON format for EPCIS can make use of epcis:sender and epcis:receiver fields defined within the EPCIS ontology, to optionally indicate a sender and recipient.

Instead of using the property "gs1:applicableProducts", **the new property "gs1:masterDataAvailableFor"** can be used to connect an EPCIS event to a set of blocks of master data for which the RDF Subject is unambiguously specified via the "id" property, which is an alias for the JSON-LD special keyword "@id", used to indicate the RDF Subject of a set of RDF triples.

5.2 "Notifying" business step in an EPCIS Object Event

In the accompanying example, a GS1 Digital Link URI expressing a GTIN and Batch/Lot ID appears within the EPCIS Object Event as the value of the "epcClass" field within an element of the "quantityList" field, and additionally as the value of the "id" property for one of the elements within the list, specified by "gs1:masterDataAvailableFor". The "regulatoryInformation" field is an alias (defined within the JSON-LD context resource for GS1 Web Vocabulary and EUDR) for the property "gs1:regulatoryInformation".

Provision of EUDR-relevant regulatory information in this EPCIS Object Event with Business Step "notifying" eliminates the need for redundant inclusion of those details in any subsequent EPCIS events which capture business step "packing" or "shipping". Instead, the GTIN and Batch/Lot can be used to query the preceding "notifying" step, in which EUDR-relevant details were initially captured.

Note that `readPoint` and `businessLocation` can be optionally included but are omitted from this example to avoid confusion.


```
{
    "@context": [
        "https://ref.gs1.org/standards/eudr/p.0.0/context.jsonld",
        "https://ref.gs1.org/standards/epcis/2.0.0/epcis-context.jsonld"
    ],
    "id": "https://id.example.org/document1",
    "type": "EPCISDocument",
    "schemaVersion": "2.0",
    "creationDate": "2005-07-30T11:30:47.0Z",
    "epcisBody": {
        "eventList": [
            {
                "type": "ObjectEvent",
                "eventTime": "2025-06-23T12:25:56Z",
                "eventTimeZoneOffset": "+02:00",
                "action": "OBSERVE",
                "bizStep": "notifying",
                "persistentDisposition": {"set": ["subject_to_regulation"]},
                "quantityList": [
                    {
                        "epcClass": "https://id.gs1.org/01/09506000134369/10/ABC12345",
                        "quantity": 200,
                        "uom": "KGM"
                    },
                    {
                        "epcClass": "https://id.gs1.org/01/09506000134369/10/XYZ98765",
                        "quantity": 300,
                        "uom": "KGM"
                    }
                ],
                "bizTransactionList": [
                    {
                        "type": "inv",
                        "bizTransaction": "https://transactions.sender.example/inv/XYZ123"
                    }
                ],
                "gs1:masterDataAvailableFor": [
                    {
                        "id": "https://id.gs1.org/01/09506000134369/10/ABC12345",
                        "regulatoryInformation": [
                            {
                                "regulatoryAct": "EU 2023/1115",
                                "regulationType": "DEFORESTATION_REGULATION",
                                "regulatoryIdentifier": [
                                    {
                                        "regulatoryReferenceNumber": "r1236",
                                        "regulatoryVerificationNumber": "v9847",
                                        "regulatoryInformationProvider": "https://id.gs1.org/417/9521141123454",
                                        "regulatoryReferenceApplicabilityStartDate": "2025-06-01",
                                        "regulatoryReferenceApplicabilityEndDate": "2026-05-31",
                                        "regulatoryIdentifierType": "DUE_DILIGENCE_STATEMENT"
                                    }
                                ]
                            }
                        ]
                    },
                    {
                        "id": "https://id.gs1.org/01/09506000134369/10/XYZ98765",
                        "regulatoryInformation": [
                            {
                                "regulatoryAct": "EU 2023/1115",
                                "regulationType": "DEFORESTATION_REGULATION",
                                "regulatoryIdentifier": [
                                    {
                                        "regulatoryReferenceNumber": "r987",
                                        "regulatoryVerificationNumber": "v210",
                                        "regulatoryInformationProvider": "https://infoProviderCo.example/417/9521141123454",
                                        "regulatoryReferenceApplicabilityStartDate": "2025-01-01",
                                        "regulatoryReferenceApplicabilityEndDate": "2025-12-31",
                                        "regulatoryIdentifierType": "DUE_DILIGENCE_STATEMENT"
                                    }
                                ]
                            }
                        ]
                    }
                ]
            }
        ]
    }
}
```


6 GS1 EDI Solution

6.1 Introduction

The GS1 EDI standards are widely in use, in the GS1 community, as a data sharing solution for transactional data exchange, as well as for supply chain collaboration and traceability processes.

The following identified technical solutions provide the possibility to reuse and extend the exchanges already in place, limiting the impact and the required investments.

6.2 EANCOM

6.2.1 Technical solution

The EANCOM technical solution is based on the extension of the EDIFACT code list 1153 = Reference Code Qualifier.

The data element 1153 is part of the composite element C.506 in the segment RFF

RFF	- M	1 - Reference	
Function: To specify a reference.			
		EDIFACT	EAN
C506	REFERENCE	M	**M**
1153	Reference code qualifier	M an..3	**M**
1154	Reference identifier	C an..70	**R**
1156	Document line identifier	C an..6	**N**
4000	Reference version identifier	C an..35	**N**
1060	Revision identifier	C an..6	**N**

Two new values have been added to the code list, identifying the Due Diligence Statement Reference Number and Due Diligence Statement Verification Number.

DDR	Due Diligence Reference Number	The unique EUDR Due Diligence Reference Number that is returned when the due diligence is registered on the EU platform
DDV	Due Diligence Verification Number	EUDR Verification Number that is created automatically by the system when registering a Due Diligence

Being that the RFF segment is widely adopted across the EANCOM set of messages, the identified solution is applicable to multiple data exchanges, specifically where this segment is used as a reference to a product level or below.

The use of the DDR and DDV values in an RFF segment at header level or, for instance, used in a segment group with a NAD segment, providing references referred to a party, is not to be considered as proper and applicable.

This standard will provide details on the implementation with the main documents that may come into play in the EUDR.

The implementation logic explained in the use cases will be applicable to other messages as well.

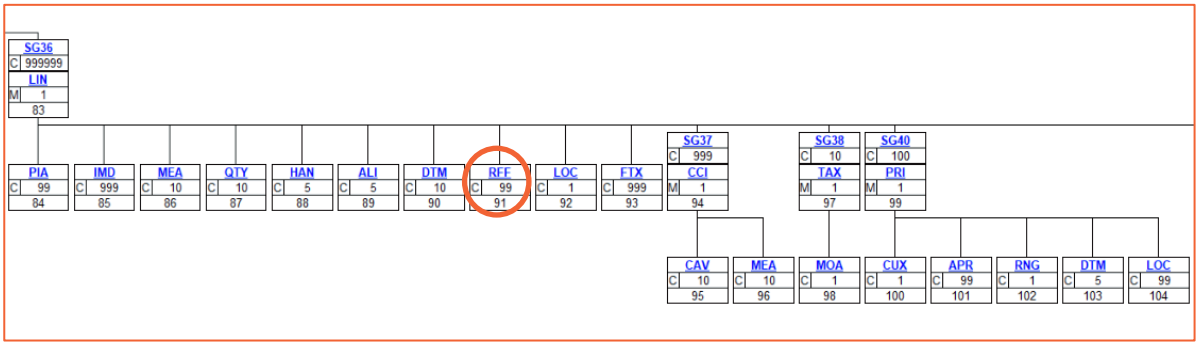
Note: Not all the data identified in the GS1 Web Vocabulary solution will be available in the EANCOM implementation. The mapping for the supported data will be provided.

Note: Since the two codes in the 1153 are specific to the EUDR regulation, in the EDI exchanges, there is no need to specify the regulatory act details, as defined in the GS1 Web Vocabulary data model. The support to additional regulations will require the addition of new specific values in the 1153 code list.

6.2.2 Master data alignment: PRICAT

The PRICAT message is used for product master data alignment and then, it can support only the product level of granularity.

Higher levels of granularity, like batch/lot or serial, are not supported by this message.



To express the two DDS numbers, the RFF segment in the SG36 can be used.

Note: the two numbers are included into two different RFF segments. There is no logical dependency between the two. The indication of multiple pairs will require a pair of RFF segment for each of the pair of DDS numbers where the verification number SHALL follow its specific reference number.

Note: In case the cardinality of the RFF segment is not enough to include all the pairs, the SG36 SHALL be repeated to accommodate all the pairs.

Since the usual use of the PRICAT is between the brand (or the importer) and the retailer, it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the SG2 with the data element 3035 = SU or AT.

In case there is the need to specify a specific DDS owner at line level, the NAD segment in the SG52 can be used.

The 3035 EDIFACT code list does not include a specific value for the EUDR submitter, however the value below, having a broader definition, can fit the purpose.

DT	Declarant	Party which makes a declaration to an official body or - where legally permitted - in whose name, or on whose behalf, a declaration to an official body is made

In SG36, it is not possible to associate a specific pair of start and end dates (**regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate** in the GS1 Web Vocabulary) with each DDS. The applicability interval will be specified once for all the SG36 using the Segment DTM and the following values in the DE C507:2005

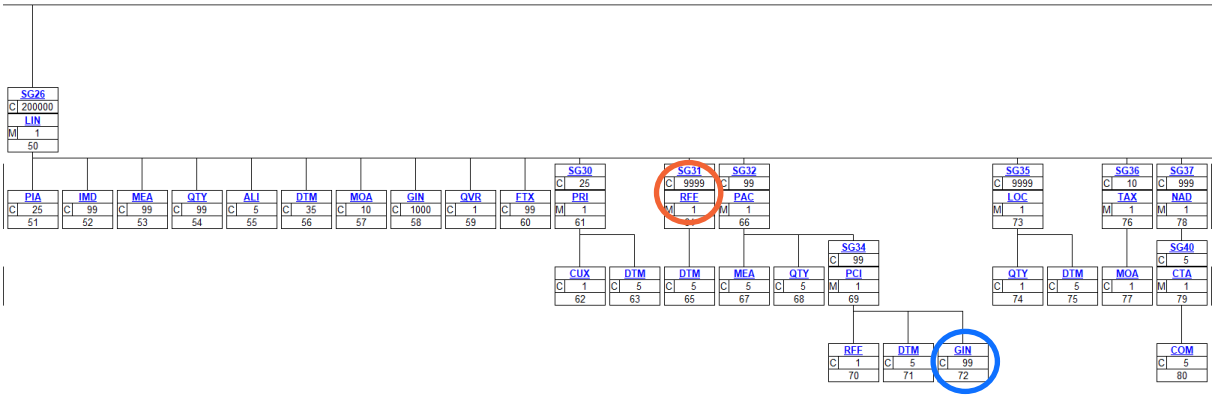
157	Validity start date	The first date of a period for which something is valid.
799	Validity end date	The last date of a period for which something is valid.

The **applicableTransactions** in GS1 Web Vocabulary can be provided through the RFF segment, in SG36, with the DE1153 indicating the proper type of reference.

6.2.3 Procurement: ORDRSP

The ORDRSP is the response message to an order and provides the confirmation of the products that will be shipped.

An ORDRSP is usually generated before the specific lots or serial numbers to be shipped are fully known. In such cases, the supported level of granularity is usually the product level. Higher levels of granularity, like batch/lot or serial, are, in theory, supported by the structure of the message but may apply only to a use case where the goods are reserved upon the generation of the ORDRSP message.



The indication of the DDS reference number and verification number leverages the SG31.

Note: the two numbers are included into two different RFF segments. There is no logical dependency between the two. . The indication of multiple pairs will require a pair of RFF segment for each of the pair of DDS numbers where the verification number SHALL follow its specific reference number.

Note: In case the cardinality of the RFF segment is not enough to include all the pairs, the SG26 SHALL be repeated to accommodate all the pairs.

The RFF segment is specifically intended for the two numbers, in order to specify the properties **regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate** defined in GS1 Web Vocabulary, the DTM segment can be used with the C507:2005 data element assuming the following values:

194	Start date/time	Date/time on which a period starts.
209	End date/time	Date/time on which a period (from - to) ends.

The same segment group SG31 can be used to specify additional transactional references, leveraging the values available in the EDIFACT code list 1153.

Since the usual use of the ORDRSP is between the brand (or the importer) and the retailer, it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the SG3 with the data element 3035 = SU.

In case there is the need to specify a specific DDS owner at line level, the NAD segment in the SG37 than can, technically, be used.

The 3035 EDIFACT code list does not include a specific value for the EUDR submitter, however the value below, having a broader definition, can fit the purpose.

DT	Declarant	Party which makes a declaration to an official body or - where legally permitted - in whose name, or on whose behalf, a declaration to an official body is made

As stated at the beginning of the section, the ORDRSP typically applies only at the product level.

In the specific use case where the goods reservation is done, there is the chance to specify a set of lots and / or serials using the segment GIN, evidenced with the blue circle in the figure, in the SG34.

GIN - C 99 - Goods identity number

Function:

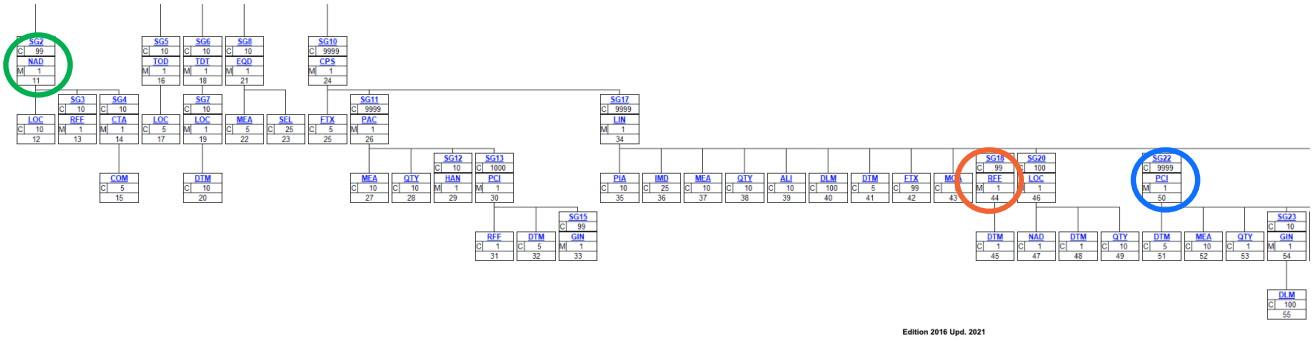
To give specific identification numbers, either as single numbers or ranges.

		EDIFACT	EAN	*	Description
7405	Object identification code qualifier	M an..3	**M**	*	AW = Serial shipping container code BJ = Serial shipping container code BN = Serial number BX = Batch number SRV = GS1 Global Trade Item Number (GS1 Temporary Code)
C208	IDENTITY NUMBER RANGE	M	**M**		
7402	Object identifier	M an..35	**M**		
7402	Object identifier	C an..35	**O**		

6.2.4 Shipment: DESADV

The DESADV message provides the goods recipient with complete details of the shipment composition, including logistic units, products, lots, serial numbers, and expiry dates.

The supported level of details and granularity makes the DESADV the preferrable solution when the requirement is to implement a level of granularity higher than the simple product level.



The indication of the DDS reference number and verification number SHALL use the SG18.

Note: the two numbers are included into two different RFF segments. There is no logical dependency between the two. The indication of multiple pairs will require a pair of RFF segment for each of the pair of DDS numbers where the verification number SHALL follow its specific reference number.

Note: In case the cardinality of the RFF segment is not enough to include all the pairs, the SG17 SHALL be repeated to accommodate all the pairs.

The same segment group SG18 can be used to specify additional transactional references, using the values available in the EDIFACT code list 1153.

In order to specify the properties **regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate** defined in GS1 Web Vocabulary, since the DTM

included in the SG18 has a restricted set of allowed values, the available solution is to use the SG22, evidenced in blue in the figure.

The DTM segment can be used with the C507:2005 data element assuming the following values:

194	Start date/time	Date/time on which a period starts.
209	End date/time	Date/time on which a period (from - to) ends.

The segment GIN, in the SG23, can, then, be used to specify the set of lots or serials that are covered by the DDS.

According to the usual application of the DESADV it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the SG2 with the data element 3035 = SU.

In the DESADV structure, it is not possible to specify the DDS owner at the line level. The only available option is to use SG2 at the header level, which means that the **regulatoryInformationProvider** will apply to the entire message rather than to specific lines. The 3035 EDIFACT code list does not include a specific value for the EUDR submitter, however the value below, having a broader definition, can fit the purpose.

DT	Declarant	Party which makes a declaration to an official body or - where legally permitted - in whose name, or on whose behalf, a declaration to an official body is made

6.2.5 Logistic Process: INSDES

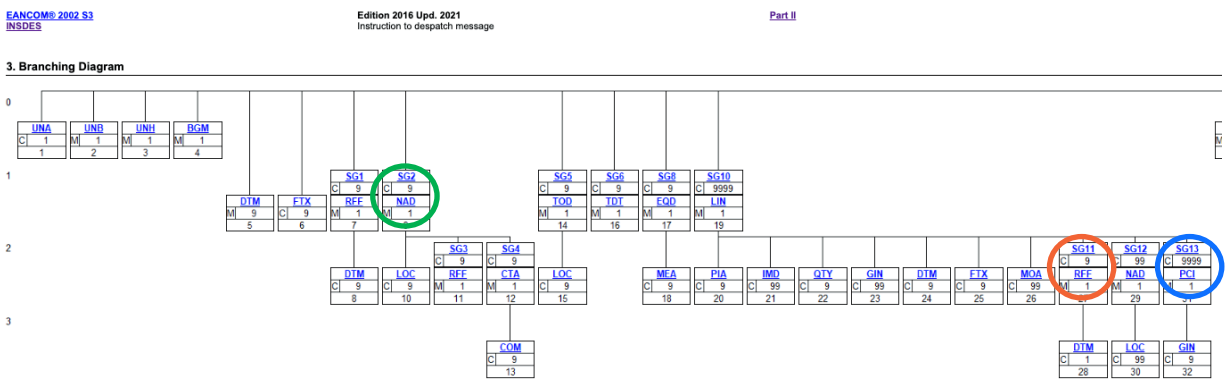
The INSDES is a message that provides the instructions to despatch to a third party service provider.

The INSDES can be used to identify at a complete message level or at a line item level;

- the delivery location(s)
- the date(s) on which delivery(s) should take place
- etc.

In the context of the EUDR regulation, it can be used to provide also the Due Diligence Statement Reference and Verification Numbers.

This applies, in particular, to use case when the service provider will deliver the goods and will generate the DESADV for the recipient, having the need to include those numbers there.



The indication of the DDS reference number and verification number leverages the SG11.

Note: the two numbers are included into two different RFF segment. There isn't any logical dependency between the two. The indication of multiple pairs will require a pair of RFF

segment for each of the pair of DDS numbers where the verification number SHALL follow its specific reference number.

Note: In case the cardinality of the RFF segment is not enough to include all the pairs, the SG10 SHALL be repeated to accommodate all the pairs.

The same segment group SG11 can, also, be used to specify additional transactional references, leveraging the values available in the EDIFACT code list 1153. For references applicable to all the message, the SG1 can be used as well.

Note: The actual INSDES structure does not support the properties **regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate** defined in GS1 Web Vocabulary, since the DTM included in the SG11 has a restricted set of allowed values and same happens with the DTM in the SG10. To enable the use of the DTM segment in the SG11, an extension of the restricted code list would be needed, adding the following values:

194	Start date/time	Date/time on which a period starts.
209	End date/time	Date/time on which a period (from - to) ends.

The segment GIN, in the SG13, can, then, be used to specify the set of lots or serials that are covered by the DDS.

According to the usual application of the INSDES it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the SG2 with the data element 3035 = SU or = OB.

In the INSDES structure, it is not possible to specify the DDS owner at the line level. The only available option is to use SG2 at the header level, which means that the regulatoryInformationProvider applies to the entire message rather than to individual lines. The 3035 EDIFACT code list does not include a specific value for the EUDR submitter, however the value below, having a broader definition, can fit the purpose.

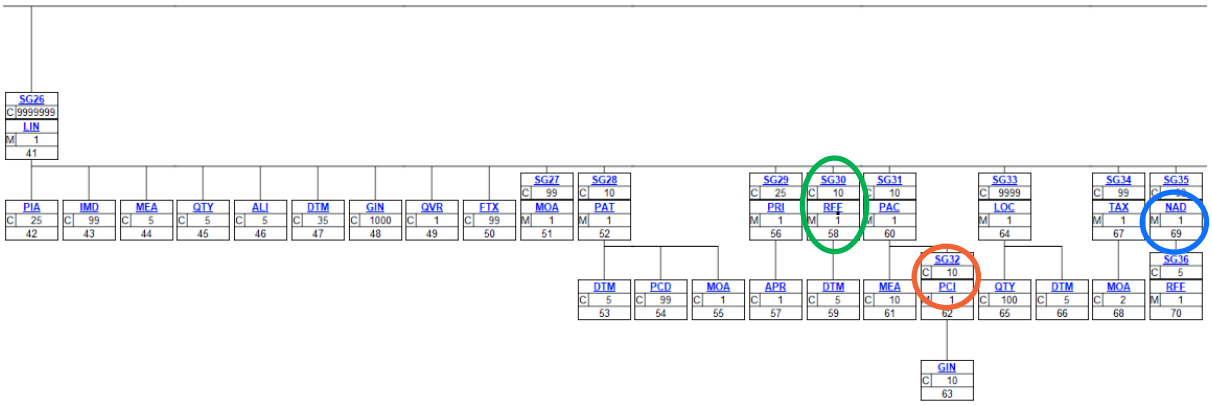
DT	Declarant	Party which makes a declaration to an official body or - where legally permitted - in whose name, or on whose behalf, a declaration to an official body is made

6.2.6 Payment: INVOIC

The INVOIC is a message claiming payment for goods or services supplied under conditions agreed between the seller and the buyer.

Although it is usually a document issued at the end of the transaction, when the goods have already been delivered to the recipient, there are use cases where the document comes into play in earlier stages of the supply chain.

An example can be the "immediate invoice", that is issued immediately when the shipment starts and legally substitutes the shipping document. The message then assumes a double role, being at the same time a financial document and a logistic document, carrying also the EUDR related data.



The indication of the DDS reference number and verification number uses the SG30.

Note: the two numbers are included into two different RFF segments. There is no logical dependency between the two. . The indication of multiple pairs will require a pair of RFF segment for each of the pair of DDS numbers where the verification number SHALL follow its specific reference number.

Note: In case the cardinality of the RFF segment is not enough to include all the pairs, the SG26 SHALL be repeated to accommodate all the pairs.

Important: The same segment group SG30 can, also, be used to specify additional transactional references, leveraging the values available in the EDIFACT code list 1153. For references applicable to all the messages, the SG1 can be used as well.

: The actual INSDES structure does not support the properties **regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate** defined in GS1 Web Vocabulary, since the DTM included in the SG30 has a restricted set of allowed values and same happens with the DTM in the SG26. To enable the use of the DTM segment in the SG30, an extension of the restricted code list would be needed, adding the following values:

194	Start date/time	Date/time on which a period starts.
209	End date/time	Date/time on which a period (from - to) ends.

Note: The actual structure of the INVOIC message does not support a level of granularity higher than the GTIN. Unlike the other messages, the GIN segment, in the SG32, can express only the SSCC while lots and serial numbers are not supported. In order to include this support, an extension of the restricted list of the values for the DE7405 would be needed.

According to the usual application of the INVOIC it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the SG2 with the data element 3035 = SU.

If needed, the structure of the INVOIC provides the possibility to specify the **regulatoryInformationProvider** both at header level, in the SG2, and at line level, in the SG35.

The 3035 EDIFACT code list does not include a specific value for the EUDR submitter, however the value below, having a broader definition, can fit the purpose.

DT	Declarant	Party which makes a declaration to an official body or - where legally permitted - in whose name, or on whose behalf, a declaration to an official body is made

6.3 GS1 XML

6.3.1 Technical solution

The GS1 XML technical solution is based on the extension of the code list for the **transactionalReferenceTypeCode** type and it is used in the classes **TransactionalGenericReference** and **TransactionalReference.**

Class
TransactionalGenericReference

Name	TransactionalGenericReference
Definition	Reference to an associated information in support of related business processes. The type of references are defined in the TransactionalReferenceTypeCode list.

Attributes

Name	Data Type	Multiplicity	Length
transactionalReferenceTypeCode	TransactionalReferenceTypeCode	1..1	
transactionalReferenceValue	string	1..1	{1..200}
transactionalReferenceDateTime	dateTime	0..1	

Class
TransactionalReference

Name	TransactionalReference
Definition	Reference to an associated document containing information in support of related business processes. E.g. a purchase order, a bill of lading, etc. ;new class added in MR3 to replace some uses of TypedEntityIdentification

Generalizations

Name	Class	Multiplicity	Definition
Generalization	Ecom_DocumentReference		

Attributes

Name	Data Type	Multiplicity	Length
transactionalReferenceTypeCode	TransactionalReferenceTypeCode	1..1	

Two new values have been added to the code list, identifying the Due Diligence Statement Reference Number and Due Diligence Statement Verification Number.

DDR	Due Diligence Reference Number	The unique EUDR Due Diligence Reference Number that is returned when the due diligence is registered on the EU platform
DDV	Due Diligence Verification Number	EUDR Verification Number that is created automatically by the system when registering a Due Diligence

These classes are widely adopted across the GS1 XML set of messages, so the identified solution is applicable to multiple data exchanges, specifically where this segment is used as a reference to a product level or below.

This guideline will provide details on the implementation with the main documents that may come into play in the EUDR.

The implementation logic explained in the use cases will be applicable to other messages as well.

Note: Not all the data identified in the GS1 Web Vocabulary solution will be available in the GS1 XML implementation. The mapping for the supported data will be provided.

Note: Since the two codes in the **transactionalReferenceTypeCode** are specific to the EUDR regulation, in the EDI exchanges, there is no need to specify the regulatory act details, as defined in the GS1 Web Vocabulary data model. The support to additional regulations will require the addition of new specific values in the code list.

Important: The master data message, the Item Data Notification message, does not include any of the classes supporting the **transactionalReferenceTypeCode** data type. Therefore, the master data alignment process is not supported in the EUDR context.

6.3.2 Procurement: Order Response

The Order Response is the response message to an order and provides the confirmation of the products that will be shipped.

An Order Response is usually generated before the specific lots or serial numbers to be shipped are fully determined. In such cases, the supported level of granularity is generally the product level. Higher levels of granularity, like batch/lot or serial, are, in theory, supported by the structure of the message but may apply only to a use case where the goods are reserved upon the generation of the Order Response message.

The indication of the DDS reference number and verification number leverages the association **TransactionalGenericReference** included in the class **OrderResponseLineItem.**

This class provides the details of a confirmed line.

Note: the two numbers are included into two different instances of the TransactionalGenericReference class. There is no logical dependency between the two. The indication of multiple pairs SHALL follow logical ordering with the reference number preceding its specific verification number

Class
OrderResponseLineItem

Name	OrderResponseLineItem
Definition	Contains the modifications per line item on items (substitutes), quantities, prices and/or of the original order.

Attributes

Name	Data Type	Multiplicity	Length
lineItemNumber	positiveInteger	1..1	
parentLineItemNumber	positiveInteger	0..1	
confirmedQuantity	Quantity	1..1	
lineItemActionCode	LineItemActionCode	0..1	
lineItemChangeIndicator	ResponseStatusCode	0..1	
originalOrderLineItemNumber	positiveInteger	0..1	
orderResponseReasonCode	ErrorOrWarningCode	0..*	
additionalOrderLineInstruction	Description200	0..1	
deliveryDateTime	dateTime	0..1	
netAmount	Amount	0..1	
netPrice	Amount	0..1	
monetaryAmountExcludingTaxes	Amount	0..1	
monetaryAmountIncludingTaxes	Amount	0..1	
note	Description500	0..1	
avpList	Ecom_AttributeValuePairList	0..1	
deviatingQuantity	Quantity	0..1	
firstDeliveryDateTime	dateTime	0..1	

Calls

Association Name	Class	Multiplicity	Definition	Message(s)
	ShipmentTransportationInformation	0..1	Contains the identification of the carrier and mode associated with the transportation of the goods or services.	ConfigureToOrder, Invoice, OrderResponse, WarehousingOutboundInstruction, WarehousingOutboundNotification
	TransactionalGenericReference	0..*		DespatchAdvice, Invoice, Order, OrderResponse, RequestForPayment

Note: The **regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate,** defined in GS1 Web Vocabulary, do not have a corresponding pair of attributes. There is a date, **transactionalReferenceDateTime**, but it represents the date the reference has been issued and therefore it cannot be assumed to be the applicability start date

The same TransactionalGenericReference class can be used to provide references to other transactions or documents. The allowed references are specified in the **transactionalReferenceTypeCode** code list.

Since the usual use of the Order Response is between the brand (or the importer) and the retailer, it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the **seller** class in the header of the message.

Note: the actual structure of the message does not support the need to specify a specific DDS owner, neither at header level, nor at line level.

As stated at the beginning of the section, the Order Response typically applies only at the product level. In the specific use case where the goods reservation is done, there is the chance to specify a set of lots and / or serials using the class **TransactionalItemData**

Class
TransactionalItemData

Name	TransactionalItemData
Definition	Dynamic characteristics used to specify individual instances of a trade item, such as the best before date, batch number or serial number.

Attributes

Name	Data Type	Multiplicity	Length
availableForSaleDate	date	0..1	
batchNumber	string	0..1	{1..80}
bestBeforeDate	date	0..1	
countryOfOrigin	CountryCode	0..1	
itemExpirationDate	date	0..1	
lotNumber	string	0..1	{1..80}
packagingDate	date	0..1	
productionDate	date	0..1	
productQualityIndication	Quantity	0..1	
sellByDate	date	0..1	
serialNumber	string	0..*	{1..20}
shelfLife	string	0..1	{1..80}
tradeItemQuantity	Quantity	0..1	
avpList	Ecom_AttributeValuePairList	0..1	
itemInContactWithFoodProduct	boolean	0..1	

6.3.3 Shipment: Despatch Advice

The DESADV message provides the goods recipient with complete details of the shipment composition, including logistic units, products, lots, serial numbers, and expiry dates. The supported level of details and granularity makes the Despatch Advice the preferrable solution when the requirement is to implement a level of granularity higher than the simple product level.

The indication of the DDS reference number and verification number uses the association **TransactionalGenericReference** included in the class **DespatchAdviceLineItem.**

This class provides the details of a shipped line.

Note: the two numbers are included into two different instances of the TransactionalGenericReference class. There is no logical dependency between the two. The indication of multiple pairs SHALL follow a logical ordering with the reference number preceding its specific verification number.

Note: The **regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate,** defined in GS1 Web Vocabulary, do not have a corresponding pair of attributes in the GS1 XML Despatch Advice. There is a date, **transactionalReferenceDateTime**, but it represents the date the reference has been issued and therefore it cannot be assumed to be the applicability start date.

The same TransactionalGenericReference class can be used to provide references to other transactions or documents. The allowed references are specified in the **transactionalReferenceTypeCode** code list.

Usually, the Despatch Advice is issued by the supplier or by the logistic provider.

In case the exchange is between the brand (or the importer) and the retailer, even if the shipment is done by a logistic provider issuing the message, it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the **seller** class in the header of the message.

Note: the actual structure of the message does not support the option to specify a specific DDS owner, different from the seller, neither at header level, nor at line level.

The Invoice message supports multiple levels of granularity, from product level to lot or serial level.

To specify a set of lots and / or serials the class **TransactionalItemData** can be used.

Class
TransactionalItemData

Name	TransactionalItemData
Definition	Dynamic characteristics used to specify individual instances of a trade item, such as the best before date, batch number or serial number.

Attributes

Name	Data Type	Multiplicity	Length
availableForSaleDate	date	0..1	
batchNumber	string	0..1	{1..80}
bestBeforeDate	date	0..1	
countryOfOrigin	CountryCode	0..1	
itemExpirationDate	date	0..1	
lotNumber	string	0..1	{1..80}
packagingDate	date	0..1	
productionDate	date	0..1	
productQualityIndication	Quantity	0..1	
sellByDate	date	0..1	
serialNumber	string	0..*	{1..20}
shelfLife	string	0..1	{1..80}
tradeItemQuantity	Quantity	0..1	
avpList	Ecom_AttributeValuePairList	0..1	
itemInContactWithFoodProduct	boolean	0..1	

6.3.4 Payment: Invoice

The INVOIC is a message claiming payment for goods or services supplied under conditions agreed between the seller and the buyer.

Although it is usually a document issued at the end of the transaction, when the goods have already been delivered to the recipient, there are use cases where the document comes into play in earlier stages of the supply chain.

An example can be the "immediate invoice", that is issued immediately when the shipment starts and legally substitutes the shipping document. The message, then, assumes a double role, being at the same time a financial document and a logistic document, carrying also the EUDR related data.

The indication of the DDS reference number and verification number uses the association **TransactionalGenericReference** included in the class **InvoiceLineItem.**

This class provides the details of an invoiced line.

Note: the two numbers are included into two different instances of the TransactionalGenericReference class. There is no logical dependency between the two. The indication of multiple pairs SHALL follow a logical ordering with the reference number preceding its specific verification number

Note: The **regulatoryReferenceApplicabilityStartDate** and **regulatoryReferenceApplicabilityEndDate,** defined in GS1 Web Vocabulary, do not have a corresponding pair of attributes in GS1 XML Invoice. There is a date, **transactionalReferenceDateTime**, but it represents the date the reference has been issued and therefore it cannot be assumed to be the applicability start date

The same TransactionalGenericReference class can be used to provide references to other transactions or documents. The allowed references are specified in the **transactionalReferenceTypeCode** code list.

Usually, the Despatch Advice is issued by the supplier or by the logistic provider.

In case the exchange is between the brand (or the importer) and the retailer, even if the shipment is done by a logistic provider issuing the message, it can be assumed that the **regulatoryInformationProvider**, as defined in GS1 Web Vocabulary, corresponds to the party indicated in the **seller** class in the header of the message.

Note: the actual structure of the message does not support the need to specify a specific DDS owner, neither at header level, nor at line level.

The Despatch Advice message supports multiple levels of granularity, from product level to lot or serial level.

To specify a set of lots and / or serials the class **TransactionalItemData** can be used.

Class
TransactionalItemData

Name	TransactionalItemData
Definition	Dynamic characteristics used to specify individual instances of a trade item, such as the best before date, batch number or serial number.

Attributes

Name	Data Type	Multiplicity	Length
availableForSaleDate	date	0..1	
batchNumber	string	0..1	{1..80}
bestBeforeDate	date	0..1	
countryOfOrigin	CountryCode	0..1	
itemExpirationDate	date	0..1	
lotNumber	string	0..1	{1..80}
packagingDate	date	0..1	
productionDate	date	0..1	
productQualityIndication	Quantity	0..1	
sellByDate	date	0..1	
serialNumber	string	0..*	{1..20}
shelfLife	string	0..1	{1..80}
tradeItemQuantity	Quantity	0..1	
avpList	Ecom_AttributeValuePairList	0..1	
itemInContactWithFoodProduct	boolean	0..1	

7 GDSN Solution

7.1 Introduction

The GS1 Global Data Synchronisation Network (GS1 GDSN) is the world's largest product data network. With GDSN, high-quality product content is uploaded, maintained and shared automatically, ensuring trading partners have immediate access to the most current and complete information needed to exchange products on both local and global markets.

GDSN is based on the master data approach and enables the structured exchange of product data across the supply chain.

Some of the information provided via GS1 Web Vocabulary can also be transmitted through GDSN. This includes key EUDR-relevant data elements such as the EUDR applicability, the Reference Number and the Verification Number.

The GDSN approach supports data readiness at the GTIN-level, allowing for early-stage preparation and integration into internal systems. When both trading partners have implemented a GDSN-based solution, this standard can effectively be used to communicate the Reference and Verification Number as required by EUDR.

7.2 Technical solution

Attributes that can be transmitted using the GDSN Standard:

Module	Class	Attribute	Definition
RegulatedTradeItem	RegulatoryInformation	regulationTypeCode (= DEFORESTATION_REGULATION)	The code indicating a type of regulation.
		isTradeItemRegulationCompliant (= TRUE – the product is subject to EUDR) (= NOT_APPLICABLE – the product is not subject to EUDR)	The indicator specifying whether the product is subject to EUDR or not. Remark: This definition is specific to regulationTypeCode = DEFORESTATION_REGULATION.
	RegulatoryIdentifier	regulatoryReferenceNumber	A reference number for a record, document or dataset stored within a regulatory information system, repository or registry.
		regulatoryVerificationNumber	A verification number for a record, document or dataset stored within a regulatory information system, repository or registry, typically used in combination with the reference number when requesting access to the referenced document or dataset.
		regulatoryReferenceAvailabiltyStartDate	The earliest date from which the referenced information becomes applicable.
		regulatoryReferenceAvailabiltyEndDate	The final date for which the referenced information remains applicable.
		regulatoryIdentifierType (= DUE_DILIGENCE_STATEMENT)	The code indicating the type of regulatory information that is referenced.

7.3 General Use Case – EUDR Applicability

Suppliers may use GDSN to inform retailers about products which are subject to EUDR as retailers are obliged to ascertain that these products have not caused deforestation and can be sold to the consumer in EU. Following regulation information attributes shall be used:

- regulationTypeCode: DEFORESTATION_REGULATION
- isTradeItemRegulationCompliant: TRUE, NOT_APPLICABLE
  - Use value 'TRUE' if EUDR applies to the product: the product's Combined Nomenclature (CN) code is listed in Annex I of EUDR and it either contains, has been fed with, or has been produced using the relevant commodities.
  - Use value 'NOT_APPLICABLE' if EUDR does not apply to the product: the product's CN code is not listed in Annex I of EUDR or it does not contain, has not been fed with, and has not been produced using the relevant commodities.

7.4 Use Case When Sharing Due Diligence Information

GDSN may be applied to products limited in quantity or time – for example, one-off or seasonal products with clearly defined quantities – where the respective sourcing parameters remain stable.

An example would be wooden garden furniture. These types of products lend themselves well to a master-data driven approach, where EUDR-related information – such as the Reference Number *(regulatoryReferenceNumber)* and the Verification Number *(regulatoryVerificationNumber)* – can be transmitted once and remain valid over a longer period.

In such cases, GDSN can be used to exchange the relevant regulatory identifier type *(regulatoryIdentifierType)*, such as the Due Diligence Statement (DDS), the reference number and the verification number via GDSN.

Since these products are typically planned well in advance, the DDS can be prepared proactively to cover the anticipated quantities for the relevant period.

This information SHOULD include a Validity Start Date *(regulatoryReferenceAvailabiltyStartDate)* and Validity End Date *(regulatoryReferenceAvailabiltyEndDate)* to define the intended applicability of DDS and associated identifiers.

It should be noted that these dates reflect declared validity and do not inherently verify deforestation-free status at the batch level.

If an additional DDS is created later (e.g. for next year's stock), the entire product class *(RegulatoryIdentifier)* can be repeated in GDSN with the updated Reference Number, Verification Number, and the new Validity Period. This helps business partners distinguish which DDS is intended for a given period.

The EUDR applicability *(regulationType + isTradeItemRegulationCompliant)* SHOULD be communicated early via GDSN.

This gives non-SME buyers sufficient time to identify any obligations under the EUDR – such as whether a DDS must be carried out before the product is placed on the market.

If the product is sold shortly after ordering (i.e., within a short sales cycle), the seller should consider informing the buyer separately and directly about the EUDR compliance data to ensure timely availability.

Note: The master data approach using GDSN is most suitable when EUDR Reference and Verification Numbers remain stable for extended periods. For products with relatively stable documentation and predictable ordering cycles, GDSN may offer a framework for sharing regulatory data, though its applicability depends on the consistency of underlying compliance information.

For products with fluctuating sourcing, additional traceability mechanisms beyond GDSN may be necessary to ensure compliance. GDSN does not replace batch-level verification processes required

under EUDR. Companies should assess whether GDSN is appropriate for their product and sourcing setup.

8 Examples

Future examples will be available via https://ref.gs1.org/standards/eudr/artefacts