



DIASCA

Digital Integration of Agricultural Supply Chains Alliance

Results of the first Round Table Meeting on 7th September 2022

On **7 September 2022**, more than 60 supply chain actors, technology companies, researchers and other key stakeholders from around the world convened for the first time around the topic of **interoperability of digital traceability systems** and its importance in global agricultural supply chains. The ambitious goal of the “**Digital Integration of Agricultural Supply Chains Alliance**” (**DIASCA**) is a broad agreement on common data standards for **traceability, forest monitoring and farm income** by August 2023. This joint work will facilitate interoperability and data exchange between systems and enable an easier implementation and monitoring of due diligence legislations and related EU initiatives, such as the legislative proposal to ban products associated with deforestation from entering the EU market.

Please contact diasca@giz.de if you are interested in participating in DIASCA or in receiving updates. The next DIASCA round table meeting is scheduled for **30 November 2022**.

Commissioned by:



Implemented by:



In collaboration with:



Introduction

Due diligence requirements and respective legislations, such as the [new EU new rules for deforestation-free products](#), generate a concrete sense of urgency for agricultural supply chain actors to track their agricultural products' origin and sustainability history in an efficient manner.

The global situation of data flows and their digital applications in agriculture is heterogeneous, fragmented and not very efficient. Interoperability of traceability systems from farm to fork can benefit all supply chain actors.

Hence, a **broad acceptance of common global standards to track and trace products and report on their sustainability** could significantly boost efficiency and facilitate information exchange within supply chains.

The [Digital Integration of Agricultural Supply Chains Alliance \(DIASCA\)](#) is a project of the [Initiative for Sustainable Agricultural Supply Chains \(INA\)](#), commissioned by the [German Federal Ministry for Economic Cooperation and Development \(BMZ\)](#), implemented in collaboration with [GS1 Germany GmbH](#), the [Committee on Sustainability Assessment \(COISA\)](#), [Deutsches Institut für Normung e. V. \(DIN\)](#), the [Linux Foundation AgStack project](#) and other key sector stakeholders, including supply chain actors, ICT Service providers, governments and other relevant organisations.

Its **objective** is to find a broad agreement on globally accepted standards on

- **Traceability**,
- **Geospatial Data: forest monitoring** and
- **Entity-based Data: farm income**,

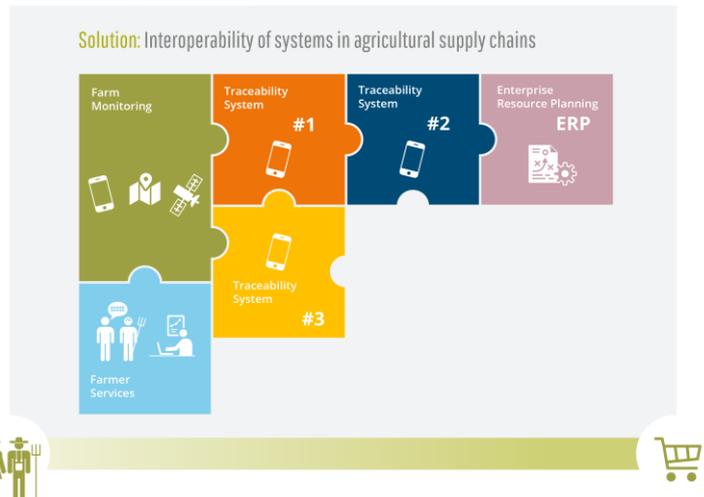
as fundamental building blocks for efficient data flow and compliance within agricultural supply chains, underpinned by concrete use cases and field-level reference projects.

DIASCA was kicked off on 7 September 2022 with more than 60 international experts gathering around the first virtual round table. See the introductory slide decks on [interoperability](#), [DIASCA](#) and the recording [here](#) and the breakdown of participants in the annex on page 8.

DIASCA's approach for the first phase until August 2023 is designed as follows:

1. Stakeholder **interviews** haven taken place prior to this first event. See the [presentation](#) and [recording](#) on results and derived hypotheses.
2. Iterative approach via a **series of roundtable talks**
3. Three **subgroups** on the above focus topics
4. Cross-check of results through **field-level reference projects** with stakeholders
5. Recommendations as **input for standardisation bodies and processes**

DIASCA long-term vision



Interoperability

Interoperability consists of the guidelines that allow different information systems to functionally comprehend and utilize information shared between them. To succeed, interoperability must be:

- **Pragmatically useful** and fit for purpose
- **Commonly accepted** as credible and science-based
- **Accessible** (cost & ease of use) and globally applicable

The ability to gather and exchange data credibly between and within corporate and public systems is a key requirement. This means establishing interoperability among the different ways of identification, capturing, organizing, and reporting sustainability data with an approach that is both tech-neutral and tool-agnostic. Then, to be functional and widely accepted, any common standard needs to be transparent, evidence-based, and designed for extensibility. To achieve this, as a meta guideline, it must thoughtfully address the three major domains of interoperability:

- **Semantic:** Definition or detailed meaning of vocabulary, indicators and metrics (*e.g. is child labor defined as age 13 or 15, what does packaging mean*)
- **Syntactic:** Rules and structure pertaining to the data (*e.g. what format of date to use: dd.mm.yyyy*)
- **Technical:** Format for how data is stored and transmitted (*e.g. JSON vs csv, wide vs narrow*)

Working Group Summaries

1. Traceability

Summary

Traceability along entire value networks is based on unique identification, capturing and sharing of data. With regards to identification, entities are classified in different levels like physical and digital locations, value network actors, products and their batches (or serial numbers), logistic units, transport units, reusable transport items. For cross-company use, these entities need worldwide unique identification keys. Regarding the data capture and a population of events with a common vocabulary along the supply chain, standardized auto ID solutions and a standard for identification keys and their attributes are available. This layer opens the way for standardized interfaces for data exchange between multiple IT systems among different stakeholders. The entities named above can be accompanied by crucial sustainability information. With regards to deforestation-free products this can be geolocations or data/certifications on due diligence. For more information, see the [slide deck](#) and [recording](#).

Recommendations

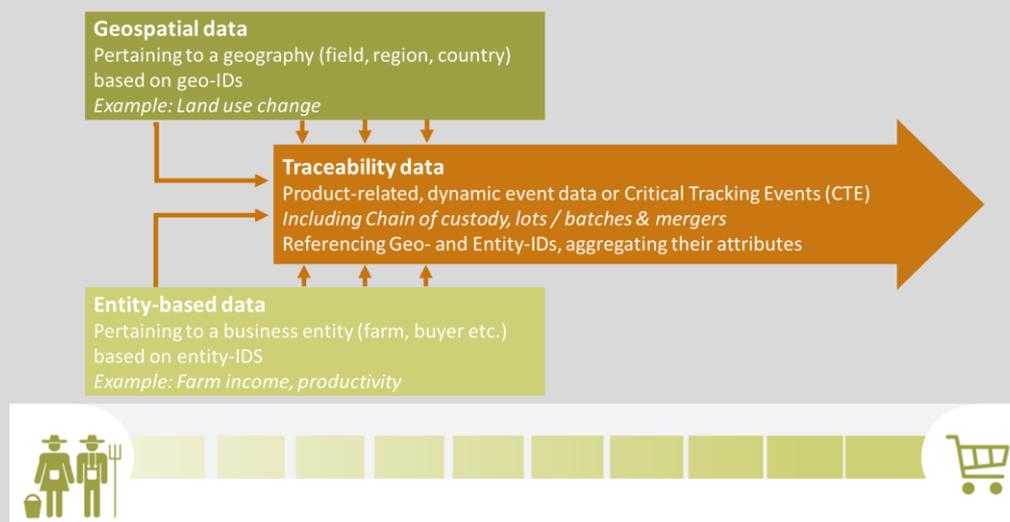
The traceability session came up with **three initial core recommendations**:

1. Identify and agree on global traceability attributes and data formats for established identification keys, common auto ID and information sharing. For interoperability reasons in multi-tier value networks one should build on existing standards.
2. Start small in tracing complete supply chains to proof functionalities and improve trust. To achieve a relevant data amount and a substantial trust in data, the experts proposed a secure storage of data and their responsible dissemination by public or private services (e. g. trustee service, shared enterprise).
3. A commitment of companies for data sharing is crucial which depends strongly on the benefits of conducting traceability for all stakeholders in a general trustworthy framework.

Three Pillars of DIASCA: Traceability, Entity-level and Geospatial Data

Integrating traceability with entity-level information, including individual farms, cooperatives, exporters, allows to assess the sustainability of a particular supply chain, brand or industry, by determining which farms, factories and other entities are included, and their assessing their respective sustainability.

Geospatial data, anchored to the GPS or polygons of entities, then provides the ability to leverage 3rd party data, include deforestation maps, climate models and other information that may be less feasible to collect en-mass for each entity.



2. Geospatial Data: Forest Monitoring

Summary

Geospatial data offers the ability to monitor and even predict key attributes, from deforestation to climate change, often at a fraction of the cost of gathering similar data on the ground. The number of geospatial data sources has proliferated. Yet leveraging the value of geospatial data to understand the context for a supply chain or group of suppliers, requires integration with entity-level and traceability data.

The objective of the geospatial working group is to begin to establish the fundamentals for interoperability between geospatial systems and the systems used to capture entity-level and traceability data.

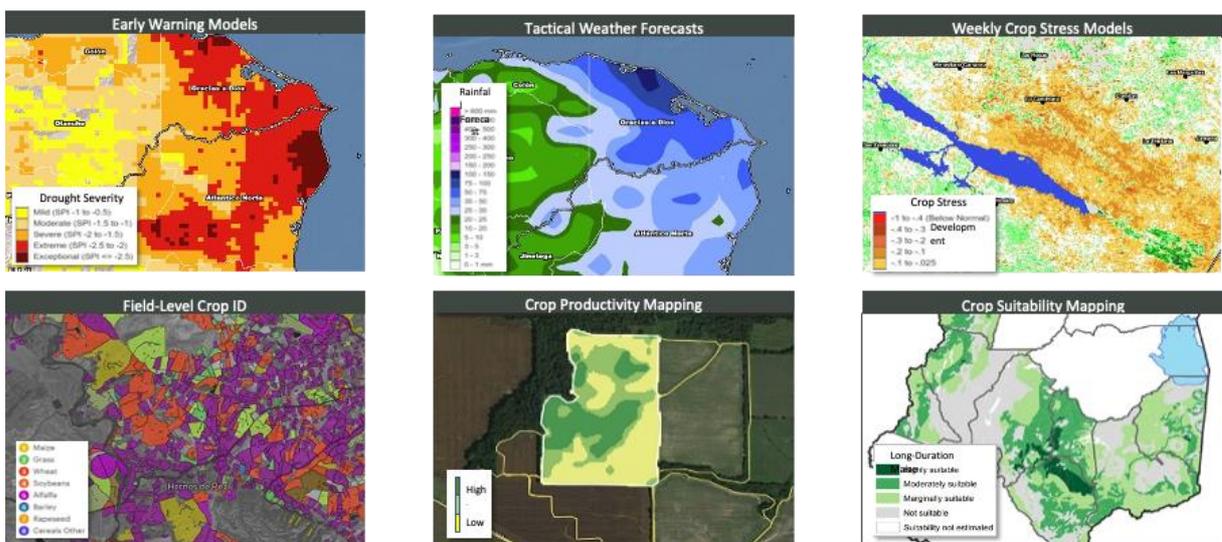
The working group will focus on Forest Monitoring as a tangible use-case for geospatial data. Forest monitoring is a topic of particular urgency and establishing standardization and interoperability is imperative ahead of upcoming regulatory changes in the EU, which will require all products being imported into the EU to be deforestation-free.

Recommendations

The Geospatial: Forest Monitoring session concluded with **five core recommendations**:

1. Invite more leaders from producer countries (national/regional commodity trade associations, producer organizations, governments, farmer support/advisory organizations, etc.). We also need to make it possible for them to participate (simultaneous translation, easily usable/accessible tech platform, timing, etc.).

2. Requirements and definitions must be clarified (i.e. how is a forest, a farm, and/or deforestation defined). Even a minor difference in definition could be catastrophic for deforestation.
3. Important to support open-source approaches that create one absolute and openly available source for good data/farm polygons.
4. Use geospatial data to play a role in closing the income gap for farmers: revenue generation from data collection, pay for practice change, insetting, carbon offsets, tokenization, etc. Invite more supply chain and carbon finance experts, such as the Council on Smallholder Agricultural Finance (CSAF).
5. We must make sure that we do not 'wrongfully exclude' producers that have no relation to a given deforestation event. How do we ensure this does not happen—especially with automated geospatial monitoring? And, if it does happen, a grievance protocol should be designed so that farmers have recourse.



3. Entity-Level Data: Cost of production - Farm Income

Summary

Individual entities, from farmers to brands and consumers, ultimately affect and are affected by sustainability efforts. Data affects many decisions and so data standards are vital to any shared accountability and those with interoperability will lower their costs and improve their understanding.

The working group will focus on entities further up the supply chain, where sustainability concerns, from human rights issues to deforestation and other environmental issues tend to be more severe. The entity-level data working group was initially set to focus on the topic of Farm Income. However, the group may elect to focus first on the relatively simpler Cost of Production given the overall objective of establishing interoperability that can then apply to any topic, including Farm Income.

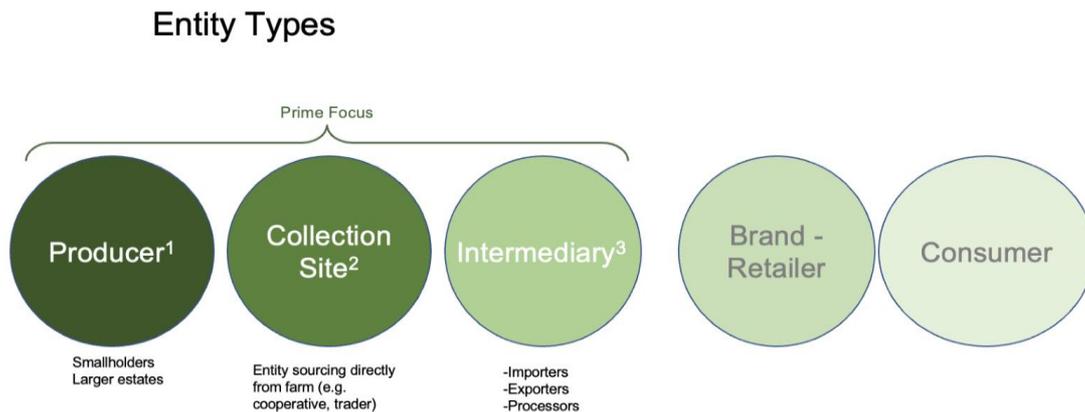
Recommendations

The Entity-base Data: Farm Income session concluded with a long list of core questions to address in working groups going forward, ranging from the optimal unit of analysis and how to ensure that farmers contribute to and benefit fairly from the data. During the initial session, the group did conclude on the following **three core recommendations**:

1. DIASCA should establish a curated set of indicators (semantics) and methodologies for measuring (syntax).
2. To achieve this, there should be a multi-stakeholder advisory board (with core funding) to maintain standard and approve additions or changes.
3. In determining the optimal way to measure a given issue, that a balance must be found between rigor and pragmatism. In some cases where the optimal way to measure a topic is quite complex, then may consider having both the simple and the ideal method.

For more information on farm income and forest monitoring, see the [slide deck](#) and the [recording](#).

Next Steps



As next steps and methodology for the working group on **traceability**, the DIASCA steering unit will elaborate on the given statements and propose to the working group participants:

- a) a dedicated **DIASCA value network** – also transferable and scalable,
- b) a **DIASCA process model** on the use of global standards for all stakeholders in the supply chain processes above – existing and future needs,
- c) a draft **DIASCA roadmap** for internal alignment with information requirements from the working groups on farm income and forest monitoring – including priority list and integration plan.

Working group participants will be invited to get involved and to contribute to the DIASCA traceability recommendations; co-leading roles in tasks can be attributed to those having strong interests.

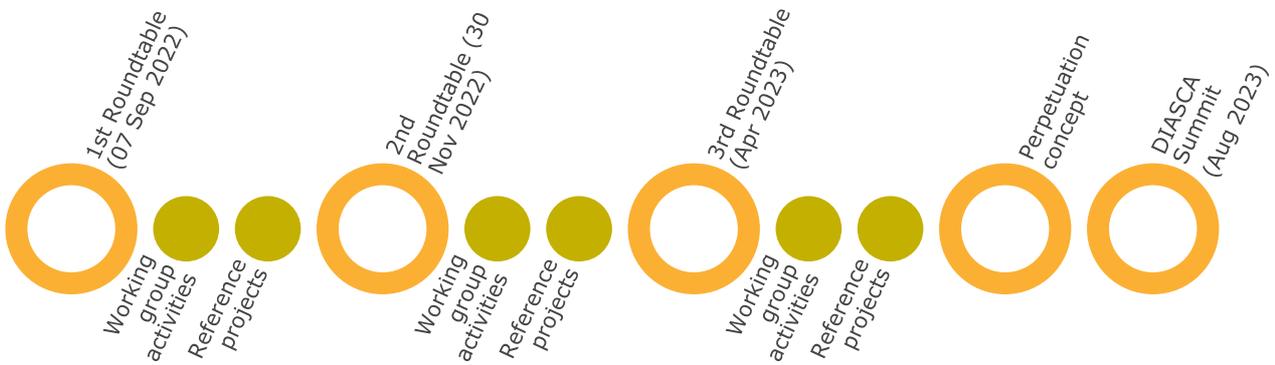
The working groups on **geospatial** and **entity-level data** have defined the following next steps:

- a) **Determine which additional organizations and representatives must be involved.** This should include representation from producer countries as well as companies, governments, civil society, trade associations, producer organizations, etc.
- b) **Establish a dedicated core group** to create a unified vision and roadmap.
- c) **Hold follow-up learning event** to welcome and onboard new participants, establish shared understanding of topics, and align with the emerging unified vision and roadmap.
- d) **Tackle key questions** identified during the initial meeting on September 7th, as well as any additional questions highlighted, through two additional meetings prior to November 30, as well as asynchronous collaboration and exchanges between meetings.

How to engage

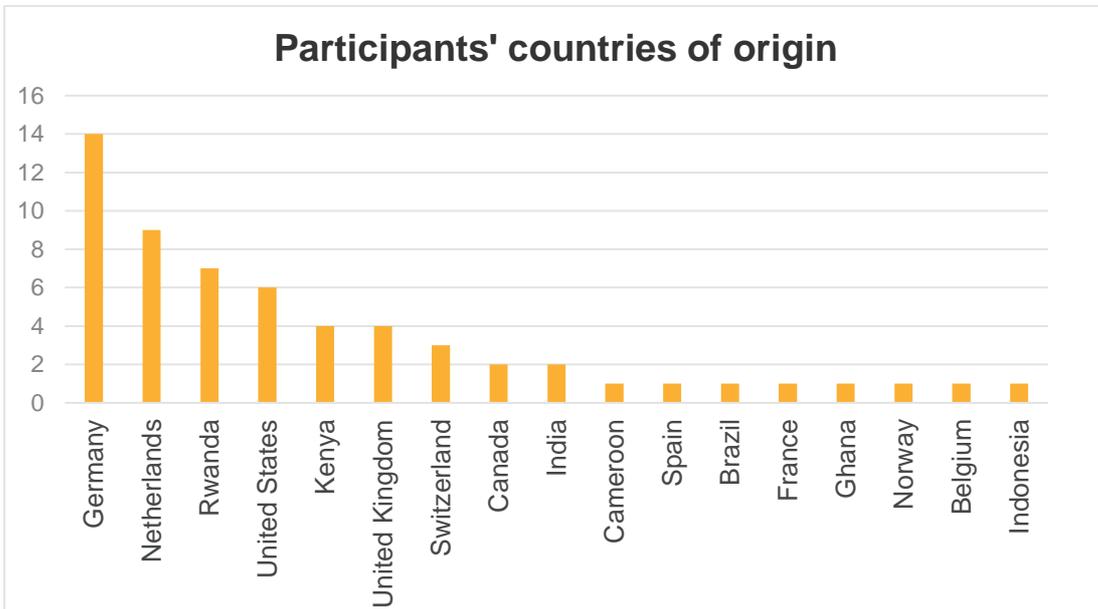
Working groups include some of the world’s leading experts and practitioners, from governments to global brands to academics to civil society. Shared leadership will be established within working groups, and all levels of commitment are welcome. Participation in DIASCA and one or more of the three working group is open to all interested stakeholders.

If you missed the 1st Round Table meeting on September 7th, but are interested in participating in the next session or in a working group, **please indicate your interest and provide your contact information** at diasca@giz.de.



ANNEX: Breakdown of participants

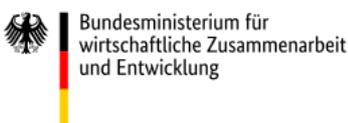
59 Participants (without members of organizing entities) from more than 50 companies and institutions worldwide participated in the first DIASCA Round Table.



A variety of different stakeholder groups was represented at the DIASCA Roundtable, with strong interest from technology providers and government institutions, as well as supply chain partners.



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