INA Initiative für nachhaltige Agrarlieferketten

Traceability and geolocation
- Digital Public Infrastructure (DPI) -

Lars Kahnert, DIASCA/GIZ

Forest Governance and Policy Conference 2024
30 April 2024

INA Initiative für nachhaltige Agrarlieferketten

Digital Challenges?

DIASCA

Digital becomes mandatory

Lack of **access** to digital solutions

Fragmented digital market

Lack of **standard approaches**

Lack of **data sovereignty**

Additional burden instead of benefit

Economic & digital **dependencies**

Risk of Exclusion: Farmers, Regions, Countries

Heading towards compliance….
…yet: Everyone is building their own railway track ….and their own trains!

- ? Accessibility
- ? Cost / Reusability
- ? Maintainability
- ? Interoperability / Standardization
- ? Trust (Neutrality, Security)
- ? Quality

Photo by Bruno Kelzer on Unsplash

DPI for Forest Monitoring

Tech Building Blocks
Polygons
Deforestation analysis
Traceability

Enabling Rules
Data Ownership
Data Security
Trust Mechanisms

Public Data
Land Cover Maps
Satellite Imagery

Community
Contributors
Users

Driving...
...Inclusion
...Innovation
...Competition

Open Standards
Georeferences
Data exchange
Interoperability

Governance
Public, Private
Host, Maintainer
Funding

Identifiers
Field-/Geo-IDs
Farm(er)-IDs

DIASCA - Objective

A broad agreement on globally accepted **standards** on

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

for efficient data flow and compliance within agricultural supply chains.

Support elaboration and deployment of technology building blocks and DPI

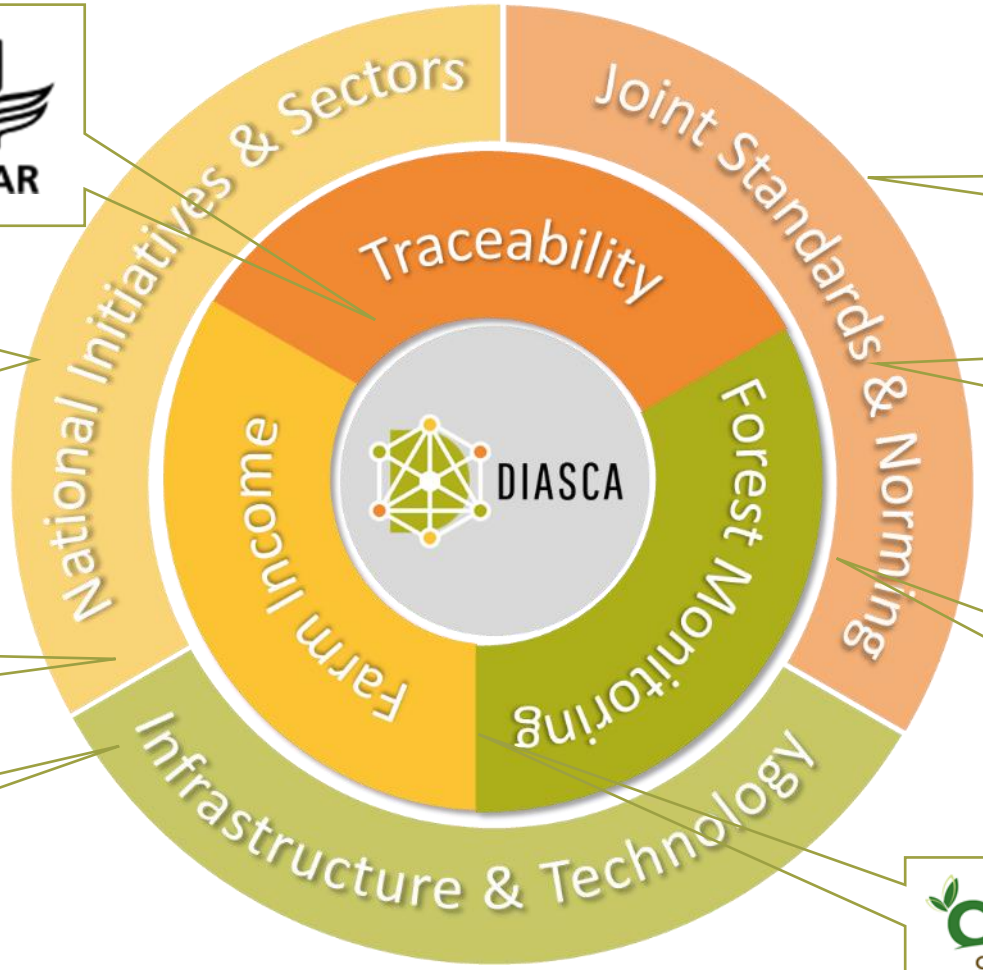
…….in an **open** and **inclusive** multi-stakeholder process

DIASCA

Digital Integration of Agricultural Supply Chains Alliance

Multi-Actor Community on Standards and DPI

DIASCA



CGIAR

ISO DIN

INTERNATIONAL COFFEE ORGANIZATION

FOREST DATA Partnership

WORLD RESOURCES INSTITUTE

The Living Income Community of Practice

AgStack A Linux Foundation Project

INA Sustainable Agricultural Supply Chain Initiative Trace

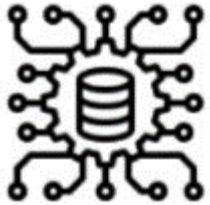
COSA Committee On Sustainability Assessment

SAFE Sustainable Agriculture for Forest Ecosystems

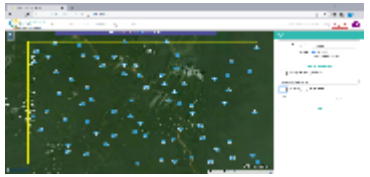
European Commission

> 500 actors across sectors, countries

DPI Building Blocks



GEOID	TMF	GFC	GAEZ	PA	Alert	LCLU
'c288d6c94efa	10	30	1	yes	1000	Trees
'1a41a309ae2	9	30	1	no	200	Trees
'1a4472dc407	10	10	2	no	200	Agriculture
'8e2accea7dd	1	70	4	no	100	Bare



Boundaries
- From the field
- Next-Gen UI
- Polygon collection

Unique Geo-IDs
- Anonymous
- Attribute-less
- Open-source
- Transferable

Public geodata
- Land cover
- Deforestation
- Legal

Public library
- AI models
- Validation

Public Tools
- Traceability
- Forest Monitoring

Compliance support
- Standardized data
- Verification App

Geo-IDs: Asset Registry

http://asset-registry.agstack.org

Geoid: **ff93ad2470125dfe0f21b7b857140c94efa635c8b6f25104419e88129db9f682**

- The asset registry is developed by AgStack, under the LINUX foundation
- It is a free, open source, public registry to create and maintain ubiquitous, geo-intelligent unique “public geoIDs” for field boundaries without requiring any other attribution
- geoIDs are anonymous, addressable but not discoverable

What is in that plot? Whisp principles

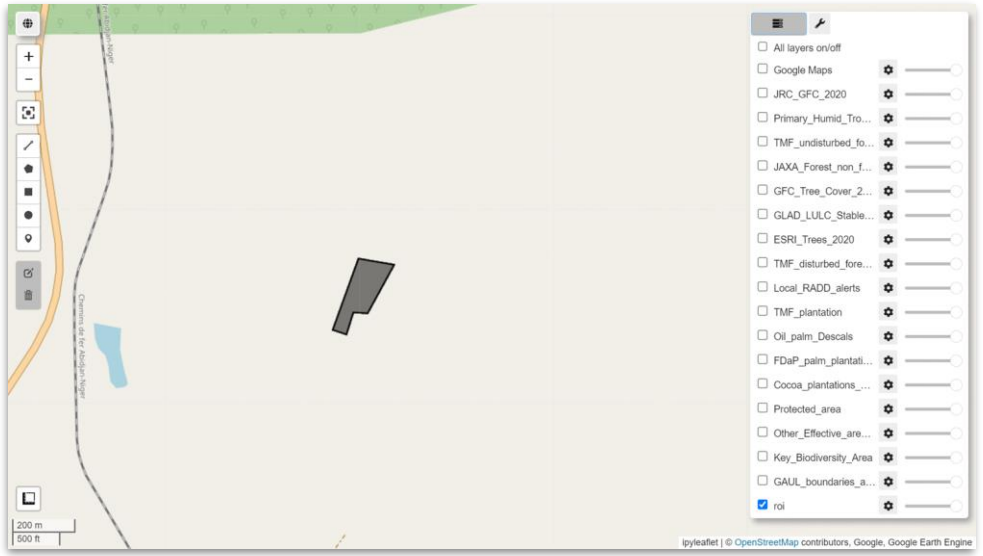
Sustainable Agriculture for Forest Ecosystems

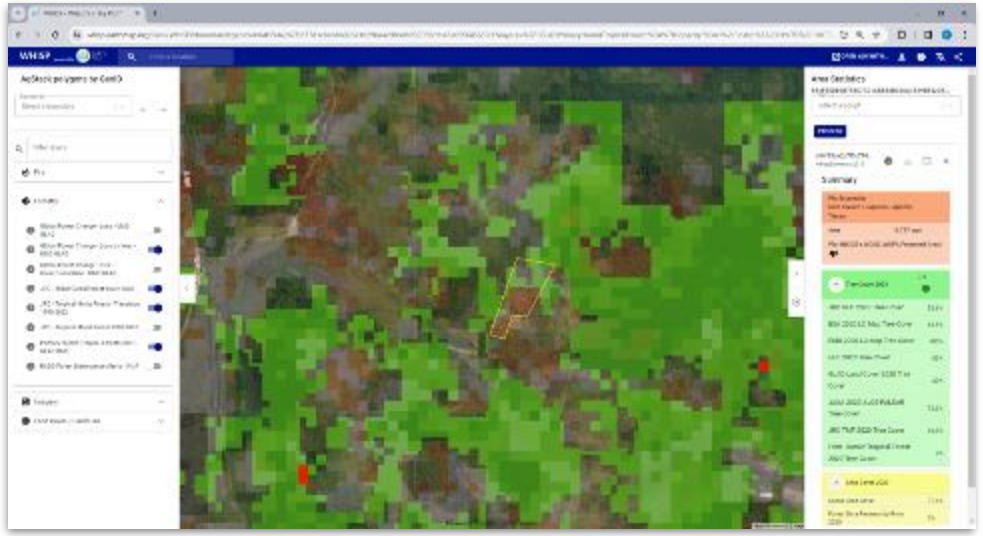
FOREST DATA Partnership

Whisp

- No single geospatial layer of information can prove compliance
- Convergence of evidence from multiple layers can support compliance claims
- National circumstances need to be taken into account
- Robust, transparent and reproducible analysis requires public datasets and processes

https://whisp.earthmap.org/
https://github.com/forestdatapartnership/whisp





INATrace – a tool for traceability

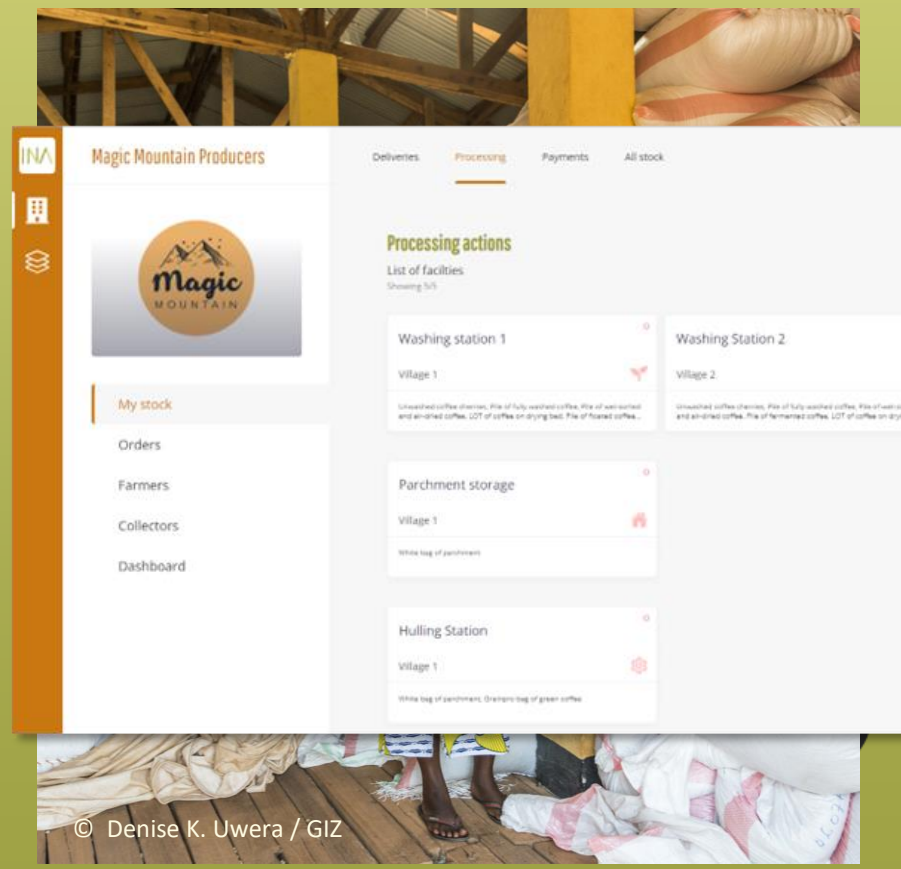
.....is an **open-source traceability solution**

...has been developed **with** the **users**, especially **women**

...maps **all process steps and transactions**, from the cooperative to the end product

...is adaptable, transferable and scalable.

... is based on **blockchain technology**.

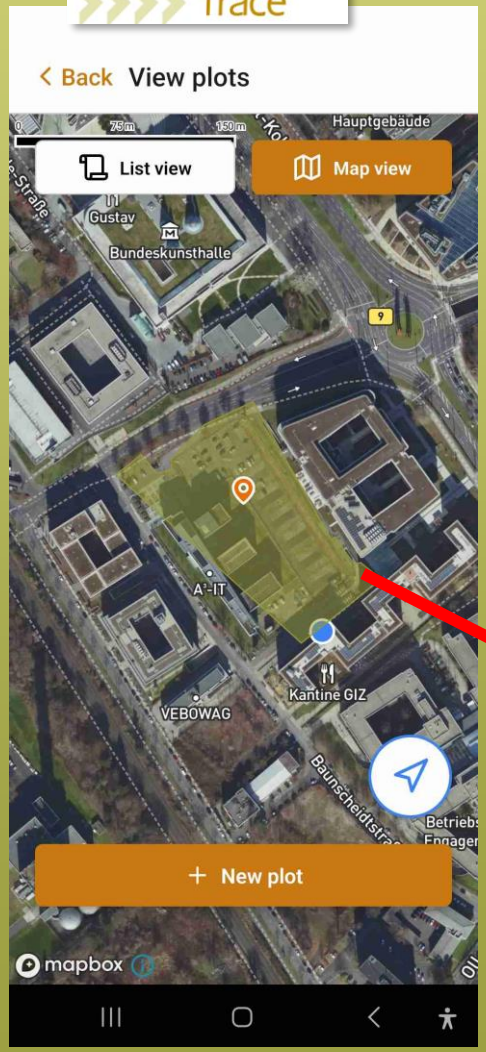


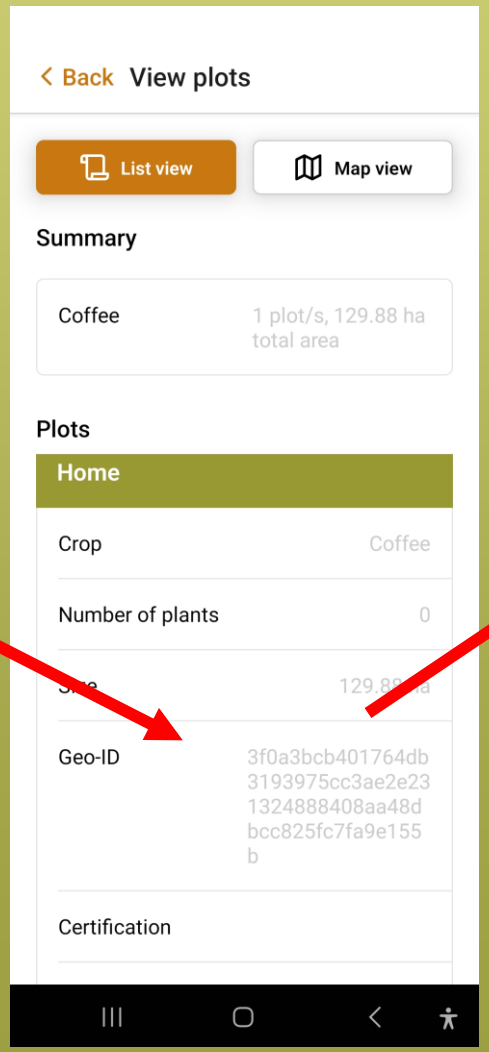
© Denise K. Uwera / GIZ

Convergence of DPI open source building blocks

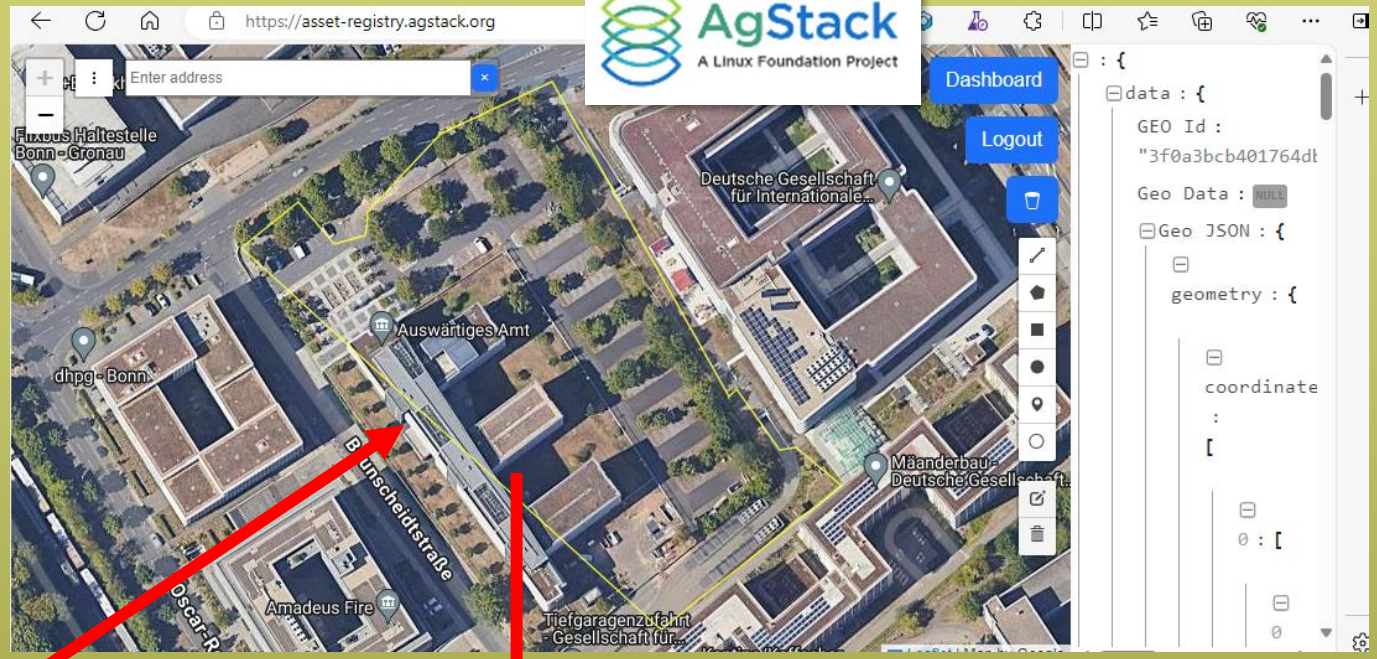
DIASCA

INA Sustainable Agricultural Supply Chain Initiative Trace





AgStack A Linux Foundation Project



Whisp

Governance: DPI in the making

CONSENSUS ON MAINSTREAMING DIGITAL INTEGRATION OF THE COFFEE VALUE CHAIN IN KENYA FOR ENHANCED TRACEABILITY & SUSTAINABILITY

Key Consensus Areas at the Roundtable Workshop held at Kyaka Hotel, Machakos on 25th and 26th January, 2024

Following the roundtable meeting, held at Kyaka Hotel, Machakos on 25th and 26th January, 2024, we the undersigned stakeholders wish to confirm that we reached consensus on the following issues relating to mainstreaming digital integration of the coffee value chain for enhanced traceability and sustainability:

1. **Data Management**

   a) **Interoperability**

   - It was agreed that there is a need to have value chain actors interconnected for digital integration.
   - There is a need to use basic systems to support interoperability.
   - There is a need to have basic ICT infrastructure to support interoperability.
   - Have in place a central point where data can be uploaded, validated and when necessary edited.

   b) **Standardisation of templates for information capture:**

Declaración

"Reconocemos la necesidad de adoptar un modelo de gobernanza colaborativa para la Infraestructura Digital de Interés Público (IDIP) en el sector cafetalero, que integre de manera equitativa las visiones y esfuerzos del sector público y del privado. Este enfoque asegurará que la IDIP se desarrolle y opere bajo un marco de cooperación, innovación y responsabilidad compartida, maximizando así los beneficios para todos los actores de la cadena de valor del café. La colaboración público-privada es esencial para abordar eficazmente los retos complejos del sector, promover el cumplimiento normativo, y garantizar la sostenibilidad y la inclusión en el ámbito digital."

INA Initiative für nachhaltige Agrarlieferketten

lars.kahnert@giz.de

nachhaltige-agrarlieferketten.org

http://diasca.org

Join us at diasca.org

Im Auftrag des:

Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

Durchgeführt von:

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

INA Initiative für nachhaltige Agrarlieferketten

Credits

https://www.flaticon.com/free-icon/team_1283342
https://www.flaticon.com/free-icon/construction_852697
https://www.flaticon.com/free-icon/database_9542653
https://www.flaticon.com/free-icon/standard_5261174
https://www.flaticon.com/free-icon/identify_5360934
https://www.flaticon.com/free-icon/rules_2046915
https://www.flaticon.com/free-icon/communities_4350908