

Geolocating plots of land

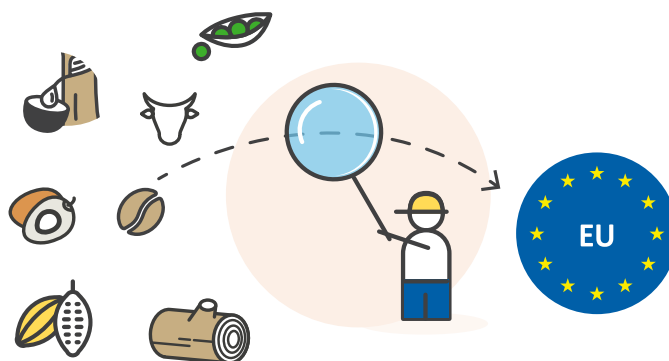


WHY AND HOW

Geolocation is how we identify the position of a place on the Earth. **For cooperatives, it involves knowing the precise location of each member's plot of land.** Using a special device or application installed on a mobile phone, it is possible to generate a unique number – **the geo-coordinate – that indicates where the plot is on the Earth.**

For global supply chains, geolocation information is becoming increasingly important because buyers, certification schemes and regulatory bodies are requiring more transparency on where **coffee, cocoa, rubber, and other agricultural products** are produced. Moreover, geolocation information makes the work of extension services more effective and helps farmers to demonstrate use and ownership rights, which is critical for tenure security and access to finance.

In the case of the European Union Deforestation Regulation (EUDR), geolocation information is needed to assess whether certain agricultural products contributed to deforestation or forest degradation after 31 December 2020. This is something buyers and governments increasingly request, and it is necessary for continuing to export to the EU.



HOW CAN YOU SUPPORT FARMERS IN COLLECTING THE GEOLOCATION INFORMATION OF THEIR PLOTS?

- ▶ **Cooperatives** can support the collection of geolocation information. There are many ways to do this. Simple and free tools are available such as Ground, TerraTrac, INATrace, KoboCollect or QField – which can work offline and on mobile phones.
 - ▶ **Cooperative managers** can train selected farmers to use special devices or mobile apps to map plots. These farmers could, in turn, train other farmers and pass on the information and knowledge. Cooperatives with more resources could, for instance, hire a topographer or an agronomist to map the plots of their members. Another option for cooperatives is to work with enumerators, such as students or local volunteers with good high-tech skills, to collect the geolocation information.
 - ▶ **Cooperatives** can play an important role in organising farmers, building trust and supporting them in marketing their products. They can also help updating and sharing information about new market requirements with their members.
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- ▶ **Cooperatives** should be involved in the collection and management of their members' geolocation information to be able to represent their interests and prevent misuse. They should also streamline the data collection process and provide data collection and sharing protocols to their members.

❗ To maximise efficiency, cooperatives could combine geolocation information collection and training with:

- Gathering of other farm-level data (e.g. tree age, crop variety, land ownership documents).
- Building or updating a member registry where data is linked to land ownership and farmer identity.
- Other training on agricultural practices or any other topics relevant for their members.



In this way, cooperatives may gather evidence that their members are producing coffee, cocoa, rubber, and other agricultural products legally, which is another requirement often asked by buyers and regulators.

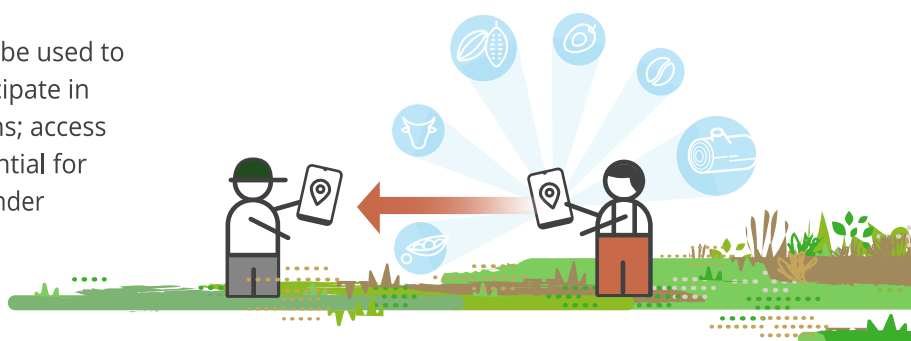
WHAT HAPPENS TO THE DATA ONCE IT IS COLLECTED?

Once collected, geolocation information can serve multiple purposes:

- ▶ **For buyers** – it is key to prove the products were grown on cultivated land not deforested after 31 December 2020. They need this information to demonstrate that products were produced free of deforestation and in compliance with market requirements when placing them on the EU market.
- ▶ **For cooperatives** – it enables better planning, transparency, and monitoring. It also gives cooperatives an important role in supporting their members to commercialise their products. If external support is available, the process of collecting geolocation information can help digitise members' registries, payments, and improve the day-to-day management of the cooperative.
- ▶ **For national and/or local authorities** – it can help deliver agricultural extension support and services more effectively, because authorities would know where the plots are and how many there are. With this information, they could make a spatial analysis to, for instance, identify which plots are most vulnerable to climate impacts or improve land-use planning. This is important for optimizing production, enhancing sustainability, and reducing risks and costs.
- ▶ **For financial institutions** – it supports risk assessments of lenders and insurers by showing where and how the commodity is produced, facilitating tailored credit and insurance products for farmers.



❗ **Importantly, for producers**, the data can be used to negotiate better conditions with buyers; participate in certification schemes and traceability platforms; access new markets and more – all of which are essential for remaining competitive in agricultural sectors under increasing scrutiny and regulation.



WHO OWNS THE DATA?

- **The ownership of geolocation information depends on several factors**, including who collects the data, who funds the collection, what agreements exist between the collector and the farmers or cooperatives, and national laws. Generally, farmers should own the data, and by extension, cooperatives should access



and manage it as they represent their members. The data is valuable and should be maintained by the cooperative management. **Any traceability systems should also be structured in such a way that the farmers' data is protected.**

❗ **Cooperatives should:**

- Maintain an up-to-date digital database of members.
- Ensure data is stored securely and used only for the intended purposes.
- Ask members for consent and be transparent about how the data is used and shared.

HOW CAN COOPERATIVES USE THE DATA TO INCREASE VALUE FOR THEIR MEMBERS?

- **Data ownership empowers cooperatives**, so they can avoid being locked into exclusive buyer relationships where data is managed externally. It provides cooperatives and their members with a stronger position to negotiate more advantageous contracts with buyers, while building trust and long-term relationships. In fact, providing this required information to buyers reduces their costs and risks, making the cooperative a more attractive partner.

Additionally, cooperatives play an important role in assisting farmers to benefit from technical support and capacity building provided by government extension services and business partners who rely on the farmers' information exchange.

