

Cocoa Traceability Case Study

BARRY CALLEBAUT

WITH GENEROUS FUNDING FROM:



C-lever.org
Collaborative leverage towards inclusive development

This publication was developed by C-Lever.org

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Acknowledgment

C-Lever.org, IDH and GISCO wish to thank Barry Callebaut for their time, cooperation and valuable contribution to this study.

Disclaimer

The opinions expressed in this publication are those of the authors. They do not purport to reflect the opinions or views of the national platforms for sustainable cocoa in Europe and/or their members, nor the stakeholders who were interviewed in the process of developing it.

Suggested citation:

IDH, GISCO, C-lever.org, 2021: Cocoa Traceability Case Study. Barry Callebaut. P. Stoop, N. Ramanan, H. Geens, A. Lambrecht and S. Dekeister.

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1. Introduction

Improving the transparency and traceability of the cocoa value chain¹ is an important means of improving accountability and sustainability of the chocolate and cocoa sector. For example, full traceability from farm level to first purchase point is one of the commitments of the Cocoa & Forests Initiative. This initiative is a public-private partnership aiming to end deforestation and restore forest areas. It was signed in November 2017 by the governments of Ghana and Côte d'Ivoire and a group of 35 companies. A similar framework, the Roadmap to Deforestation-free Cocoa², was signed in Cameroon in January 2021 by the government, companies, farmer organizations and NGOs, and aims to ensure the traceability of 100% of the cocoa supply from the farmgate via the warehouse to the port of exit by the end of 2025.



This is one of a series of four case studies that were developed to provide a deeper insight into the role of specific cocoa supply chain actors in the context of traceability. It complements our [Technical Brief on Cocoa Traceability](#), a publication developed to contribute to the global debate on cocoa traceability by providing clarity in defining traceability, what it can help to achieve, and how traceability and transparency in the cocoa sector could be further improved.

This series of case studies aims to provide details on (1) the existing traceability systems and the objectives of various supply chain actors sourcing cocoa from Cameroon, Ghana and Côte d'Ivoire; (2) the reliability and protection of data in traceability systems; (3) how traceability systems operate to provide accountability regarding sustainability commitments. Each case study focuses on a specific theme relevant to the role of that actor in the cocoa supply chain, including certification body, trader, primary processors and consumer brand. It considers their approach to traceability, such as mass balance or segregation, and the technology used by their traceability systems (for example, SAP and blockchain). This case study focuses on the approach to traceability as used by Barry Callebaut.

This case study comprises five sections. In **section 2** we introduce the actor, Barry Callebaut, and its role in the cocoa supply chain. In **section 3** we describe the Barry Callebaut traceability system by focusing on three characteristics: 1. information about the origin of cocoa entering the supply chain, 2. links between sustainability characteristics, both at origin level and at later steps in the value chain, and cocoa lots through the different stages of processing and 3. transmission of data along the supply chain. In **section 4**, we investigate the potential of Barry Callebaut's approach to ensuring accountability of sustainability claims. In **section 5**, we outline the challenges to traceability as identified by Barry Callebaut.

This case study was jointly commissioned by IDH, the Sustainable Trade Initiative and the German Initiative on Sustainable Cocoa (GISCO) and obtained funding from the UK-funded Partnerships for Forests (P4F) programme in the context of the Cocoa & Forests Initiative.

1. In this document we use the term "value chain" whenever we could use both "value chain" and "supply chain". The term value chain is preferred as it better reflects the perspective of all actors involved.

2. <https://www.idhsustainabletrade.com/uploaded/2021/01/20210111-RDFC-2-Pager-2-Final.pdf>

2. Barry Callebaut and its supply chain

Barry Callebaut is among the world's largest cocoa processors and chocolate manufacturers. The company therefore plays a key role in the global cocoa supply chain as a supplier of high-quality cocoa and chocolate products including cocoa powder, cocoa butter, and cocoa liquor. Supply chain actors downstream rely on Barry Callebaut for information about the origin and sustainability characteristics of the cocoa. Therefore, understanding the traceability system used is essential to confirming the quality of data that many consumer brands and retailers demand from their suppliers to support their own sustainability initiatives and reporting.

In 2016, Barry Callebaut established Forever Chocolate, a commitment to have more than 500,000 cocoa farmers in their direct supply chain lifted out of poverty; to eradicate child labour from their supply chain; to become carbon and forest positive; and to have 100% sustainable ingredients in all of their products.

Cocoa Horizons, created in 2015, is a multi-stakeholder, independent, non-profit organization supervised by the Swiss Federal Foundation Supervisory Authority. Cocoa Horizons is an impact driven program focused on cocoa farmer prosperity and helping to build self-sustaining farming communities that protect nature and children. The key implementers of the program are Barry Callebaut Group, Touton group (since 2020), sustainable brands, donors and other partners.



3. Barry Callebaut's traceability system

Barry Callebaut defines traceability as the ability to gather and transmit information about the cocoa lots from the farm to the first point of purchase. Traceability is considered a key tool for the group to reach their Forever Chocolate commitment to make sustainable chocolate the norm by 2025.

Barry Callebaut's traceability system focuses on the direct supply chain which accounts for 40% of the cocoa sourced. Barry Callebaut claims that, as of December 2020, 100% of the cocoa sourced through its direct supply chain in Ghana and Côte d'Ivoire is traceable to the farm. It is also working on solutions to address traceability in the indirect supply chain, going beyond the supplier code of conduct. Barry Callebaut is initially working with selected third-party suppliers to provide traceability data that will interface with its internal traceability systems; these are being upgraded to accommodate external data input.

3.1 Dimension 1: How is origin information obtained and documented?

To further strengthen traceability from farm level, Barry Callebaut will have mapped and registered the polygons of more than 90% of the farms in its direct supply chain by August 2021. The company has also paid a particular attention to the mapping of all cocoa farms located within 5 km of a protected area, and all cocoa warehouses within 25 km, to be able to monitor more closely the risk of cocoa being smuggled from protected forests.

In addition to farm mapping, Barry Callebaut also uses a proprietary SAP based application called Katchilé. This application was developed to provide batch traceability and obtain origin information on the cocoa sourced through Barry Callebaut's direct supply chain. Katchilé, a custom-built, large-scale data collection solution is used by farm coaches³ and local sustainability managers on the ground to conduct farmer censuses, farmer socio-economic surveys, track cocoa purchases and map farmers. This enables the coaches and sustainability managers to capture data for Barry Callebaut about the farmers financial stability, their farming techniques, number of children, distance to the closest school and how many children are enrolled etc.

The Katchilé application was launched in 2015 and includes:

- An in-the-field mobile phone-based data collection tool: K-App
- A data hosting platform, and
- Report generation functionality

All data gathered by the tool is entered into a centralised database. When a farmer sells cocoa to a cooperative or buying centre, the farmer receives a receipt recording the volume of cocoa and the price paid, which is recorded in the database.



3. People trained by Barry Callebaut who live in the farming communities and provide coaching on good farming practices, business practices, etc.

3.2 Dimension 2: How are sustainability characteristics linked to supply origin data?

Data on origin and transactions is linked to the sustainability characteristics of the cocoa lots in the centralised database. Barry Callebaut plans its sustainability initiatives on the basis of information obtained through the associated database. The process of data collection and transfer is further explained in section 3.3.

Living income and Child Labour

Typically, Barry Callebaut establishes long-term commitments with the farmers in their direct supply chain to scale impact and drive change in cocoa farming communities. Traceability is considered to be an essential tool for targeted planning, interventions and accountability. Barry Callebaut collects data about economic, agricultural and social parameters to obtain a holistic view upon which to recommend Farm Business Plans containing farm-based interventions, empowering farmers with the skills, approach and support to lift themselves out of poverty. Additionally, the data identifies the communities that need the most support via a heat-mapping system using a risk-based model so the remediation activities can be targeted most efficiently and effectively.

The datasets created using Katchilè also allow Barry Callebaut to obtain transparency about premium payment allocation and ensures accountability of the sustainability programs implemented in the countries of origin. Using the datasets from the Katchilè tool, Barry Callebaut supports farmers by helping to improve their professionalism and long-term viability through the development of farm business plans, and enabling access to farm services, tools, inputs and financing for cocoa farmers. Collecting data about farming households, farm size and farm location then comparing it with child labour risk indicators, location of schools etc., Barry Callebaut has implemented an improved and more robust Child Labour Monitoring and Remediation System (CLMRS), in addition to establishing community action plans to prevent child labour and supporting projects that promote women's empowerment and income generation.

Deforestation

In 2020, Barry Callebaut released a map of their cocoa suppliers in West Africa, highlighting the location of all the cooperatives and warehouses in their direct supply chain. Each point on the map details the geographical location, name of cooperative or district, the applicable certification scheme and the number of farmers from which it sources cocoa. Barry Callebaut considers mapping to be an important tool for addressing deforestation as it shows whether farms are located in or near a protected area and allows the company to exclude from their supply chain, any farmers growing cocoa in protected areas.

3.3 Dimension 3: How traceability data is transferred along the supply chain and verified

Barry Callebaut relies on the data collected through the Katchilè app to transfer and verify traceability and sustainability data from the farmgate to the factory gate and vice versa. Data is entered into a centralised database managed by Barry Callebaut. When a batch of cocoa is first moved from the purchase point or cooperative to the main warehouse of the cooperative, a bill of lading is created from purchase receipts issued to the farmers that contributed to the loading of trucks. The combination of the purchase receipt information, the GPS coordinates of the farmer, and the farm polygon mapping help to trace the sustainability characteristics of the cocoa bags from the first point of purchase to the exporters or factories. Whether the cocoa is stored as a segregated batch or traded using mass balance, the associated purchase receipt can be used to verify provenance and associated sustainability characteristics of the cocoa lots. All data collected through this system and the datasets of Katchilè are verified by a third-party (Price-Waterhouse-Cooper) to ensure accountability regarding sustainability claims.

At present Barry Callebaut claims that 100% of the cocoa sourced in Ghana (up to tier 3 - farmer cooperatives and farmer communities) and 100% of the cocoa sourced in Côte d'Ivoire (up to tier 2 - farmer cooperatives) is traceable in its direct supply chain, which represents more than 50% of traceability in its whole supply chain (direct & indirect supply chain). According to the latest reports published by Barry Callebaut, 295,383 cocoa farms have been mapped with their geographic coordinates and size, and 229,142 farmers have been interviewed to gather information about socio-economic and household circumstances.

4. How does this traceability system provide accountability on sustainability commitments?

Barry Callebaut uses the datasets collected by Katchilé to provide accountability on sustainability claims. The logic built into surveys conducted via the application should ensure that it is impossible to collect data about a fictitious cocoa farmer, because all surveys need to be connected to their farmer register. The Katchilé database is also used for monitoring⁴ certification compliance, farm services, effectiveness of CLMRS, sourcing and farm mapping. This allows the company to obtain an understanding of the impact of the services provided through these initiatives on the community, such as farming practices development, women empowerment and child labour. Impact on the environment, including reducing deforestation, initiating reforestation, pesticide use, production under shade trees can also be understood. Barry Callebaut indicates that publicly releasing a map of all the suppliers

in their direct supply chain was a move towards increased transparency which makes their sustainability claims more robust and credible to the general public.

It is essential to note that this system is structured to provide an insight into the direct supply chain of Barry Callebaut. For its indirect supply chain, Barry Callebaut defines criteria on the basis of which they buy via a supplier code of conduct. However, Barry Callebaut acknowledges that the code of conduct alone can neither prevent the inclusion of non-sustainable cocoa nor ensure reliability of the data regarding origin and sustainability characteristics of the cocoa sourced through their indirect supply chain.

5. Challenges to traceability identified by Barry Callebaut

Digitisation and quality assurance of indirect supply chain data

While Katchilé has helped to digitise data concerning Barry Callebaut's direct supply chain, most of the traceability data in the indirect supply chain continues to be maintained on a paper by the suppliers and is often of poor quality. Barry Callebaut identified a key challenge to mainstreaming effective traceability as being the creation of digital real time traceability in remote rural communities and ensuring the quality of the data.

Additionally, the provision of fraudulent data by farmers remains a stumbling block. Some farmers do not see the value in providing accurate data due to fear of consequences such as having their farms deregistered, paying additional taxes, etc. This implies that the collected data may not always reflect the real picture. Collaboration with national systems and other private sector systems could potentially help to mitigate this issue.

Harmonisation and collaboration

Closely associated with data quality is the lack of a standard to define what sort of data should be collected at farm level and to set requirements for data collection & verification processes. This leads to inconsistent data collection by companies. It also increases the complexity of data sharing between companies and the government. The absence of information sharing also leads to double-collection of data about the same farmers or farms, and hence wastage of valuable resources that could be better spent if the sector was to create a platform to enable data-sharing .

Traceability is not a solution

Barry Callebaut points out that traceability is only a tool to increase transparency and accountability. The efficiency of any traceability system in ensuring sustainability depends on the type and quality of data that is collected and more importantly on how that data is used to support, improve and monitor sustainability initiatives.

4. The frequency of data collection to support monitoring depends on the use of the data, for example - data about certification compliance and Farm Business Plans are assessed annually, child labour remediation visits are conducted on a 6 monthly basis.

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