

# Report on Implementation and scaling of open source traceability system INATrace

**Coffee and macadamia value chain -Rwandan**

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## Acknowledgement

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Additional thanks goes to all the participants (Cooperatives) and their management who contributed their time, experience and ideas during the INATrace system users’ training and their feedback helped to enrich the system.

Special appreciation goes to **Christine Muhongerwa, the Executive Director of Safer Rwanda**, who provided guidance in all administrative aspects during the implementation of the project. She also managed the relationships at the donor level and facilitated linkages with the consultant. She further provided inputs into the final deliverable of the project to ensure all procedures and protocols were observed.

## 0.EXECUTIVE SUMMARY



INATrace is an innovative digital open-source solution that prioritizes people. By enhancing the economic situation of smallholder farmers, INATrace concentrates on improving the traceability of global supply chains. The payment for producers at the beginning of the supply chain can only be increased if it becomes clear how little they receive in comparison to other actors for their raw material production.

Safer Rwanda has implemented the INATrace project funded by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and identified new coffee cooperatives across Rwanda, as well as one Macadamia nuts selling company. We have also trained four existing coffee cooperatives and RWASHOSCCO, a coffee exporting company about INATrace system.

Safer Rwanda effectively pitched to eleven different district-based coffee cooperatives about joining and using INATrace system to disseminate their coffee value chain advantages.

To assist during peak seasons when data entry can become overwhelming, Safer Rwanda team of trainers provided follow-up assistance to four pre-existing entities: Musasa, COCAGI, KOAKAKA and Maraba Coffee Cooperatives.

The training session for two days in Kigali was conducted by GIZ- designated training consultant with Safer Rwanda team of trainers who taught new users all aspects of utilizing INATrace system software. Additionally, refresher training sessions were held with existing cooperatives to review updates in the system.

Follow up visits were made by Safer Rwanda's team of trainers after these training sessions at respective cooperative premises to ensure successful implementation of newly acquired knowledge pertaining to this valuable tool which would greatly benefit those involved in producing quality products while providing and enhancing the existing users' knowledge for their data optimization<sup>1</sup>

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<sup>1</sup> [www.nachhaltige-agrarlieferketten.org](http://www.nachhaltige-agrarlieferketten.org)

## 1.INTRODUCTION

### 2.Background on INATrace



INATrace is a digital traceability tool for agricultural products that allows transparency, control, and trust. This tool is being developed under a project that arose from the “Initiative for Sustainable Agricultural Supply Chains (INA)” program. The project seeks to contribute by increasing the transparency of agricultural supply chains and comply with due diligence requirements (Deforestation Free Chains, Supply Chain Law).

In 2020, the first project phase began in Rwanda with the RWASHOSCCO cooperatives and Kaffeekoop GmbH which is marketing Rwandan women coffee under the brand Angelique's Finest.

With the latter, INATrace has successfully implemented and generated a QR code printed on the coffee package to give full traceability information to the end consumers. A second phase started in Honduras in 2022 with three coffee cooperatives. During this phase INATrace was improved basing on the feedback of the system users from Rwanda hence the launch of INATrace 2.0.

Safer Rwanda implemented INATrace by pitching and on-boarding new five coffee cooperatives and one in the value chain of Macadamia . These cooperatives were introduced and trained about INATrace system and their company profiles established in the system.

## 2.2 Objectives

We aimed to increase Rwandan producers' visibility in the international coffee market. More transparency on provenance, processing, and quality increases the revenues from coffee sales and strengthens the producers' bargaining power so that a better price for their produce is forwarded along the value chain.

As a long-term impact, we envisage increased farmers' income and empowerment of producers as a result, increased cooperative income, and better farm management, allowing them to invest in new facilities.

Our objective was to increase the accessibility and usability of INATrace for existing and other producer organizations in Rwanda at large.

In particular, we aimed to make INATrace new features usable by existing users and the System available to additional users through on boarding their staff members on the INATrace System.

At the end of this project phase, existing producers are familiar with the new features and additional cooperatives and their value chains are able to manage INATrace data entry during their daily work.

End-consumers of the on-boarded products can access value chain information on the products they bought by scanning a QR Code on the product package (e.g. on processing, social and environmental impact)

**This narrative report summarizes the activities implemented by Safer Rwanda team of trainers including :**

- Identification of new cooperatives, which show interest in using INATrace
- On boarding/training of new and current value chain actors on INATrace .
- Gathering and providing user feedback to inform the further technology development
- Close collaboration with GIZ consultants with respect to further feature development
- Translation of user interface adaptations into Kinyarwanda
- Update training material in English and Kinyarwanda
- Give input to the development of an INATrace business model as may be requested/required by GIZ
- Participation in workshops, meetings, round tables, or other formats to give input on the roll-out of INATrace and user feedback.
- Develop internal knowledge management and knowledge transfer system at Safer Rwanda in order to anchor INATrace in Rwanda in the long run.

## 2.3 Outcomes :

Upon the completion of this phase, we have arrived at the following outcome:

**1. Bilingual Training Material:** Documentation for purchases, processing, payments, and configurations is available in both English and Kinyarwanda languages.

**2. Localized User Interface:** The user interface is available in the Kinyarwanda language, catering to local users.

**3. Data Entry Training:** Actors involved in the coffee value chain have received data entry training on INATrace, enhancing their operational efficiency.

**4. On boarding New Cooperatives:** New cooperatives and actors along additional value chains have been successfully on boarded onto INATrace, expanding its user base

Safer Rwanda carried out different activities starting with trainers having a recap on INATrace system together with the consultant which increased their capacity and the trainers went ahead to do a refresher training with existing cooperatives on data entry during the coffee season and as well as pitching to the new cooperative to be on boarded.

### 3. Expanding Digital Traceability:

Safer Rwanda's team of trainers Successfully Pitched to Eleven District-Based Coffee Cooperatives for INATrace Adoption<sup>2</sup>:

- MAYOGI COFFEE- Gicumbi District.
- TWONGERE UMUSARURO WA KAWA KAYONZA-TUK KAYONZA.
- ABADATEZUKA COFFEE-Ngororero District.
- ABANGAKURUSHWA COFFEE- Nyamasheke District-(KOAKAA)
- GISUMA COFFEE- Rusizi District.
- GASHONGA COFFEE - Rusizi District.
- KOTUKANYA COFFEE - Rusizi District.
- NYAMPINGA COFFEE- Nyaruguru District.
- KOKUKAMU COFFEE -Nyagatare District.
- AKAGERA COFFEE PROJECT LTD- Kayonza District.
- AKAGERA COFFEE WASHING STATION- Kirehe District.

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<sup>2</sup> Safer Rwanda Team of trainers successfully pitched eleven coffee producers to be onboarded



#### 4. CRITERIA FOR IDENTIFYING COOPERATIVE TO BE PITCHED AND ONBOARD

In our search for suitable cooperatives to pitch, we employed a set of criteria to ensure we identified the most appropriate candidates. These criteria included:

1. **Involvement in the Coffee Value Chain:** We sought out cooperatives that actively participate in the coffee value chain, as this was a key factor in our selection process
2. **Legal Registration:** It was crucial for us to engage with cooperatives that are fully registered and possess all necessary legal documentation. This ensured that we were dealing with legitimate entities.
3. **Promotion of Rwandan Women's Specialty Coffee:** We prioritized cooperatives that are committed to promoting Rwandan women's specialty coffee. This aligns with our goal of supporting and uplifting women in the coffee industry.

By adhering to these criteria, we were able to identify cooperatives that not only met our requirements but also shared our vision and values of transparency and traceability

#### 5. Multi-Step Process for Identifying Cooperatives for Pitching :

Embarking on a journey to discover potential partners, we presented a comprehensive, multi-step process designed to identify cooperatives that are ripe for pitching.

1. **Internet search:** We conducted a thorough search on the internet to identify cooperatives that aligned with the criteria.
2. **References from other cooperative managers:** We reached out to other cooperative managers to get recommendations for cooperatives that might fit in the criteria.
3. **On-site visits:** We visited cooperatives as working guests and explained the benefits of using the INATrace system.
4. **Reference from Kaffeekoop GmbH :** We got references from Kaffeekoop GmbH for cooperatives that might be interested in using the system.
5. **Checking our database:** We checked our database of coffee cooperatives we worked with on other projects to identify potential cooperatives.

Safer Rwanda staffs, who are INATrace trainers, visited the respective cooperative premises in person to meet with cooperative managers and committees. During these meetings, they explained the benefits of using the INATrace system, how to use it, and the way forward for training once the cooperatives agreed to be on-boarded

After pitching, the cooperatives that expressed interest were on-boarded by creating company profiles in the INATrace system. Their staff accounts were added, and their farmers' profiles were created. These profiles were used during the INATrace users' training .

Out of the cooperatives mentioned above, five were on-boarded based on the availability of resources . These cooperatives are Gisuma, Gashonga, Abangakurushwa, Kotukanya, and Nyampinga coffee cooperatives



6. The table below shows the cooperatives that were on-boarded after pitching <sup>3</sup>

No	Cooperative Name	Location	Certification	NO of Washing Station
1	Gisuma	Rusizi District	Fair Trade	1
2	Gashonga	Rusizi District	Fair Trade	1
3	Abangakurushwa	Nyamasheke	Fair Trade	1
4	Kotukanya	Rusizi District	Fair Trade	1
5	Nyampinga	Nyaruguru District	Fair Trade	1

<sup>3</sup> Among the 11 pitched cooperatives-only 5 were on boarded based on the budget available and time

## 7. Training Objectives

With the integration of new producers, the subsequent phase of the project was dedicated to train both existing and newly onboarded users about the INATrace 2.0. The main objectives of the trainings were to demonstrate functionalities of INATrace main modules to the new users and explain new features of the system to the existing users.

The trainings were held in Kigali at Centre Saint Vincent Pallotti, Gikondo on:

- 18th August 2023 with the Gorilla nuts new user from the macadamia value chain
- 19<sup>th</sup> with Gisuma, Gashonga and KOTUKANYA and 29th September 2023 with Nyampinga and Abangakurushwa the new users from the coffee value chain
- 22nd September 2023 with the existing users from the coffee value chain, namely Dukundekawa Musasa, COCAGI, Maraba KOAKAKA and Rwashoscco

### **The trainings were designed with the following specific objectives in mind:**

A. Help new system users understand the general background of INATrace system and how it enables traceability and transparency in agricultural value chains of coffee and macadamia.

B. Support new users to have access to the system.

C. Demonstrate to the users how INATrace accommodates whole value chain data related to receiving farmers harvest deliveries, processing, payment and client's order fulfillment.

D. Showcase and explain new features of the system that were developed in the third phase of the project.

E. Enhance existing users' knowledge about INATrace and talk about data optimization.

F. Handover system user guide documents to the trainees which show how to use INATrace all modules step by step



Abangakurushwa and Nyampinga coffee staffs during INATrace training



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<sup>4</sup> Picture of Abangakurushwa and Nyampinga Coffee during INATrace Training in Kigali

<sup>5</sup> Picture of Abangakurushwa trainees during INATrace training in Kigali

8. Upon completion of the training, users have gained knowledge in the following areas:

1. **Understanding the New User Interface:** Users become familiar with the new user interface of the INATrace system, enabling them to navigate and use the system .

2. **Utilizing Deliveries and Processing Performance Dashboards:** Users acquired the skills to use the deliveries and processing performance dashboards, enhancing their ability to monitor and manage operations.

3. **Data Organization and Extraction:** Users learn how to organize and extract data from the INATrace system, empowering them to make data-driven decisions.

## 9. Conclusions, Challenges and Recommendations.

After pitching, 11 cooperatives were identified, and 5 of them were on-boarded. Nine coffee cooperatives, including four existing RWASHOSCCO cooperatives and one company in the macadamia nuts value chain called Gorilla Nuts, received training on INATrace system navigation and usage.

The training included a refresher course for the four existing RWASHOSCCO cooperatives. The follow-up training was conducted at the respective cooperative working premises, where the staff was trained on the whole system, including entering data during deliveries, processing, payments, adding and editing farmer profiles, and dashboard.

Each cooperative had five people(staff) to be trained(-during training in Kigali ), including the manager, accountant, receptionist, agronomist, and cooperative president. After the training, these individuals became INATrace new users .

After registering and logging into the INATrace system, users are trained on producer transactions in the system, including receiving farmers' deliveries, processing, and payment actions. They also learn how to add and edit farmers' profiles. Cooperative and company managers receive training on how to amend their company profiles in the system and extract data from it .

## 10.Challenges

- ✓ There is a noticeable scarcity of IT equipment. All the new users of INATrace, who are expected to use the system in their daily activities, possess minimal to no computers. This lack of equipment hinders their ability to perform data entry tasks and utilize the INATrace system effectively
- ✓ Internet connectivity and effectiveness: Due to location of the cooperatives in the areas with low connection of internet, the cooperative staff find it challenging to do all the activities in the system while on-line.
- ✓ Double work: Most of the cooperatives have other systems that they already use and some are mandatory from the government therefore they find doubling the work they do and sometimes requires extra budget for hiring temporary staff that will insert data more especially during season of coffee.
- ✓ Low computer literacy of some cooperative staff: most of the cooperative staff have no or less knowledge about using of computer and tablets because normally they are used to recording data in books and papers not computers, its only managers and accountants that use computers therefore they find it challenging to use computer and tablets like receptionists, collectors at the site, farmer agronomist.

## 11.Recommendations

- ✓ Most of the cooperatives are in shortage of IT equipment and since INATrace system requires them therefore cooperatives requests the equipment like computers, printers and others that can help during the usage of INATrace system on a daily basis.
- ✓ The staff of the cooperatives, particularly those who were recently on boarded, are finding it somewhat challenging to navigate the INATrace system. Given that this is their initial encounter with the system, they have expressed a need for additional training and follow-up support. This will enable them to become more comfortable with the system, thereby enhancing their efficiency and effectiveness in its use.”
- ✓ Off-line App: due to poor accessibility of internet more so on field for collectors and other staff that do data entry like purchases to be able to use the system off-line then synchronize later on internet.
- ✓ Some features to be added in the system like the option of paying farmers via mobile money, bulk payment to people without bank accounts should be among the options in the system.