

## 4C Solutions for Sustainable and Deforestation-Free Supply Chains

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# Anti Trust Clause

4C Services will not enter into any discussion, activity or conduct that may infringe, on its part or on the part of its members and participants, any applicable competition laws. By way of example, members and participants shall not discuss, communicate or exchange any commercially sensitive information, including non-public information relating to prices, marketing and advertisement strategy, costs and revenues, trading terms and conditions and conditions with third parties, including purchasing strategy, terms of supply, trade programmes or distribution strategy. This applies not only to discussion in formal meetings but also to informal discussions before, during or after meetings.





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4C – Who We Are

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Recognitions and Benchmark Results

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Deforestation-Free Coffee Supply Chains

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Integration of Smallholders

# 05

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Benefits of 4C Certification



4C – Who We Are

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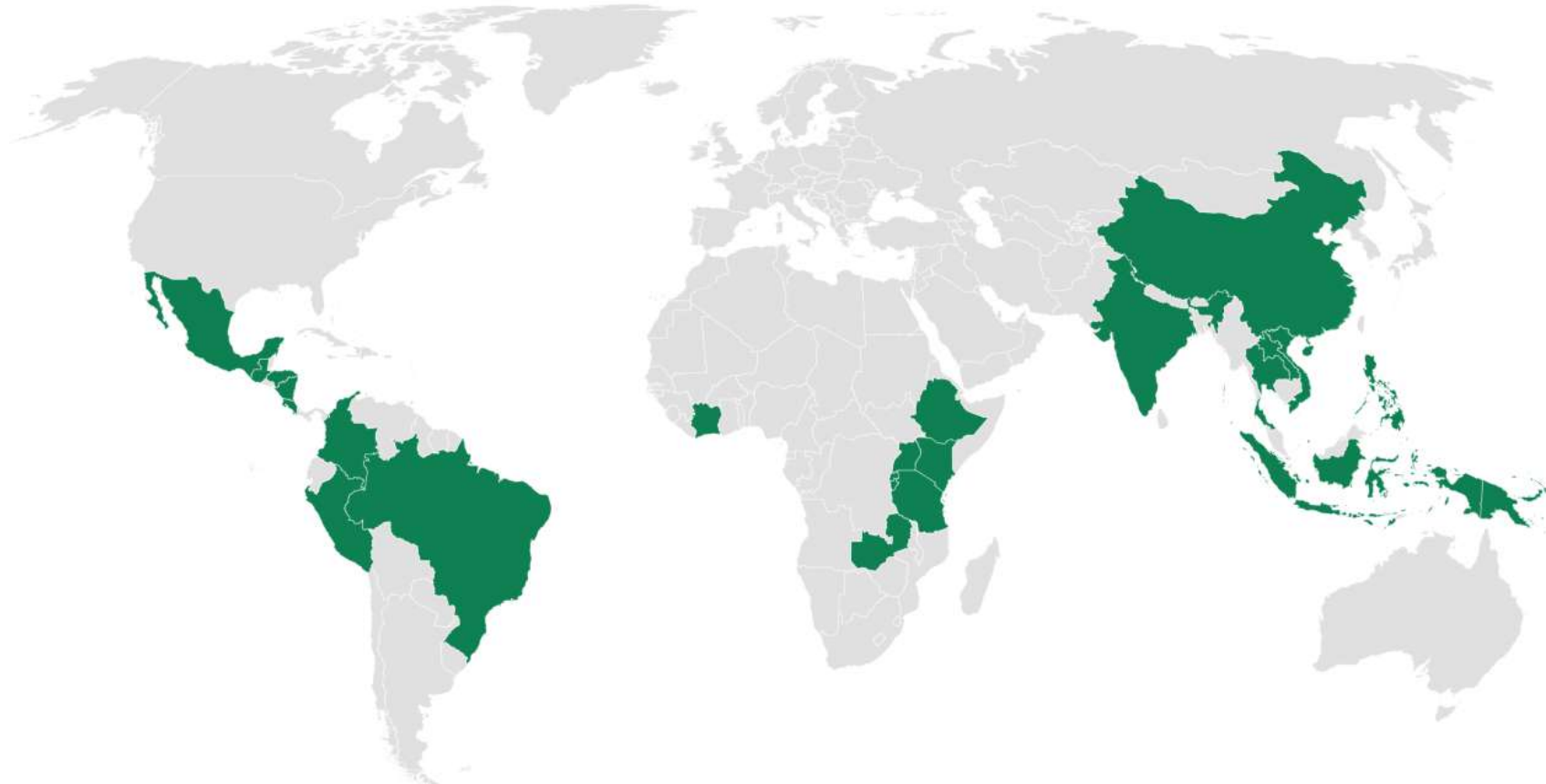
4C is the result of a multi-stakeholder initiative, and today the largest certification system for coffee worldwide

4C coffee produced in  
**25 countries**

**400,000+**  
farmers are producing  
4C coffee

**1.6+ million tons**  
**coffee** certified in  
2019

**23**  
cooperating  
certification bodies



# Figures of 4C certified coffee from Latin America

**8 countries**  
produce 4C coffee

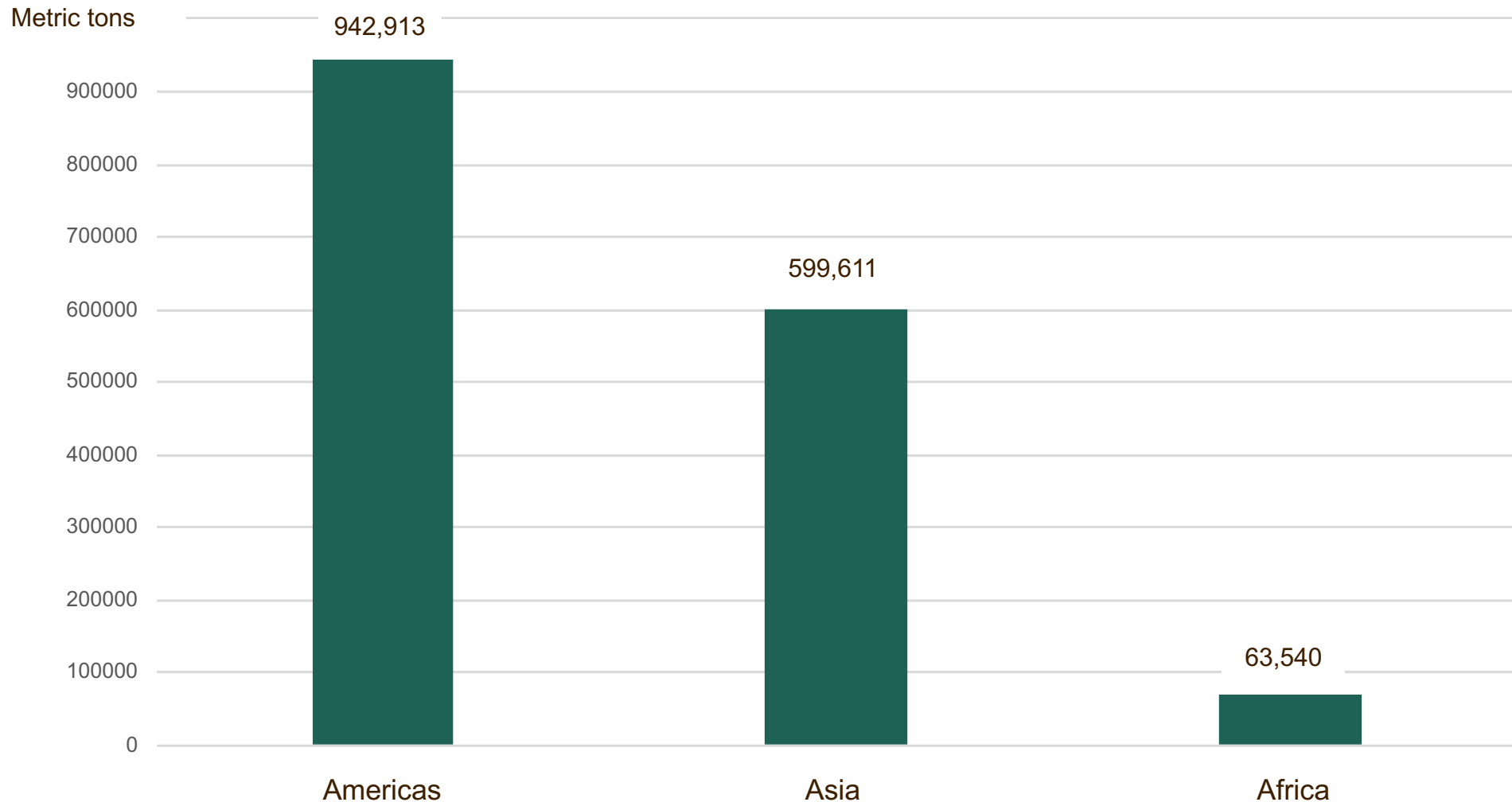
**170.000+ farmers**  
producing 4C coffee

**940.000+ tons 4C**  
coffee in 2019

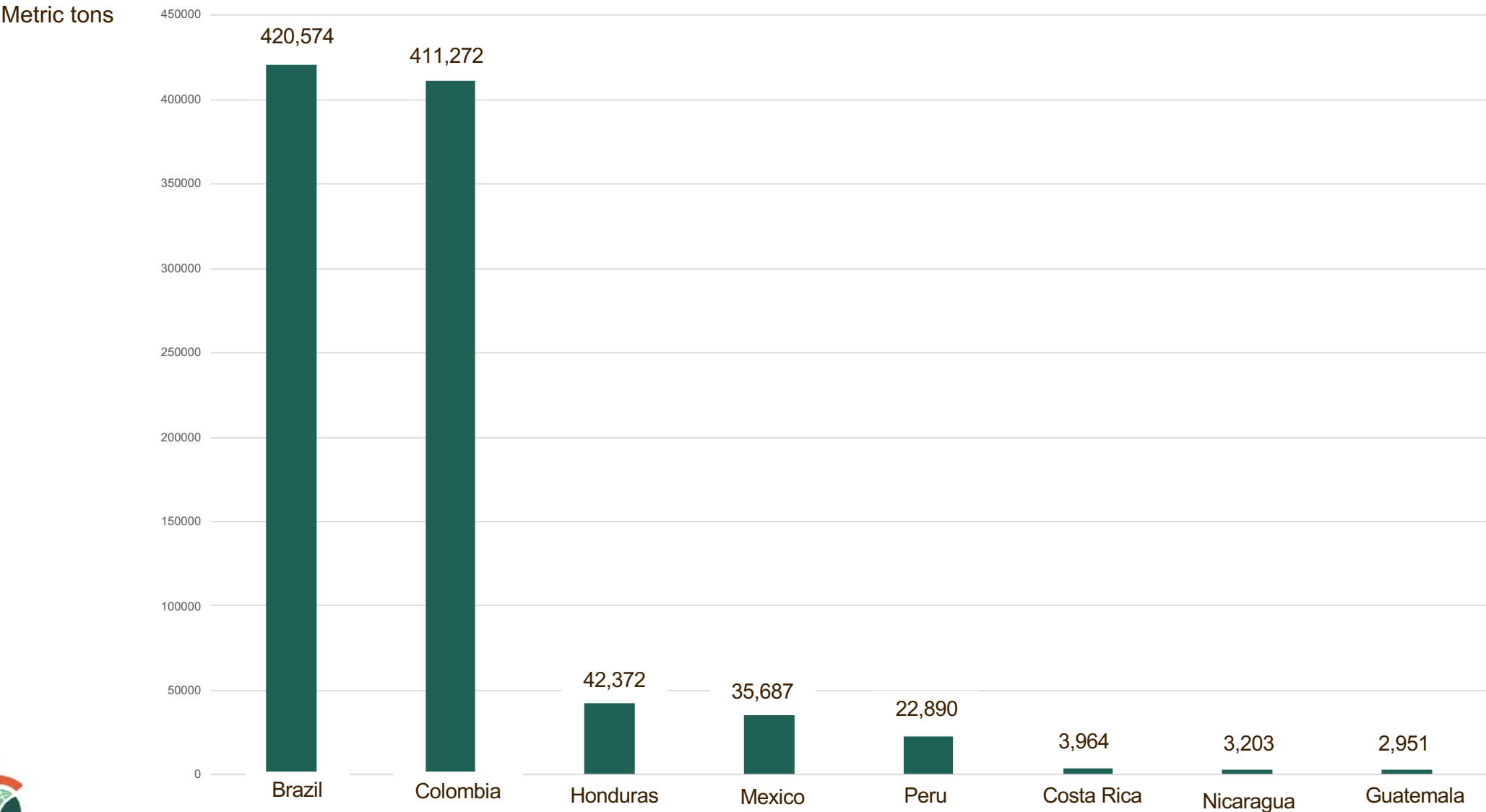
**11 certification bodies**  
cooperating with 4C



The total volume of 4C certified coffee produced in 2019 has been more than 1.6 million tons, with most volume produced in Latin America



# 4C certified coffee production per country in Latin America in 2019





# The 4C Code of Conduct applies strict criteria to coffee production and processing, based on the three dimensions of sustainability



**Central pillar of the 4C system:**  
Improvement Plan, that focusses on **continuous improvement**  
**through support and training** from the Managing Entity

## 4C applies zero-tolerance against ten unacceptable practices (UAPs)

**1**

Child labor

**2**

Forced labor

**3**

Lack of freedom of  
association and trade unions

**4**

Forced eviction

**10**

Immoral transactions in  
business relations

**5**

Lack of adequate housing

**9**

Use of genetically modified  
(transgenic) organisms  
(GMO)

**8**

Use of unacceptable  
pesticides

**7**

Cutting of primary forest or  
destruction of other forms of  
designated natural resources

**6**

Lack of potable water to all  
workers

# Solution to identify farm labour abuses through an easy-to-use tool verifying 4C farmers against the Brazilian Transparency List of Contemporary Slave Labour

- The tool is mandatory for auditors and serves as surveillance tool for 4C to ensure that 4C Units are free from labour abuses
- **Example:** Identification of three farmers listed in the Brazilian Transparency List of Contemporary Slave Labour through the integration of farmer name and/or ID number into the verification tool

### 4C Services Transparency List Tool

**Description**  
This tool compares the entries of the of 4C Business Partner Map with the entries of the Transparency List on Contemporary Slavery in Brazil, published by the Brazilian Ministry of Labour and Repórter Brasil, using National ID Numbers and Names as identifiers.

**Result Summary:** **Number of matches:**  
Matches are found! Please check which farmer is 3

	Matches with 2019_04 list	Matches with 2019_01 list:	Matches with 2018_10 list:
	2	2	2

Copy the Business Partners' National ID Numbers (CNPJ/CPF) from the BPM (column D) or Names (column B) here:	Results	Match with 2019_04 list	Match with 2019_01 list	Match with 2018_10 list
Helvécio	Risk Farmer - Please conduct further	On the 2019_04 List	-	-
Amândio	Risk Farmer - Please conduct further	-	On the 2019_01 List	On the 2018_10 List
884.400.8	Risk Farmer - Please conduct further	On the 2019_04 List	On the 2019_01 List	On the 2018_10 List
	-	-	-	-

# 4C Excel tool for Classified Chemicals: Voluntary tool for farmers and auditors to identify the applied chemicals – to be published soon

## 4C Services GmbH

Classified Chemicals<sup>1</sup>

The name of the chemical is automatically provided

### SECTION 1: Compliance with the 4C requirements on the use of pesticide (4C Pesticide Lists)

Instructions: Enter the CAS Number of the active ingredients that are included in the agrochemicals you wish to use in the green field (B10). See under the category *List* whether the use of the active ingredient is 'Prohibited' (UAL) or needs to be 'Phased out after three years after initial certification' (RL) or if a 'Reduction/Phase out' (YL) is required. If it is not listed in one of the 4C Pesticide Lists, the information 'Not listed' will show up.

CAS Number <sup>2</sup>	UN Number <sup>3</sup>	Name <sup>4</sup>	List <sup>5</sup>
1563-66-2	2757	[ISO] Carbofuran	RL

The respective CAS number of the chemical is inserted in the row

### SECTION 2: Compliance with legal requirements

Instructions: Additional to the CAS Number of the active ingredient provided in the above field, insert the country of cultivation in the green field (B15). See under the category *List* whether the use of the active ingredient is 'Banned' or 'not approved' in a country. The list is an indicative list. If it is 'Not listed' we recommend to consult the respective national authorities.

Country of Cultivation <sup>6</sup>	CAS Number <sup>2</sup>	Name <sup>4</sup>	List <sup>7</sup>
COLOMBIA	1563-66-2	[ISO] Carbofuran	Banned

This field provides the information in which 4C pesticides list the chemical is listed and if it is prohibited to be used (red) or must be phased out (yellow)

Chemical Type <sup>8</sup>	Physical State <sup>9</sup>	Main Use <sup>10</sup>	GHS <sup>11</sup>	LD <sup>12</sup>
C	S	I	2	
AS Arsenic compound	L liquids	AC acaricide		
BP Bipyridylum derivative	S solids	AP aphicide		
C Carbamate	Oil oily liquids	B bacteriostat		
CO Coumarin derivative		F fungicide, other than for seed treatment		
CU Copper compound		FM fumigant		
HG Mercury compound		FST fungicide, for seed treatment		







## 4C certificates are issued after independent successful 3<sup>rd</sup> party audit

- 4C certification. Independent third-party audit (according to ISO 17065, ISEAL Assurance Guidance)
- 4C verifiers ISO 17065 accredited certification bodies to address impartiality, conflict of interest, confidentiality, trainings and written audit and report procedures (SOPs)
- 4C certificates issued for groups of coffee producers (4C units). Audits carried out after risk assessment on a sample basis
- Elements of the supply chain included (mills, warehouses, traders)
- Continuous improvement: action plans with consistent KPIs to measure impact at farm level





## Improved audit procedure and documentation

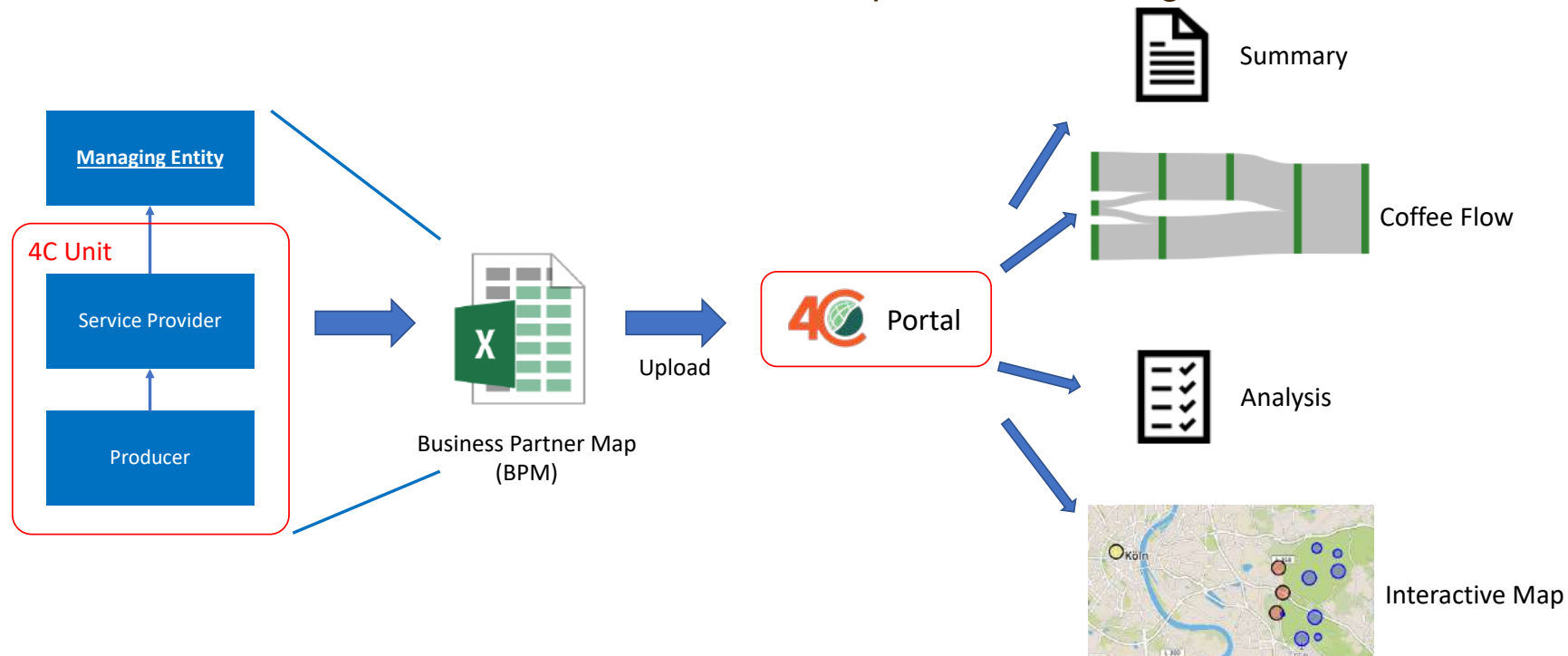
- **Objective and pragmatic risk assessment** procedure to define the sample size to be audited
- **New audit checklist** to be published soon, with revised criteria and checkpoints and limited to three certification levels
- An **inclusive approach** will be followed, enabling an easy entry level and a continuous improvement to **meet market demands** of a high quality standard
- **Continuous improvement** continues to be the key component to drive real and positive impact at farm level, with **mandatory and voluntary improvement measures** to be included

# A new Business Partner Map (BPM) has been developed and implemented

BPM: Excel Sheet including all relevant information on the 4C Unit's Business Partners, such as name, location, hectares, yields, etc.

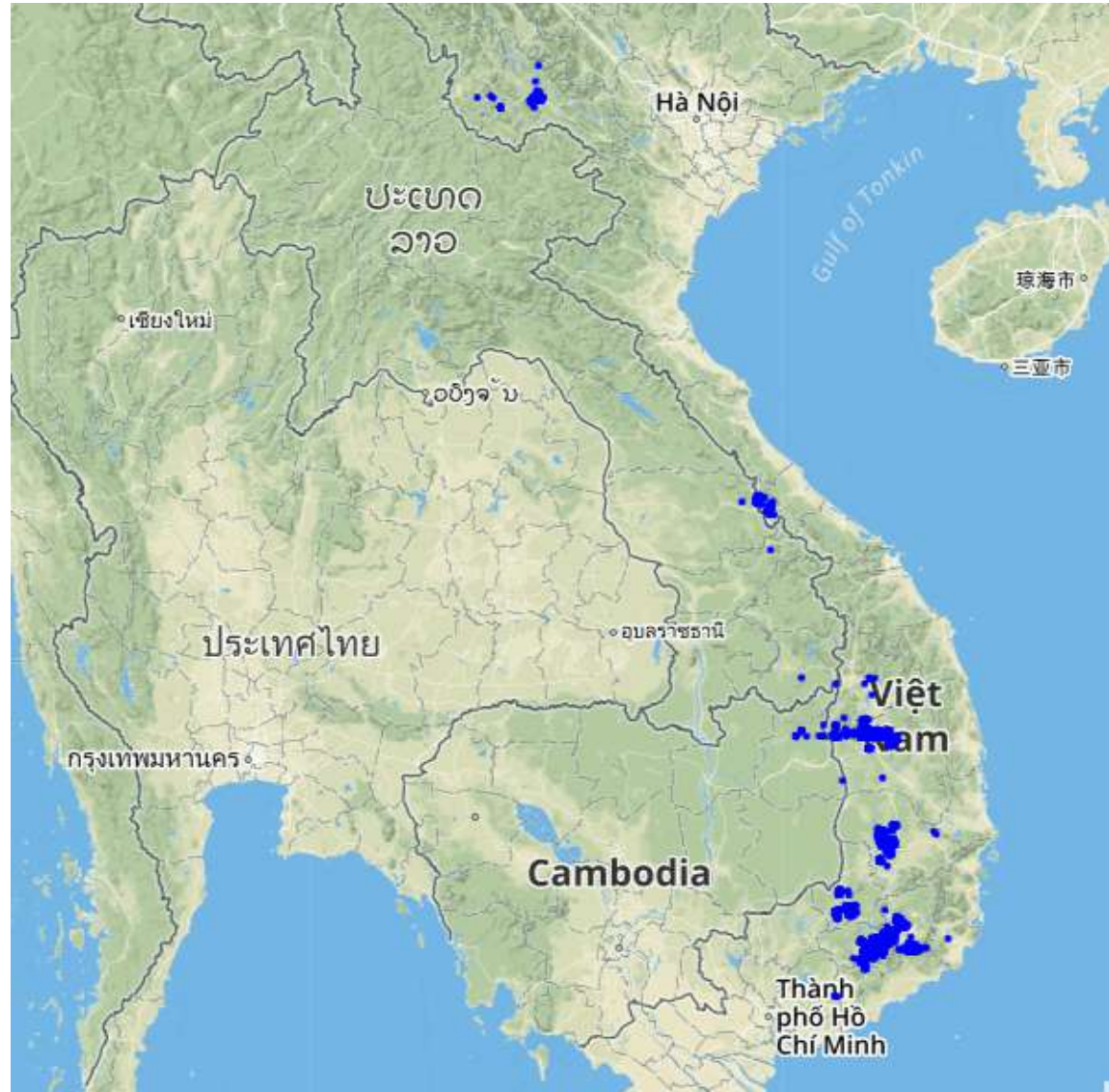
## Features of the new BPM

- Automatic error checking and summary report on the business data of the 4C Unit is presented in the 4C portal
- Physical and commercial coffee flow charts are automatically generated to be able to trace back the coffee flow
- Business Partners of the 4C Unit are shown on an interactive map based on their geo-coordinates for risk assessment





## Example Vietnam: Already 9,000 farmers of 12 4C Units included in the database





# Continuous improvement of 4C operations and customer relations

Develop the web form on 4C portal to replace list of farmers

Further improvement of verification guidance to increase audit efficiency

Implement pilots to validate processes and to assess impact

Continue improving the robustness and impact of 4C system

## Operation



## Marketing

Implement pilot projects on impact measurement and benchmarking

Strengthen customer relations through key account visits

Increase visibility through coffee events and 4C logo on-pack labelling

Improve communication: Website content, social media and newsletter





## 02 Recognitions and Benchmark Results

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# Leading brand owners and traders trust 4C compliant coffee





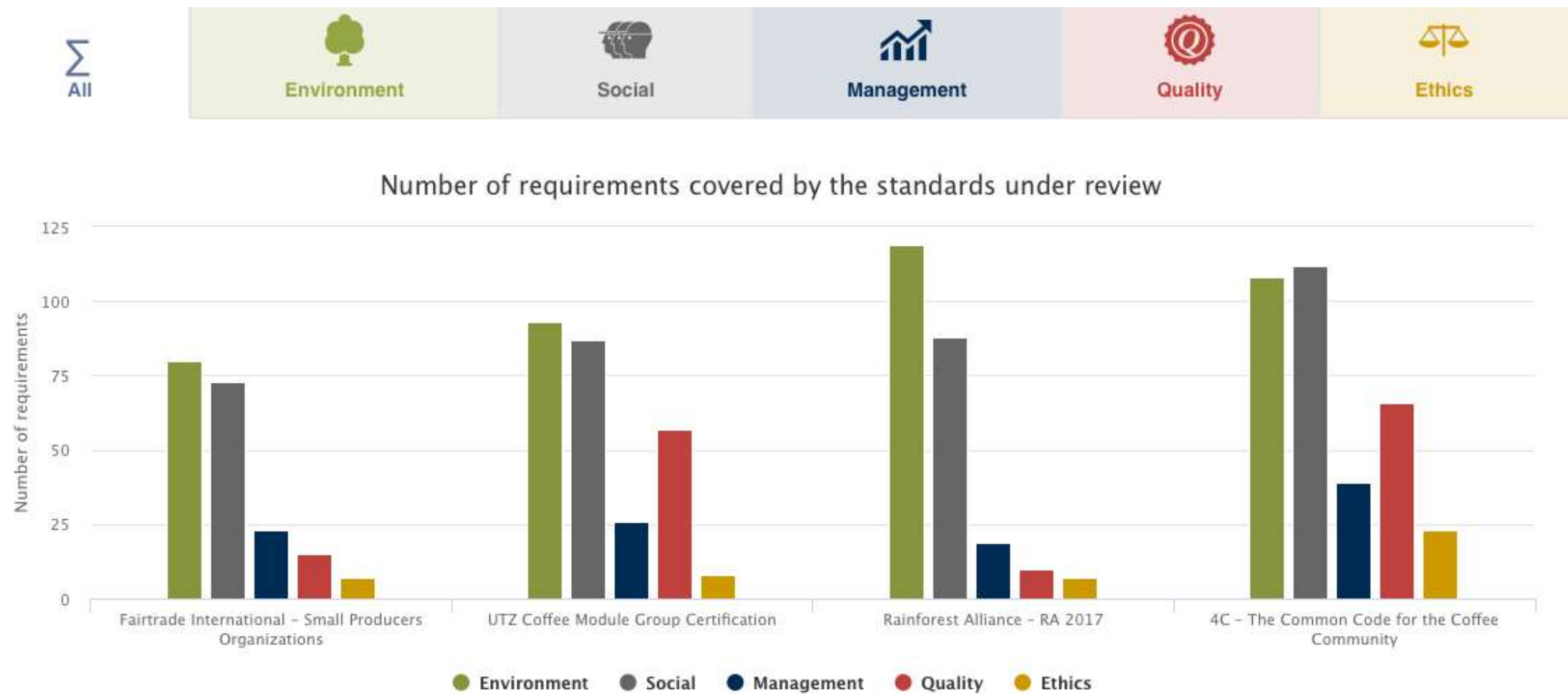
23 certification bodies are cooperating with 4C. Nearly 100 trained auditors are approved to verify compliance with the 4C standard



Status 16.01.20



4C is a comprehensive standard with high economic, social and ecological requirements – as proven by the International Trade Center



Source: ITC, Sustainability Map, [www.sustainabilitymap.org](http://www.sustainabilitymap.org), as of 16 January 2020



# 4C Units fulfill sustainability requirements of key customers in the food sector through its **SAI Silver compliance\***

SAI Platform members (active and affiliate)



\* For comparison reasons, Rainforest Alliance and Fairtrade have been also benchmarked as silver equivalent



## 4C is an active member of the Global Coffee Platform (GCP)

- 4C works in close collaboration with the CGP
- 4C is a member of the technical committee of GCP and actively involved in its multistakeholder processes
- 4C will continue to contribute to the continuous development of the Baseline Code of the GCP
- 4C is recognized by GCP as equivalent to the GCP Baseline Code
- The Baseline Code of the GCP remains the basis of the 4C standard





## 4C supports the Sustainable Coffee Challenge (SCC)



### **SCC:**

- Collaborative effort of companies, governments, organizations, institutions to lead the coffee sector into full sustainability
- Conceived and facilitated by Conservation International (CI)

4C is a partner and supports the Challenge's agenda by committing to increase deforestation-free and biodiversity protected coffee supply chains





## 4C addresses relevant issues of the European Green Deal



- European Green Deal (communicated December 2019)
  - Sets out how to make Europe the first climate-neutral continent by 2050
  - Sets out how to cut emissions, restore the health of our natural environment, protect our wildlife, create new economic opportunities and improve the quality of life

It says among others:

- Reliable, comparable and verifiable information plays an important part in enabling **buyers to make more sustainable decisions**
- The *Farm to Fork Strategy* will strengthen the EU's efforts to tackle **climate change, protect the environment and preserve biodiversity**
- Measures such as eco-schemes should **reward farmers for improved environmental and climate performance**
- Increased level of ambition to **reduce significantly the use and risk of chemical pesticides, as well as the use of fertilizers and antibiotics**

→ **4C addresses relevant issues of the Green Deal!**

Source: [https://ec.europa.eu/info/sites/info/files/european-green-deal-communication\\_en.pdf](https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf)



## 03 Deforestation-Free Coffee Supply Chains

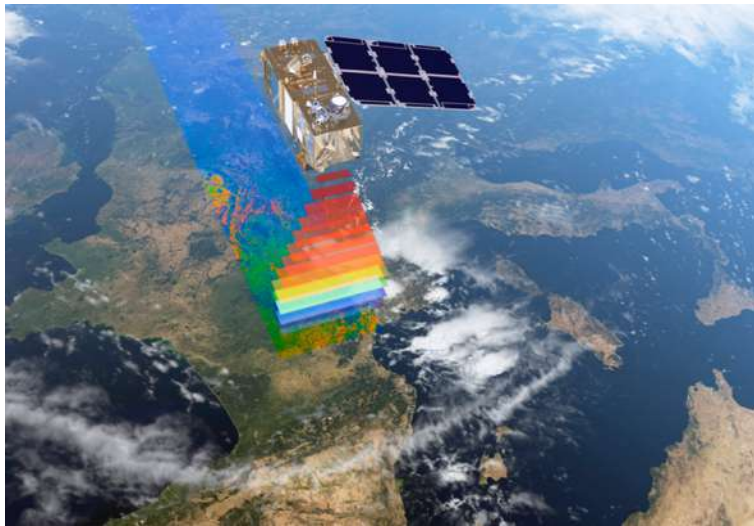
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# 4C applies risk assessment and verification of land use change during the audit procedures

Available local and national datasets on biodiversity and protected areas are used to check the overlap with the assessment areas

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Latest remote sensing technology to identify deforestation

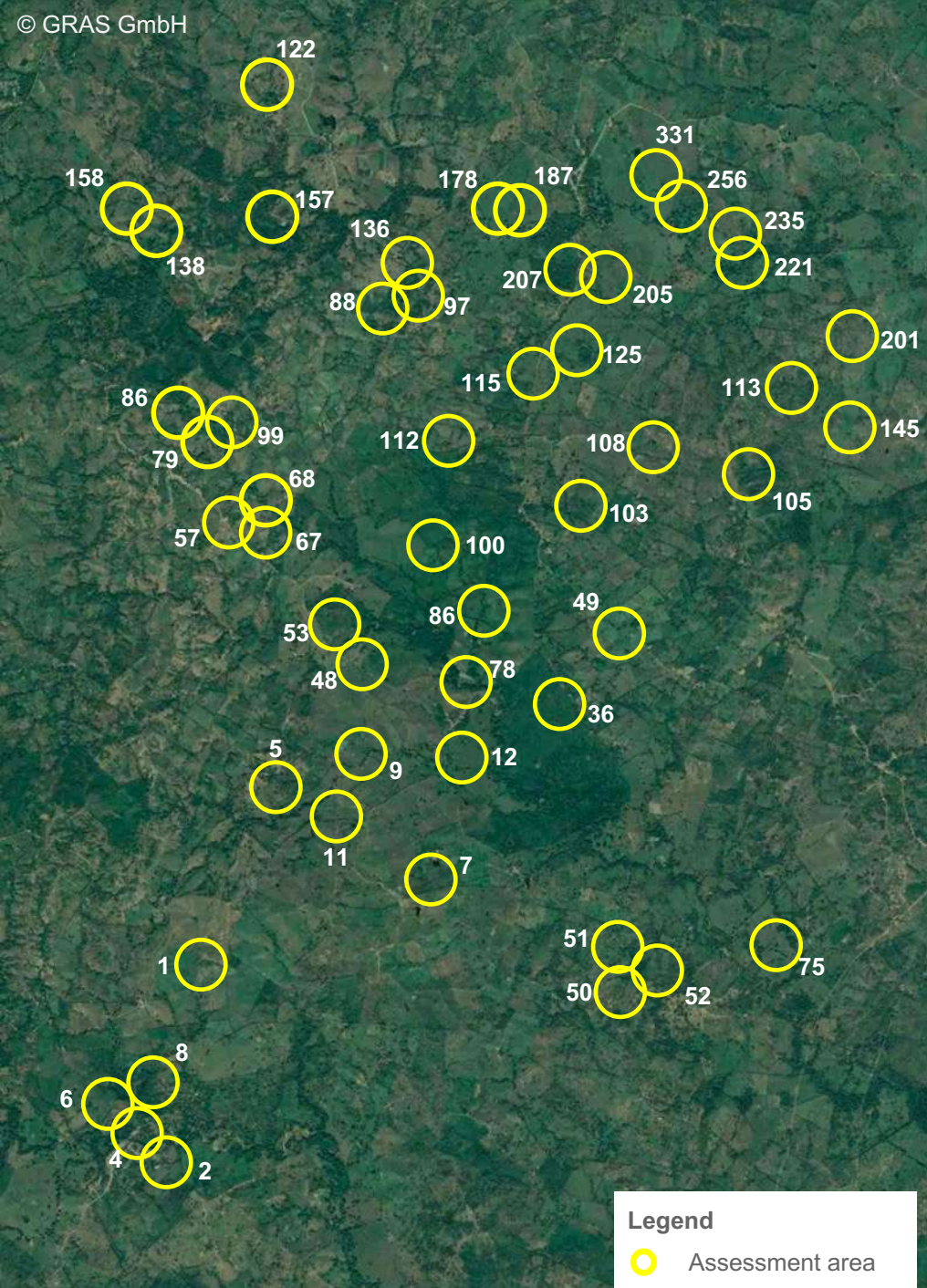


Identification of fires in sourcing areas



Several reliable biodiversity databases





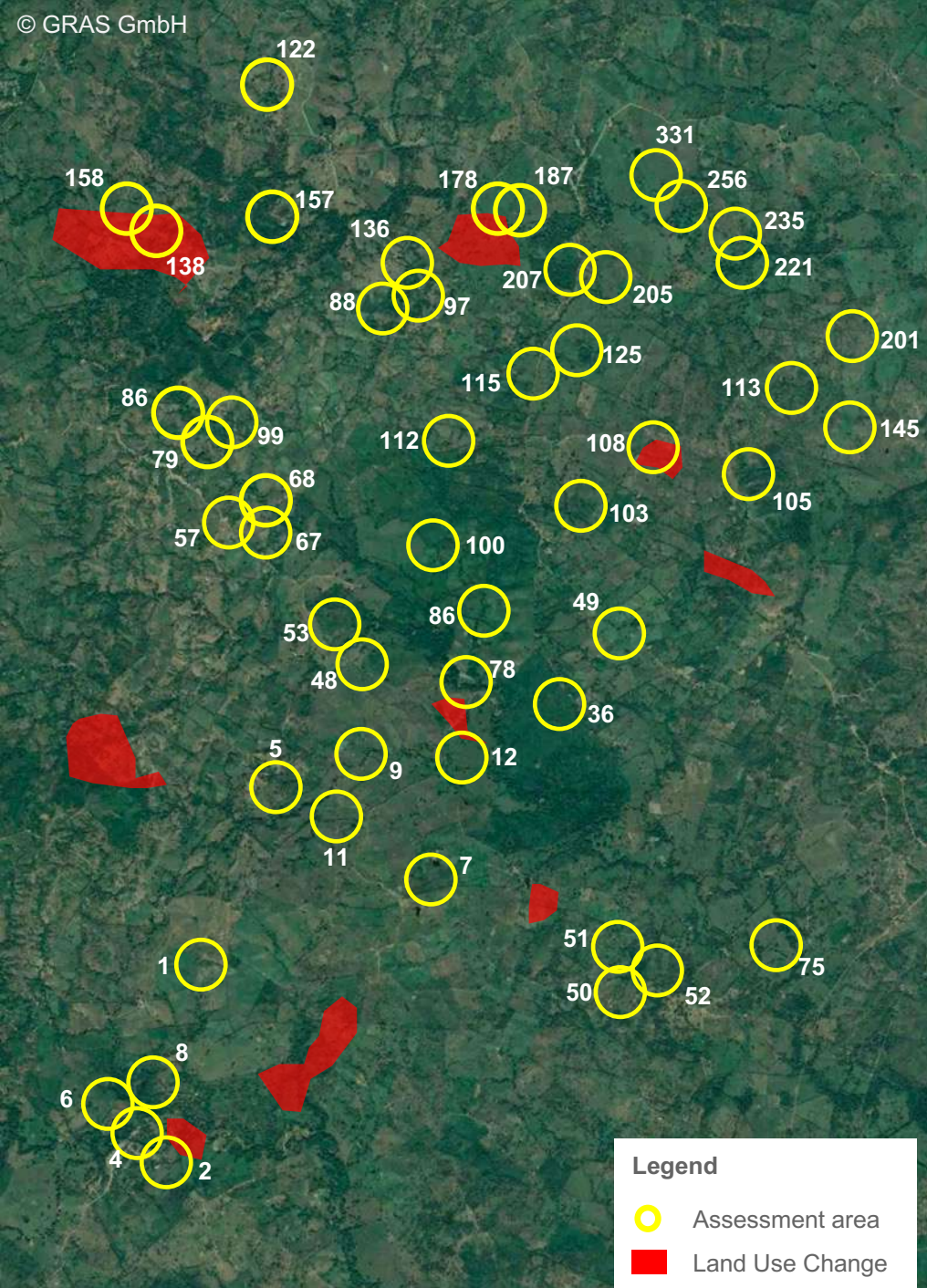
## Example: Coffee Farmers in Colombia (1/5)

A large number of production areas are analyzed efficiently and a risk ranking can be derived

### Scenario

- **Analysis of the supply base** against predefined sustainability criteria (e.g. Land Use Change after a certain cut-off-date) to **proof your partners and customers** that you fulfil your commitments
- **Preparation of a sustainability certification** audit and check compliance of farmers with the needed criteria





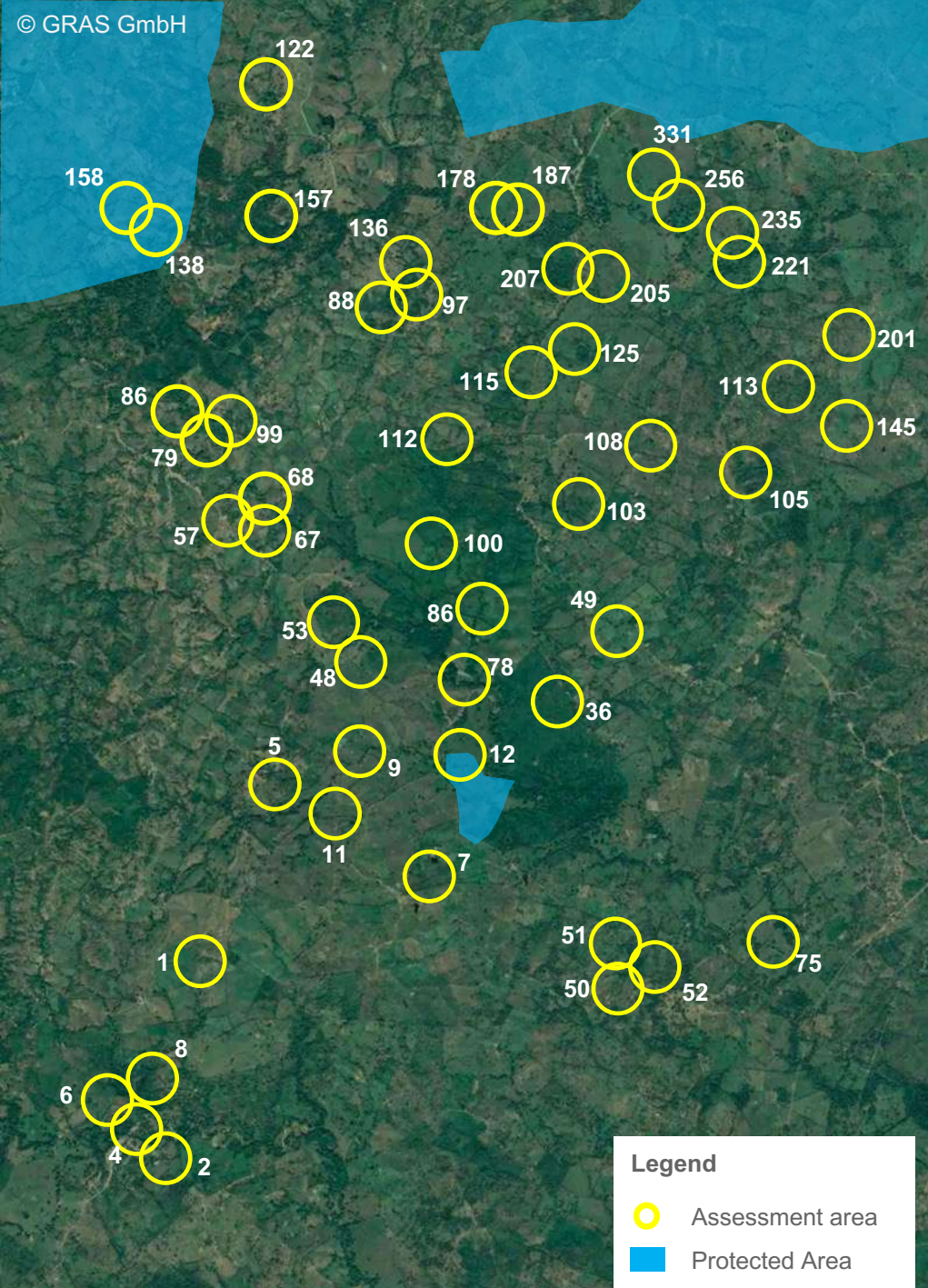
## Example: Coffee Farmers in Colombia (2/5)

A fixed radius for an assumed sourcing area per farmer can be applied and compared to land use change heat maps

### Land Use Change

- A case-specific **sourcing area** is applied, e.g. a radius of 150 m
- For each farmer, **case-specific sustainability criteria** will be checked for the assumed sourcing area, e.g. LUC, biodiversity, indigenous areas and others





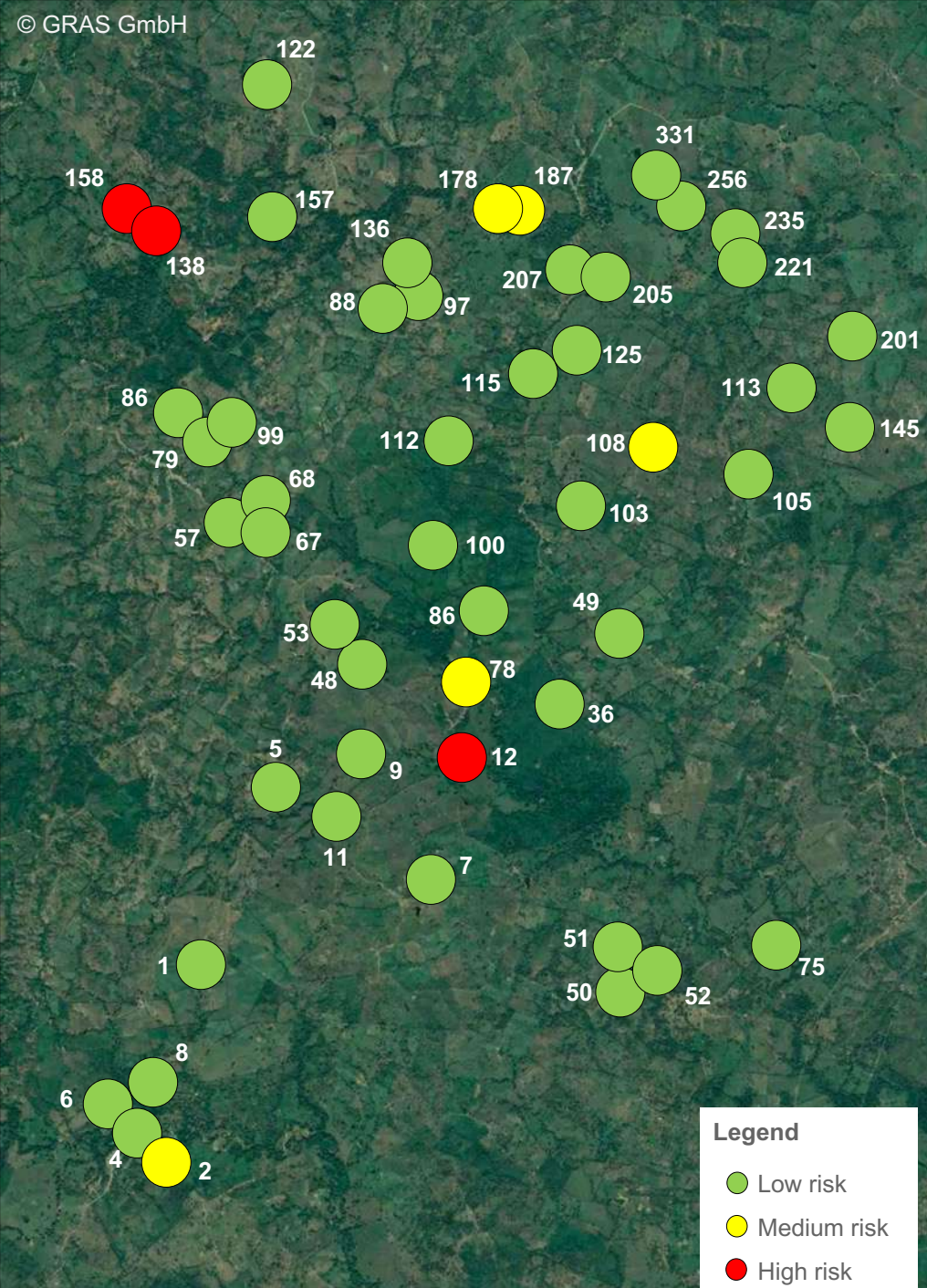
## Example: Coffee Farmers in Colombia (3/5)

Available local and national datasets on biodiversity and protected areas are used to check the overlap with the assessment areas

### Overlap with Protected Areas

- **Datasets on protected areas** and areas with **high biodiversity** or high carbon stock (e.g. peatland) to check for overlaps
- Protected areas are usually classified into areas with very strict protection rules and areas, where agricultural production is allowed under certain restrictions





## Example: Coffee Farmers in Colombia (4/5)

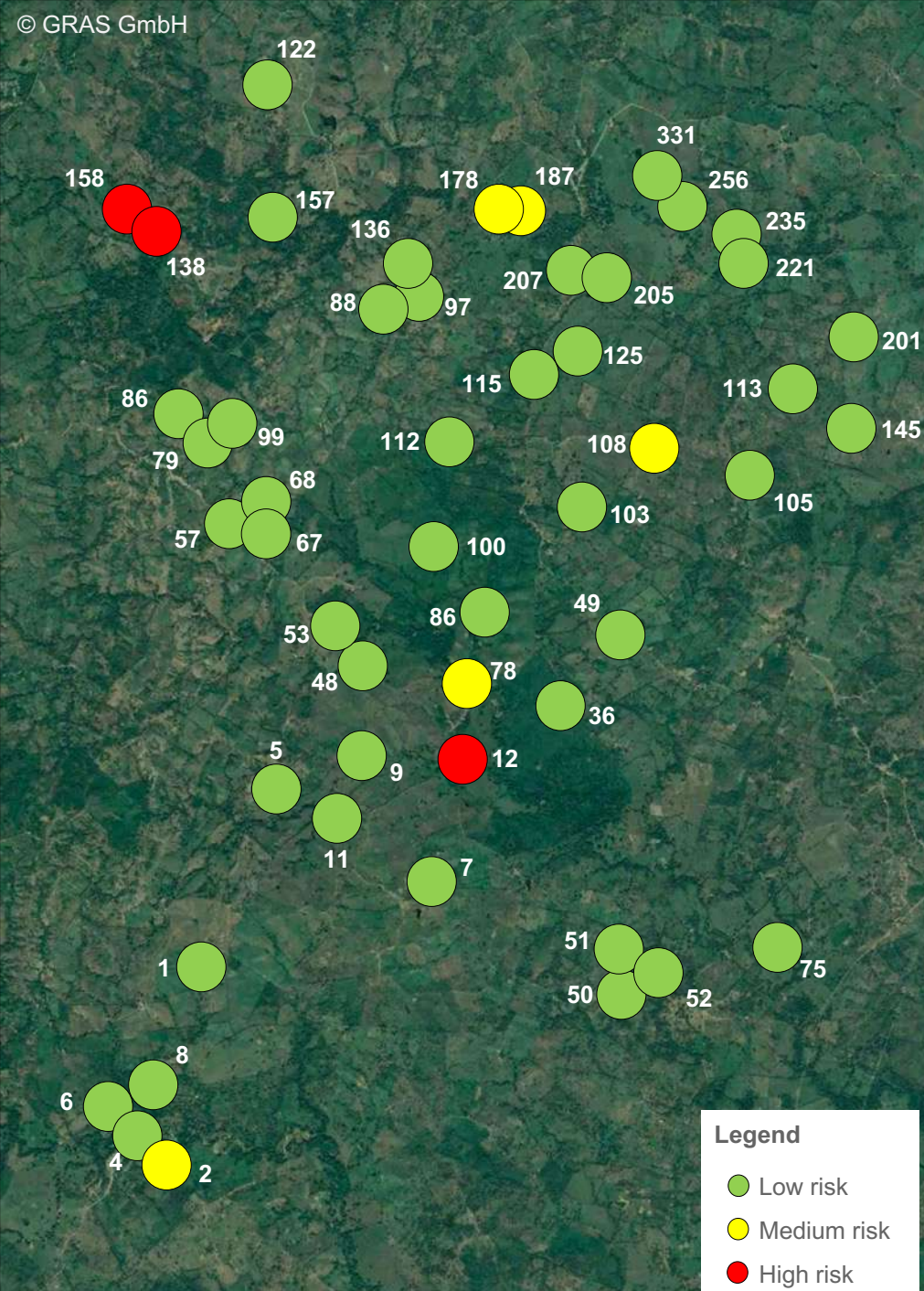
A comprehensive risk index can be calculated via the GRAS tool for each farmer, covering a defined set of sustainability criteria

### GRAS Index and Ranking (1/2)

- GRAS calculates the **comprehensive GRAS Index** for each farmer
- The transparent GRAS Index allows for ranking, **identification of risk hotspots** and **impact assessment** through continuous monitoring
- Individual reports** per farmer can be produced if needed

Risk level of the GRAS Index		
< 0.2	0.2 – 0.4	> 0.4
Low Risk	Medium Risk	High Risk





## Example: Coffee Farmers in Colombia (5/5)

Depending on the aim of the analysis, a detailed assessment of selected plantations can be conducted (e.g. those in high risk areas)

### GRAS Index and Ranking (2/2)

Farmer	Analysed area	Land Use Change	Overlap with No Go Area	Overlap with Risk Area	GRAS Risk Level
Example Farmer 108	7.2 ha	-	-	-	low
Example Farmer 221	7.2 ha	-	-	-	low
Example Farmer 12	7.2 ha	-	-	-	low
Example Farmer 103	7.2 ha	-	-	-	low
Example Farmer 53	7.2 ha	-	-	-	low
...	...	...	...	...	...
Example Farmer 5	7.2 ha	1.2 ha	-	-	medium
Example Farmer 100	7.2 ha	1.2 ha	-	-	medium
Example Farmer 122	7.2 ha	-	1.5 ha	-	medium
Example Farmer 342	7.2 ha	1.5 ha	-	-	medium
Example Farmer 296	7.2 ha	2.2 ha	-	-	medium
...	...	...	...	...	...
Example Farmer 78	7.2 ha	2.5 ha	-	1.7 ha	high
...	...	...	...	...	...

#### Detailed Farm Analysis

2005



2014



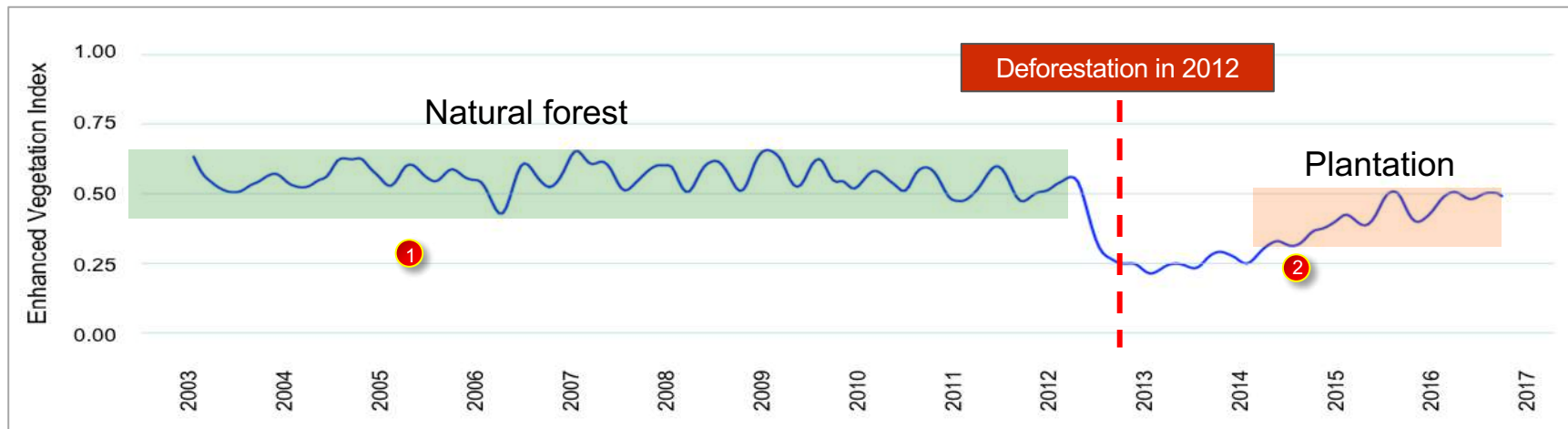


# High resolution satellite imagery and the EVI time series can be used to verify the conversion from forest to coffee plantation

2005



2014







## 04 Integration of Smallholders

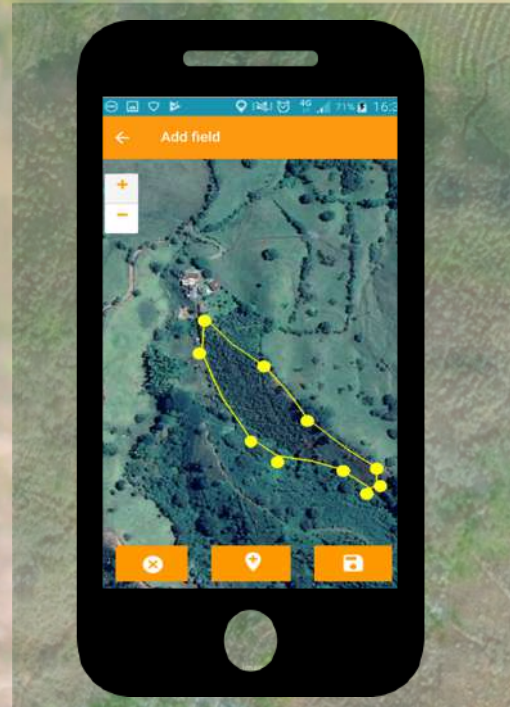
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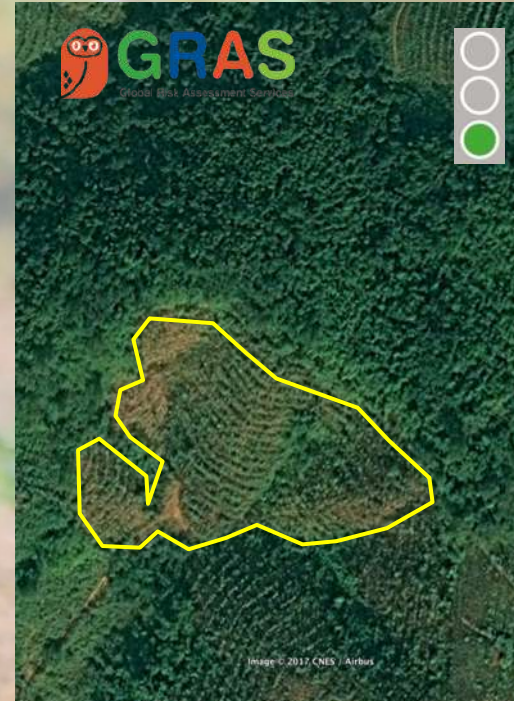
# Smallholders are not excluded from certification. Most of the 400,000 4C certified farmers are smallholders

- To facilitate integration, pre-condition is to know about smallholder location and field size
- Collect field polygons with field recorder app
- Upload polygons for an automatic sustainability risk assessment
- The interactive Smallholder Management Tool enables efficient data management
- Analysis of sustainability criteria and visualization of smallholder data
- Starting point for improvement projects with e.g. financial institutions

→ **Effective and cost-efficient solution to certification**



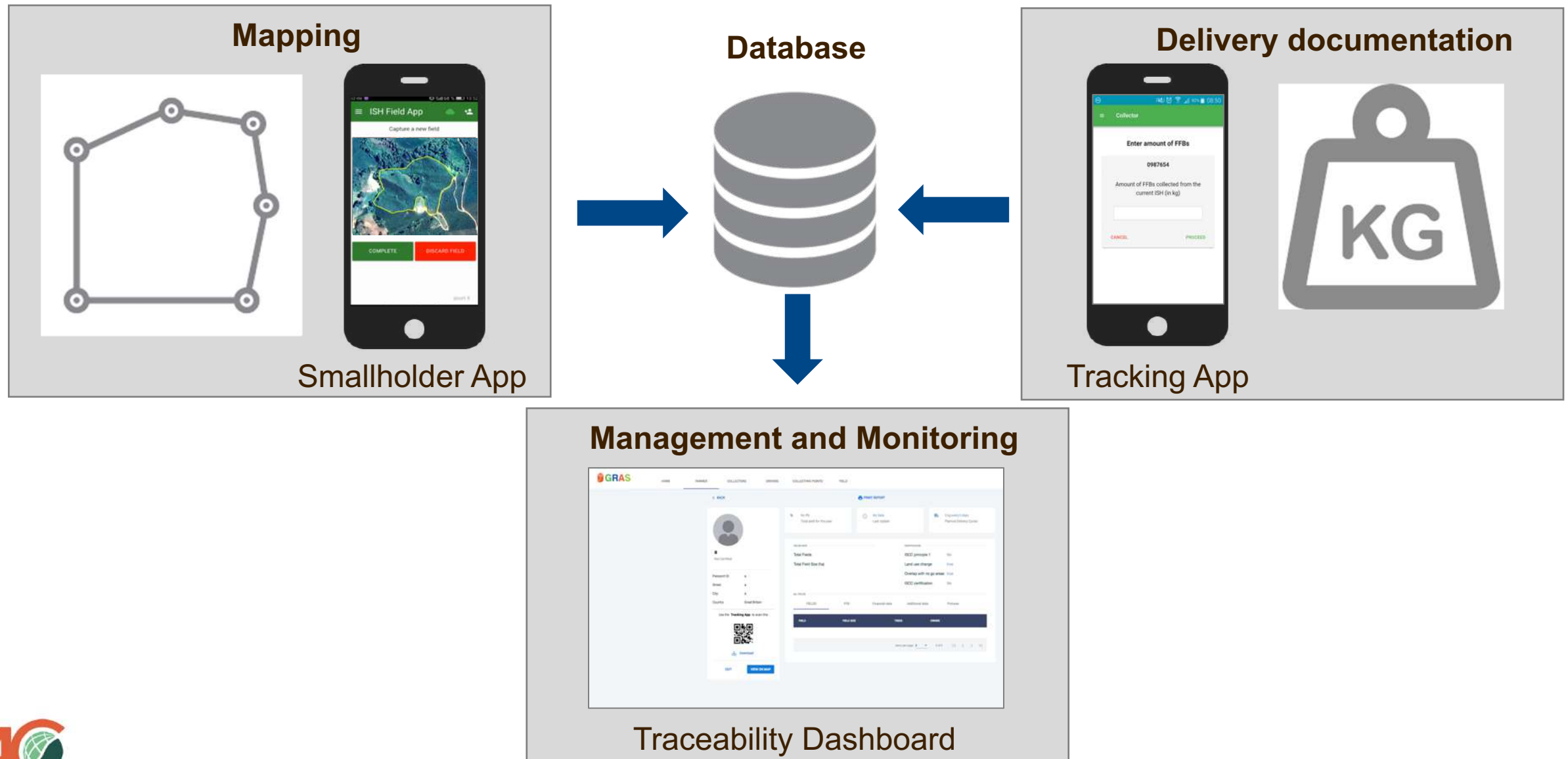
With the 4C Field Recorder App, exact field coordinates and plantation outlines can be tracked and used for further detailed assessments



A fast, easy and reliable automated risk assessment of 4C Units against critical sustainability criteria can be conducted



# 4C is implementing several tools to facilitate traceability back to farmer level

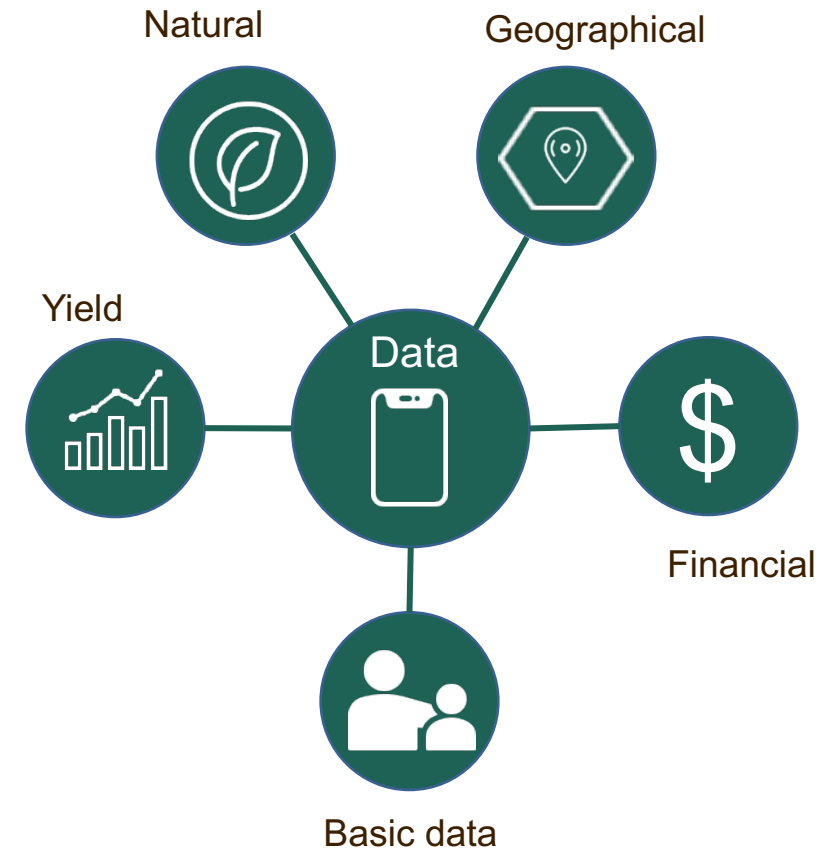




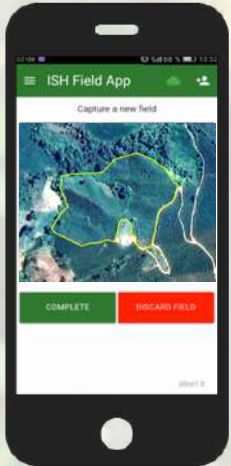
# Smallholder app allows to collect data and polygons and to upload them to a database

## Collection of, e.g.:

- Basic data
- Field outlines
- Automated check against environmental risks
- Field size
- Number of trees/bushes
- Yields per month/year
- Chemicals used
- Financial information
- Picture of smallholder
- Picture of documents
- Etc.




## Smallholder App



Database

App

# 4C has visited some smallholders in Guatemala, collecting their field polygons and basic data. These were uploaded in the Traceability Dashboard



Active since: Sep 27, 2019

Database ID:

ID Card Number:


Date of Birth:

Street:

City:

Country: Guatemala

Farmer's QR code



Download

EDIT

VIEW ON MAP

No Crop  
Total Amount of Delivered Crops/2019

No Date  
Latest activity

0.63  
Total Field Size (ha)

CERTIFICATION

4C certified producer

Self-declaration available as a hard copy and successful internal audit

Yes

Land use change

Overlap with no go areas

No

No

FIELDS DATA

Total Fields

Total Yield/Year (kg/ha)

1

0

Planned Delivery Cycles

First day of delivery

0 kg every 0 days

No date

60876406\_1569859328575

FIELD DATA

Type of Plant/Crop

Year Of Planting

Owner of the Field

Coffee Arabica Dry Green Beans

2006

Yes

Area of the Field (ha)

Number of Trees

Area based on the Polygon (ha)

Production/Year (kg)

1

1000

0.63

300

LAND RIGHT CERTIFICATE

Uploaded pictures

QR codes

Farmer field maps

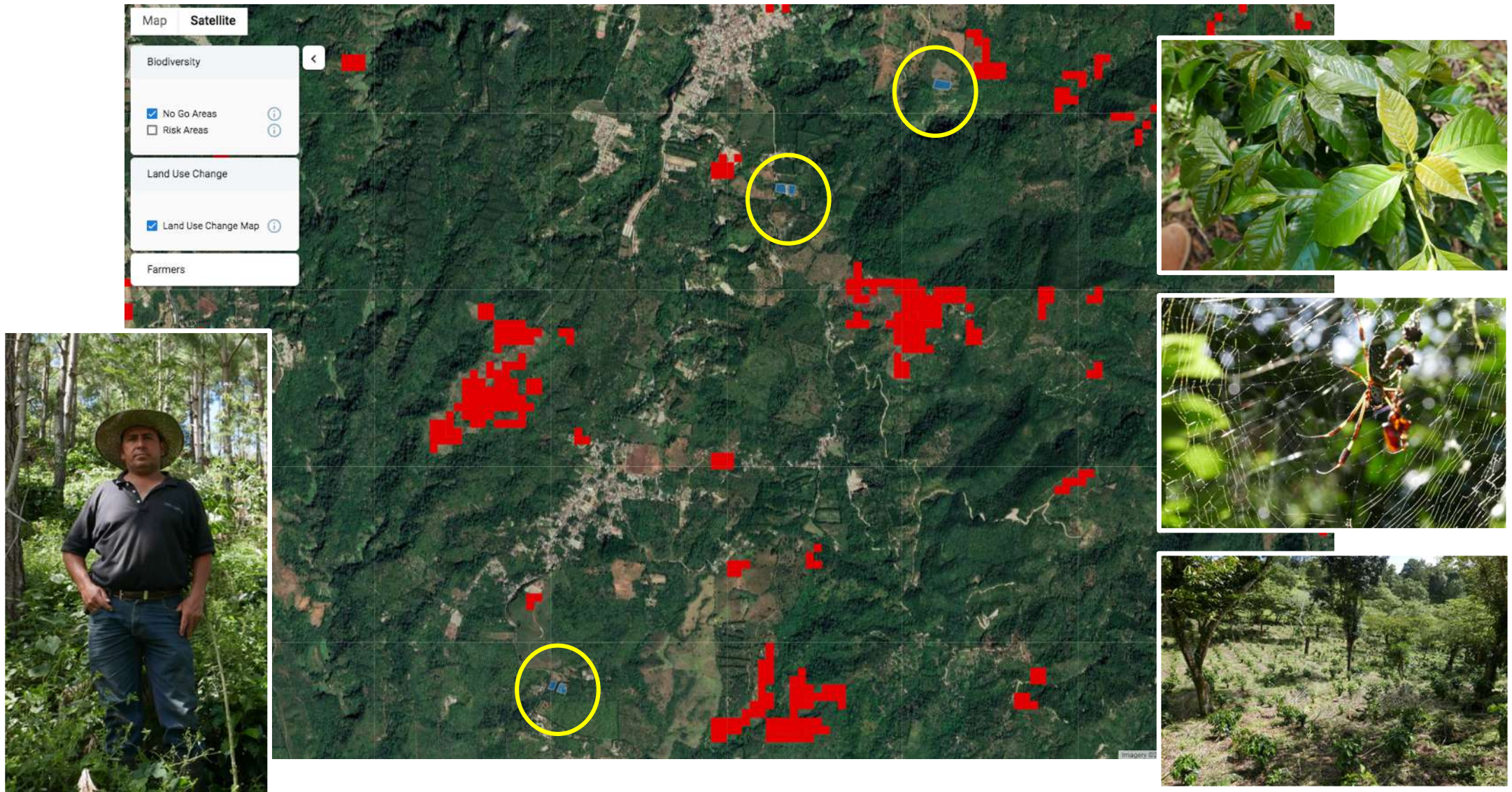
Check against land use change and No Go areas

Field information



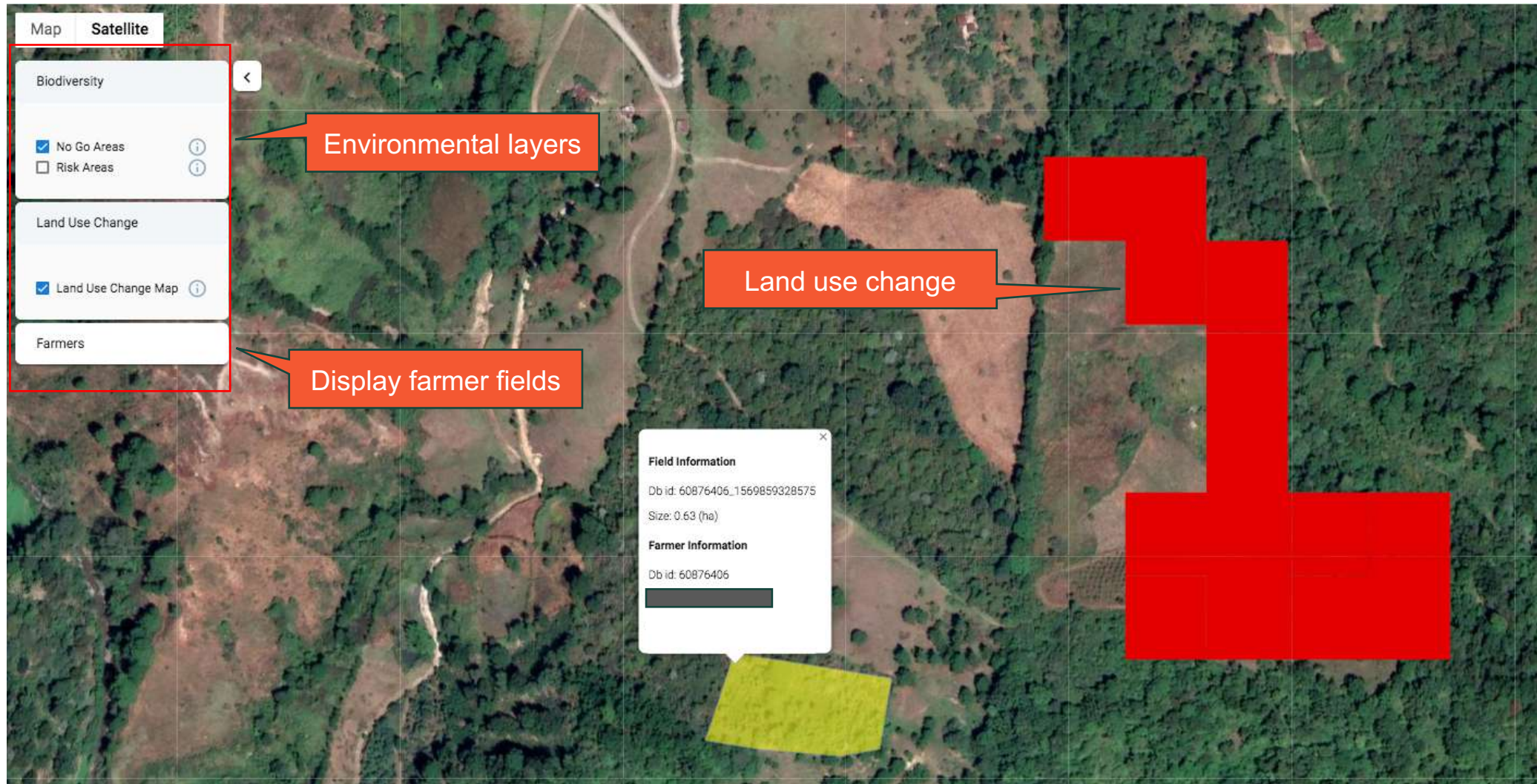


# Farmer field polygons are collected and displayed in the Dashboard...





...and are automatically checked against environmental risks like biodiversity, no go areas or land use change







## 05 Benefits of 4C Certification

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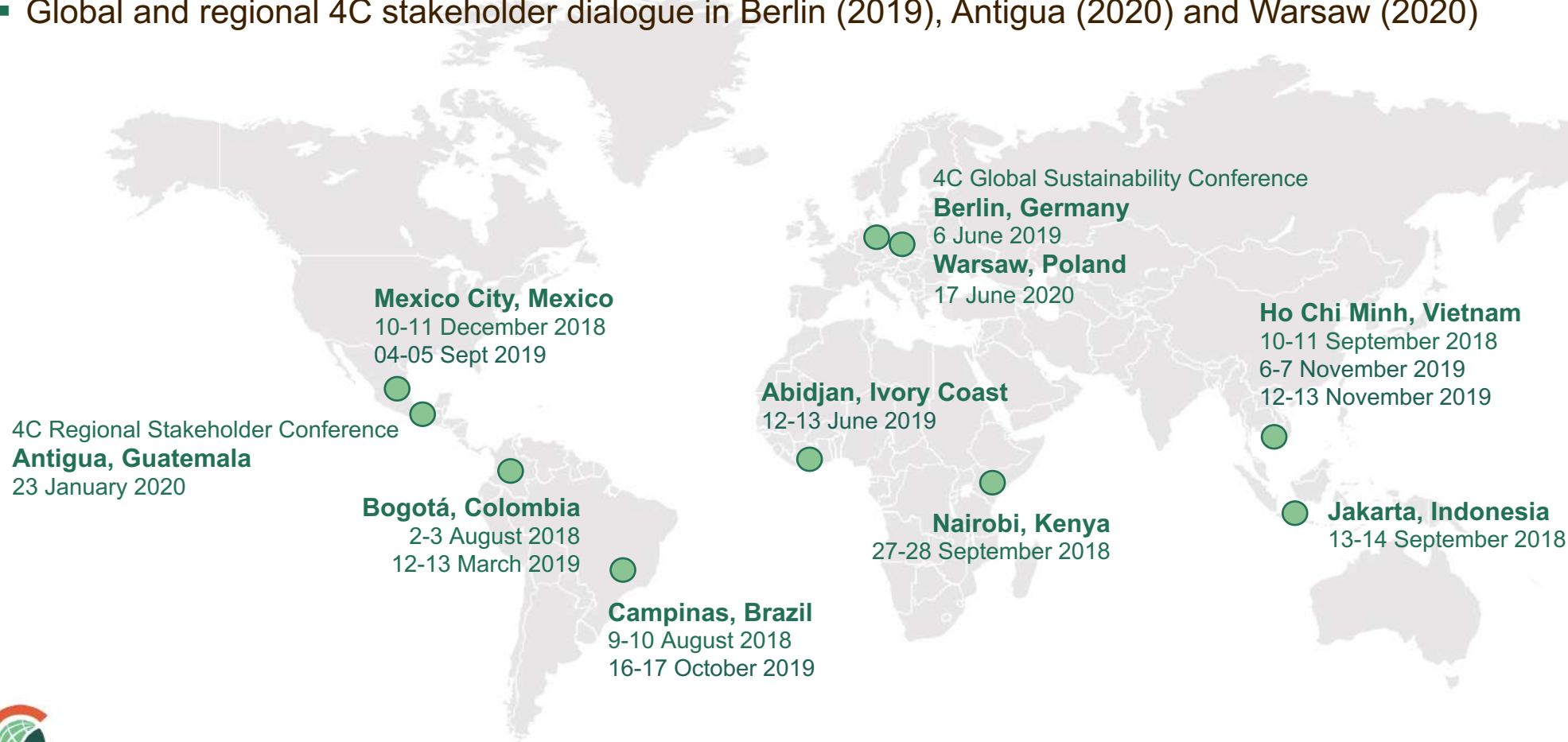
# Continuous improvement based on key account requirements to offer better services to customers in the coffee sector

- **New system documents** describing in a detailed and precise way requirements for 4C certification
- **Audit checklists and audit procedures** for more effective audits tools
- **Improved risk assessment**, e.g. by using remote sensing data and biodiversity databases (GRAS)
- **Re-introduced trainings and capacity building measures** for auditors and 4C system users
- Better **internal processes** for registration, monitoring, and fast certification decisions
- Improved data collection to support **impact assessment**
- **Improved communication** with system users, coffee sector as a whole, and interested stakeholders (e.g. website, newsletter)
- **Carbon footprint calculation, mapping of supply chains, smallholder solutions** on customer demand
- **4C logo on pack** to increase visibility and support claims from final buyers
- Regional and global **stakeholder dialogue** (e.g. Sustainability Conference Berlin, Warsaw, Antigua)



# 4C invests in training measures and stakeholder dialogue

- Development of training concept and training material
- Six new 4C trainings conducted in 2018, six new 4C trainings conducted in 2019
- Global and regional 4C stakeholder dialogue in Berlin (2019), Antigua (2020) and Warsaw (2020)





# Successfull 1st 4C Global Sustainability Conference in Berlin, June 2019.

## Stakeholder dialogue to be continued in Poland in 2020



### 4C Global Sustainability Conference

#### Practical Solutions for Sustainable Coffee Supply Chains

6 June 2019, Berlin, Germany

Maritim Hotel Berlin, Stauffenbergstr. 26, 10785 Berlin

How can you address key sustainability and climate impact challenges in the coffee sector?  
How to implement sustainable supply chains in times of **low coffee prices**? What are the sustainability **strategies** of leading brand owners and traders? What is the impact of sustainability certification and how can it be increased? How can you integrate **smallholders**?  
How can you use **innovative technologies** to increase the **credibility** of certification and to support risk mitigation? How is the **new 4C certification system** dealing with those issues?  
Which concrete and **implementable solutions** are offered to the market?



### 4C Global Sustainability Conference

#### - Practical Solutions for Sustainable Coffee Supply Chains -

Berlin, 06 June 2019

Maritim Hotel Berlin, Stauffenbergstr. 26, 10785 Berlin

#### Agenda

- 09.30 – 10.00 Welcome Coffee, Networking and Registration  
10.00 – 10.10 Welcome Address and Latest Developments 4C  
*Dr Norbert Schmitz, Member of the Board, Gustavo Bacchi, Managing Director, 4C Services GmbH, Germany*

#### Sustainability Challenges in the Coffee Sector

- 10.10 – 11.20 Political Initiatives to Resolve Sustainability Challenges in the Coffee Sector  
*Dr Stefan Schmitz, Deputy Director General, German Federal Government, German Federal Agency for Economic Cooperation and Development (BMZ), Germany*  
Ecological Risks in the Coffee Sector  
*Niels Haak, Manager Sustainable Coffee Policy, Conservation International Europe, Belgium*  
Social Risks in the Coffee Sector  
*Dr Rafael Schneider, Deputy Director, Welthungerhilfe, Germany*  
The Global Coffee Platform: Local Action for Global Results  
*Annette Pensei, Executive Director, Global Coffee Platform, Germany*  
The New 4C for Risk Mitigation – Practical Solutions to Address Sustainability Challenges in Coffee Supply Chains  
*Dr Norbert Schmitz, Member of the Board, 4C Services GmbH, Germany*  
Discussion

#### 11.20 – 11.40 Coffee Break and Networking

#### Trade and End Consumer Market Requirements

- 11.40 – 12.30 Implementation of Sustainability Strategies of Leading Brandowners and Traders  
*Stefan Canz, Global Coffee Farmer Connect Manager, Nestlé, Switzerland*  
*Sina Stemmler, Managing Director, Mercon B.V., The Netherlands*



*Jan Michael Wernicke, Senior Trader, COFCO International, Switzerland*

*Rodrigo Costa, Director of Trading, Comexim Group, USA*

Discussion

12.30 – 13.30 Lunch

#### Impact of Certification

13.30 – 14.30 Case Studies – Impact of 4C Certification on the Ground

Example Brasil

*Gabriel Miari, Trader-Coordinator, Cocatrel, Brazil*

Example Colombia

*Juan Camilo Ramos Mejia, Gerente Comercial, Federación Nacional de Cafeteros de Colombia (FNC), Colombia*

Example Uganda

*Dr Emmanuel Iyamulemye Niyibigira, Managing Director, Uganda Coffee Development Authority (UCDA), Uganda*

Certification and Post-Certification – A Scientific Assessment of Measures to Achieve Transformation into Sustainable Markets  
*Prof. Gernot Klepper, Kiel Institute for the World Economy, Germany*

German Consumer Behaviour and Buying Decisions  
*Holger Preibisch, CEO, German Coffee Association, Germany*

Discussion

14.30 – 14.50 Coffee Break and Networking

#### Application of Innovative Tools and Solutions

- 14.50 – 15.30 Coffee Genetics and Why this Matters for Sustainability  
*Greg Meenahan, Partnership Director, World Coffee Research, USA*  
Verification of Deforestation-free Coffee Supply Chains  
*Pia Rothe, Global Risk Assessment Services (GRAS), Germany*  
Cost-efficient Integration of Smallholders into Certification  
*Keith Castelfino, Sustainability Manager, 4C Services GmbH, Germany*  
Innovative Solutions for Sustainable Coffee Packaging  
*Dr Jan Henke, Director, Meo Carbon Solutions GmbH, Germany*  
15.30 – 16.15 Panel Discussion  
Moderated by *Michael von Lührte, Member of the Board, 4C Services GmbH, Germany*  
16.15 – 17.00 Reception







Examples of 4C logos and claims on coffee packaging





4C improvement plans lead to better living standards for farmers and maintain the continuous development of the communities. Impact assessments started



Farmer capacity building



Improvement plans



Farm record keeping



Shadowing, biodiversity



Improving livelihood



Field monitoring



*“We run **training and support programs** for the farmers to help them to achieve compliance with the 4C requirements. We also provide **loans and subsidies** for investments required. 4C is a comprehensive system ensuring sustainability on the farm. It is comparable with other schemes. It is practical and well recognized in our cooperative and with the participating farms.”*

Maria Hernandez, Cooperativa de  
Caficultores de Andes Ltda.



*“The 4C program helps us to develop the organization of our fincas and to increase the awareness regarding environmental issues. **Quality of coffee beans** has also been improved. **Fair agreements** with workers have been implemented thanks to 4C.”*

Diana Florez, President,  
Ubaque UbaCafé Cooperativa







## Why to use 4C?

- 4C is a consumer-oriented standard, based on a broad **global multi-stakeholder initiative**
- 4C is the **largest certification system** for coffee, it is well-recognized by all stakeholders
- **4C is a thorough and reliable standard** as independent benchmarks show. 4C is also SAI Silver compliant and traceable
- 4C provides **cost-efficient** solutions for certification
- 4C coffee **protects forests and natural resources**
- 4C coffee covers **working conditions** and **social issues**
- 4C is **impact driven** going **beyond certification**, as it develops with its users projects to improve working and living conditions of coffee growers and their families
- 4C is **innovative**, applying modern technologies to support the certification process, to ensure credibility and to safeguard the brand value of its users





# Join 4C and create a sustainable future for the coffee sector!

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