



***CARBON INSETTING: FIXING THE
PILLARS OF SUSTAINABLE COFFEE
AGRICULTURE***

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- **Climate change in the global south**
 - Situation at ground level
 - Role of smallholder farmers
- **FLO-CERT: commitment to sustainability**
 - Support initiatives
 - Gold Standard & Fairtrade International
- **Insetting**
 - Why?
 - What is it?
 - Evolution of the concept
 - Project components
 - Examples Latin America and Africa
 - Latest developments

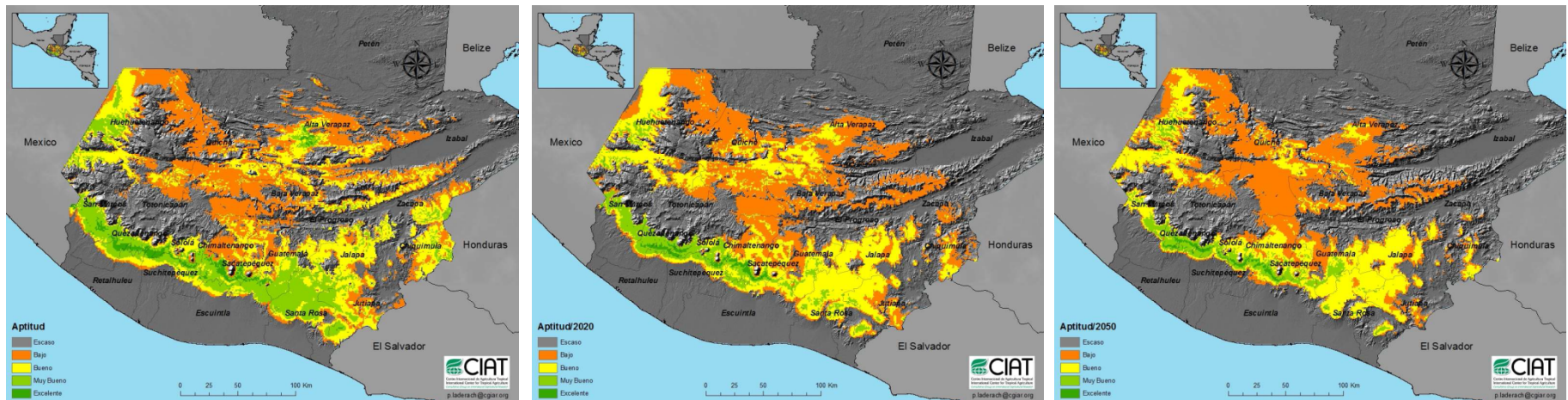


Video

Climate Change

<https://vimeo.com/75468496/>

Guatemala



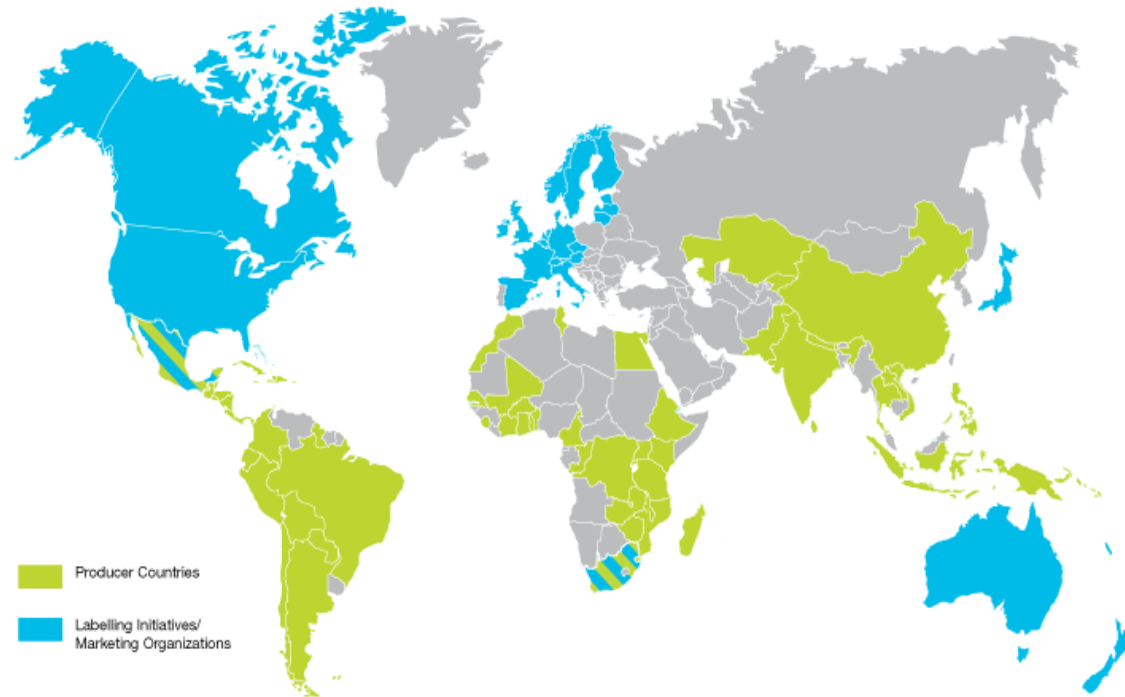
- Increase in temperature in the coffee zones of 0.9 ° C by 2020 and 2.1 ° C in 2050
- 24 mm reduction in annual precipitation
- Suitable coffee growing area in Guatemala will decline significantly by 2050
- However there is only limited land available at higher altitudes

Coffee smallholder facts

- 25 million smallholders produce 80% of the world's coffee.
- 100 million people depend on coffee for their livelihoods.

Africa

- Over 90% of coffee is produced by farmers with less than 2 hect. of land.
- Over 40 million people depend on the crop for their livelihood.



- **1.3 million farmers and workers**
- **70 countries**
- **1,149 producer organizations**
- **16 categories of products**

Fairtrade coffee

Smallholder facts 2011

- 580,200 small-scale farmers
- 348 certified organizations
- 28 countries

Latin America

- 80% of Fairtrade certified coffee is produced by 187,000 farmers

**FAIRTRADE**



Food security



Food safety



**Global warming
mitigation/adaptation**



**Cornerstone
for coffee
sustainability**

Why FLO-CERT got involved in sustainability?

1. Climate change consequences

2. Market trends

3. Support need

What Fairtrade smallholder farmers report...

- Yields are declining 76%
- Not able to access adaptation/mitigation 83%
- Awareness on carbon labeling/purchasing requirements 64%
- Carbon Footprint requested 20%



- Unilever: all suppliers to reduce Environmental Footprint by 50%.
- Unilever: 100% sustainable procurement of agricultural materials
- Tesco: all suppliers to reduce CF by 30% over 10 years
- Walmart: Supplier sustainability questionnaire – preferential purchasing – new targets set for reduction
- REWE Pro Planet: Sustainability umbrella label on all products over 10 years



Certification/Verification

- Certification for Fair Carbon Standard
- New Standards Framework (NSF): *producers plan their own future.*

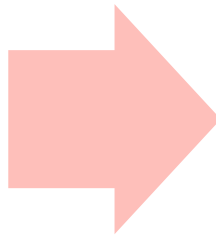
Funding

- Fairtrade Access Fund
- Premium: 5 cents (US\$) for productivity & quality
- Roya Fairtrade Fund

Supply chain

- Insetting / Carbon Footprints / Water Footprints
- Verification / Monitoring
- Impact Analysis
- Sustainability data collection & analysis





Expected results

- *FairCarbonCredits standard* facilitating:
 - Access of farmers to carbon markets
 - Participatory principles in carbon projects
- Complementary to the Gold Standard
- Scopes:
 - Energy efficiency
 - Renewable energy
 - Agro-forestry

Open to
Fairtrade
and non
Fairtrade
producers

No label
on any
package

Timeline:
Q4 - 2014



For
smallholder
farmers and
local
communities:

- Assist in adapting/mitigating
- Increase access to investment
- Improve business sustainability



For brand
companies:



- Strengthens the longevity of the supply chain
- Increase product value by creating new marketing opportunities

INSETTING – WHAT IS IT?



To...

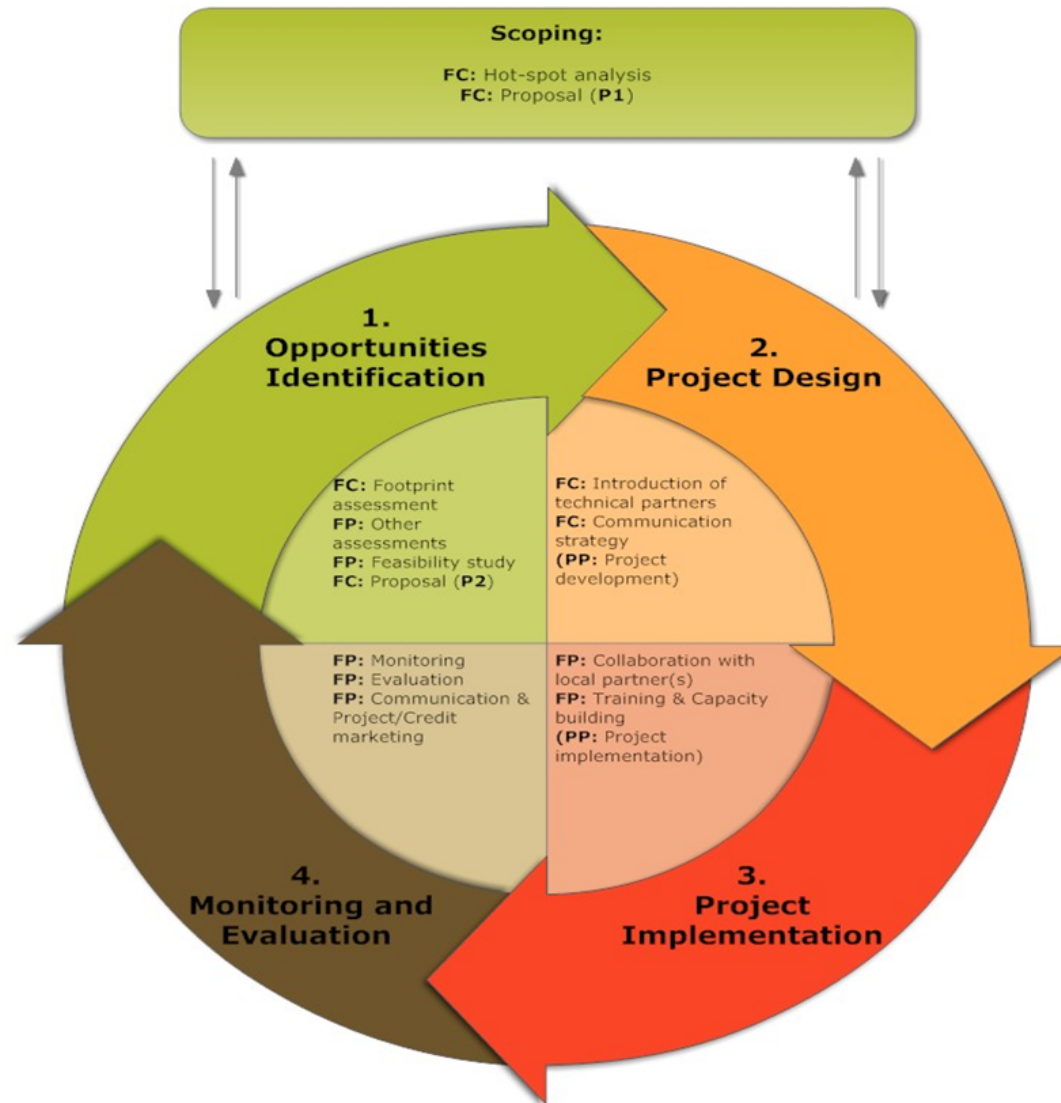
“Insetting is an investment – addressing climate change – within a company’s core business areas, bringing additional and measurable benefits to local communities”

From...

“Offsetting your GHG emission within your supply chain”



Insetting Cycle



EXAMPLE 1: CARBON CREDIT PROJECT

Objectives:

- Develop a project to confront climate change, improve farmer livelihoods and enhance supply chain security.

Content:

- Vulnerability Analysis
- Baseline Assessment
- Carbon Credits Feasibility Study



EXAMPLE 1: CARBON CREDIT PROJECT



Geographic area

- San Juan del Rio Coco, Nicaragua
- Driest region of the country with a sloped relief



Population

- 4 coops involved
- 1336 smallholder farmers participating
- 50% with farm size of less than 2.1 hectares



Product

- Coffee

Vulnerability Analysis:

- 3 criteria (IPCC): exposure, sensitivity and adaptive capacity.
- 5 opportunities for reducing vulnerability.

Baseline Assessment:

- Emissions were estimated in 5.9 kg CO₂e per kg of green coffee.
- Identified 4 main sources of emissions.
- Projected reductions of up to 60% if different technologies are implemented.

Carbon Credits Feasibility Study:

- 8 project types assessed.
- 5 carbon standards considered.



Results:

- Recommendation to invest in an Afforestation / Reforestation project.
- Use Plan Vivo as the carbon standard.
- Waiting on approval for 2nd phase.



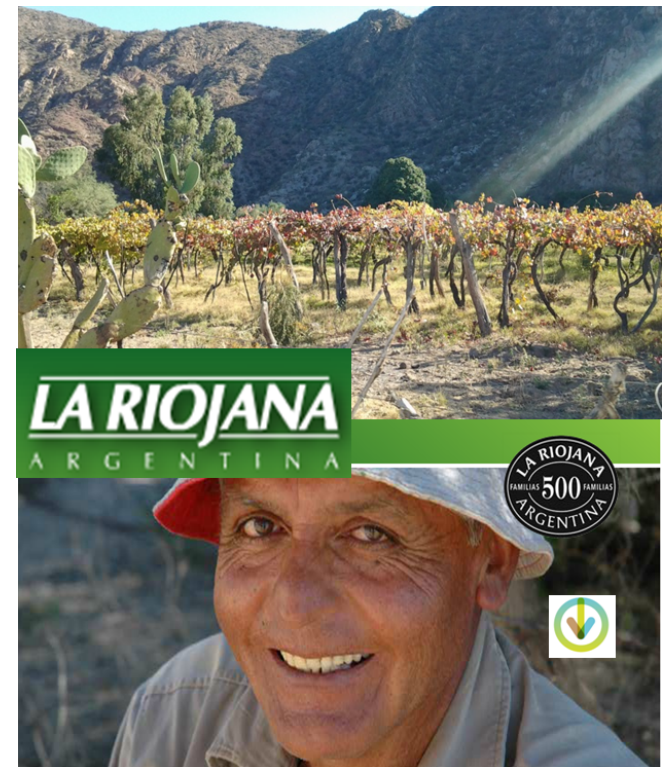
EXAMPLE 2: IMPACT REDUCTION PROJECT

Objective:

- Reduce the environmental impact of the agricultural and processing operations of wine production.

Who, Where, What?

- Company: La Riojana Coop.
- Location: Chilecito, Argentina
- Product: Wine

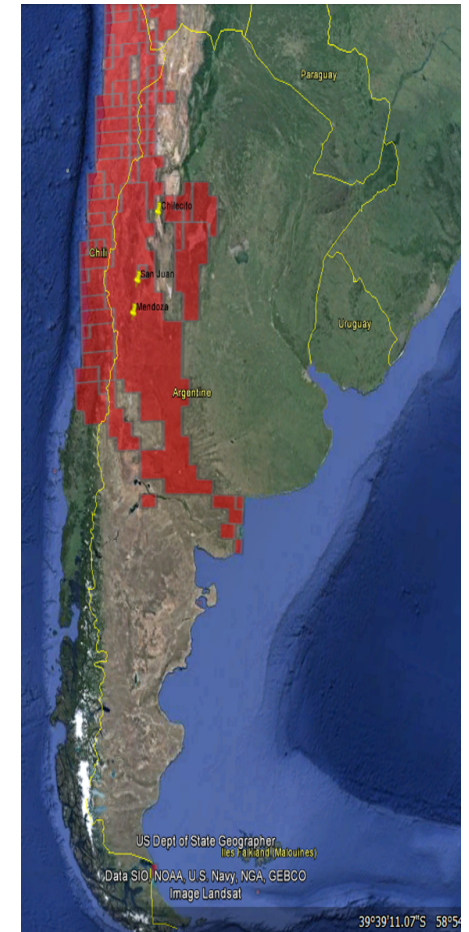


1. Identify main sources of GHG emissions, water consumption and water pollution.

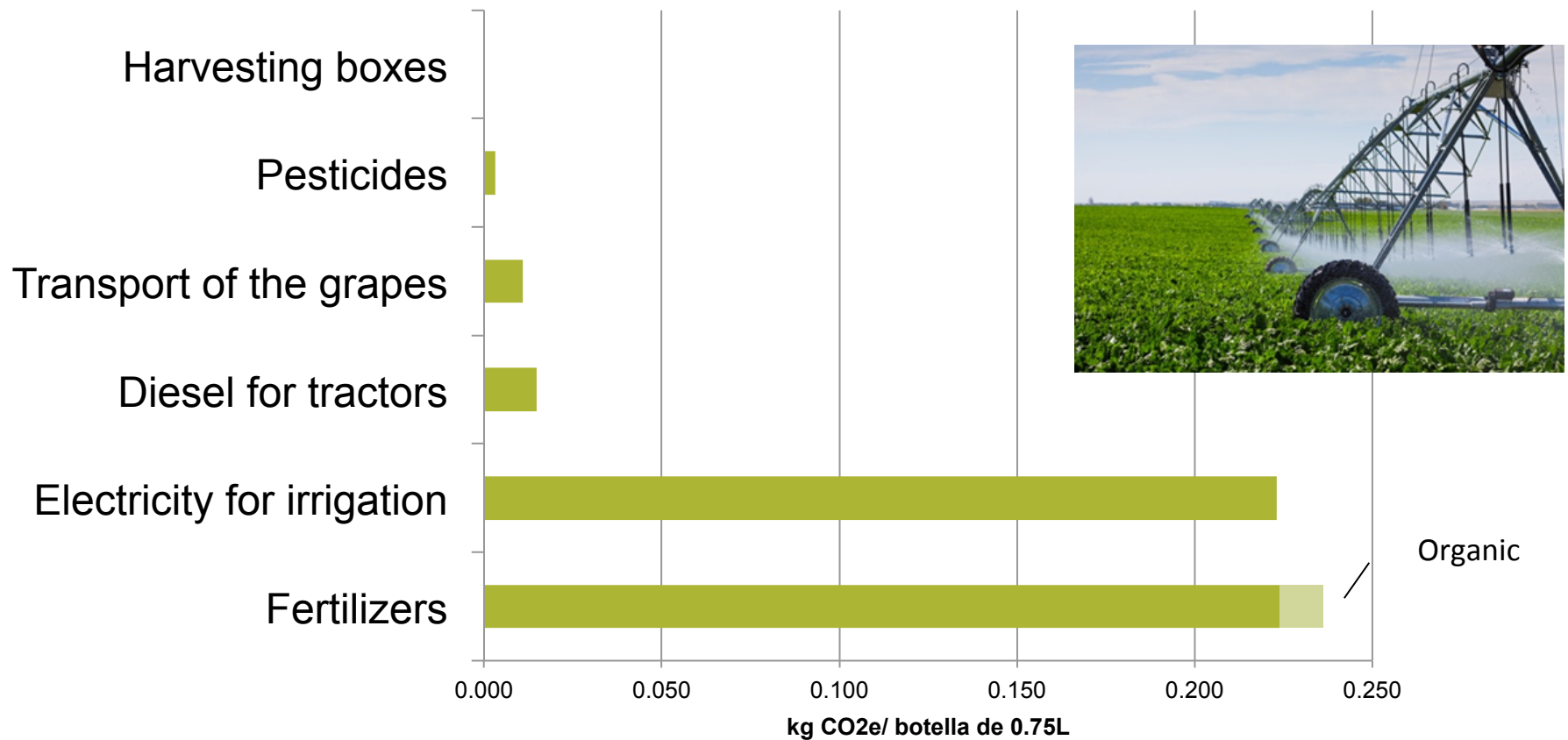
- Carbon footprint assessment
- Water footprint assessment
- Quantis Tool

2. Identify improvement opportunities of the production processes.

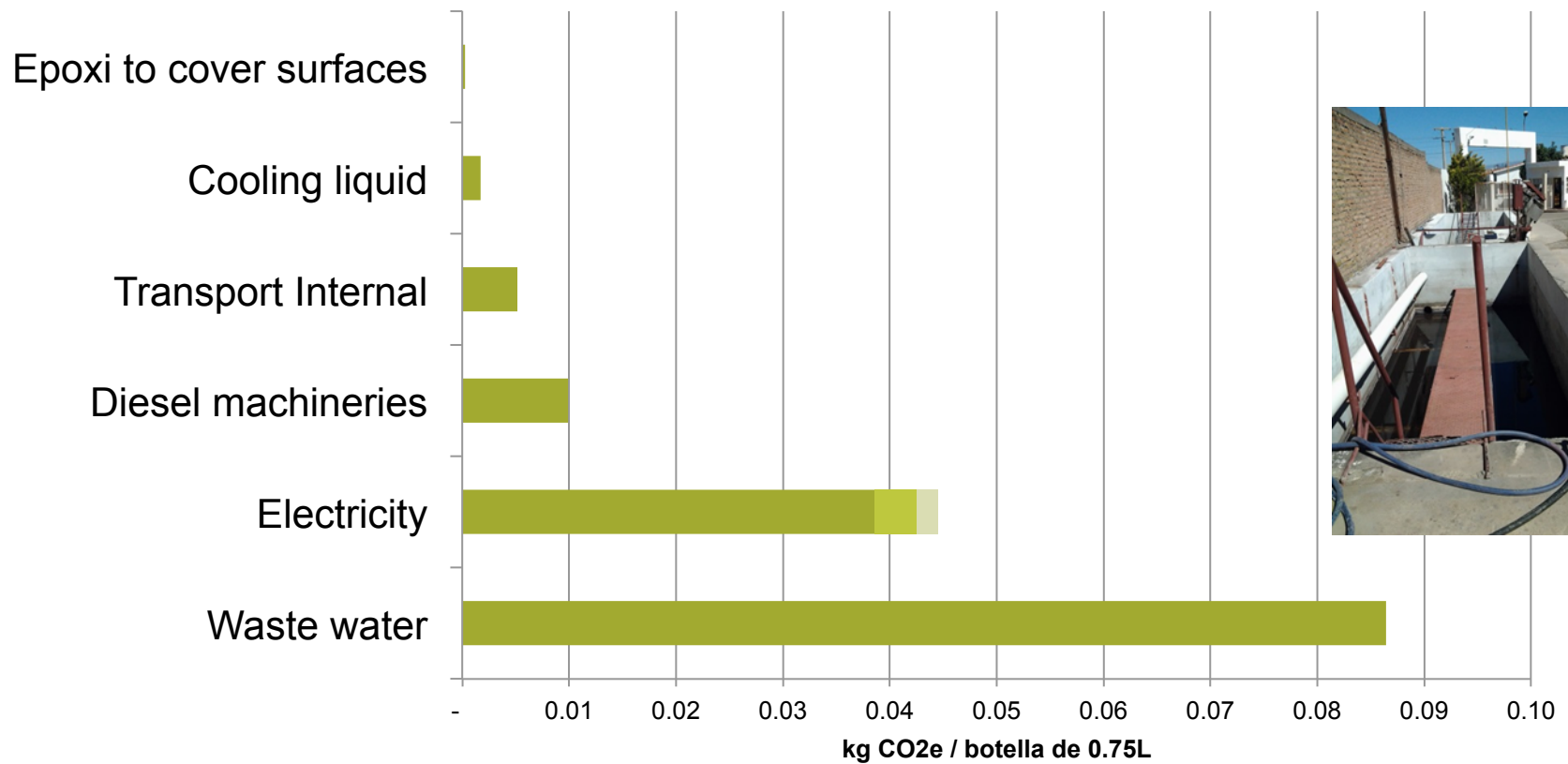
- Feasibility study on 8 projects
 - 1.Solar irrigation 2.Compost and humic acid fertilization
 - 3.Wastewater treatment digesters 4.Wastewater treatment algae
 - 5.Wastewater treatment trees
 - 6.Energy efficiency in Central Warehouse 7.Biodiesel production
 - 8.Wind power electricity production



GHG emissions – farm



GHG emissions – factory



Results: emissions & water consumption



A bottle of wine 0.75 liters:

- Carbon FP = 1.63 kg CO₂e
- Water FP = 448 liters of water

Results: process improvements



1. Solar powered irrigation



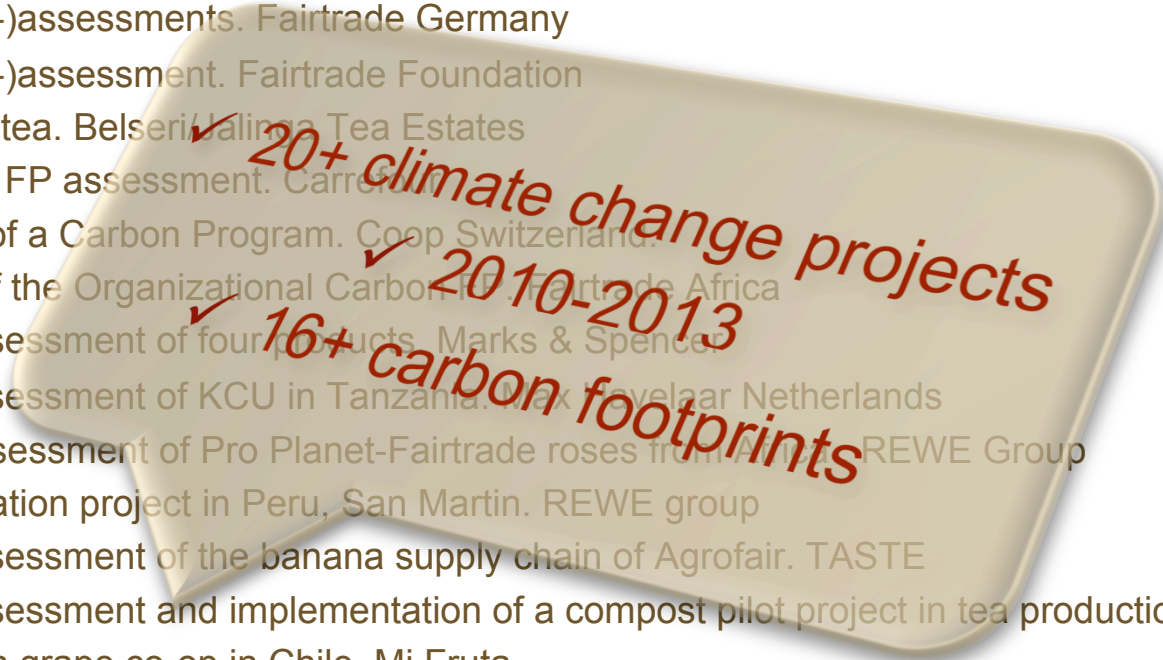
2. Compost and humic acid
fertilization



3. Wastewater treatment
digesters

- **Who:** Kagera Coffee Union (KCU)
- **Where:** Northwest Tanzania
- **What:** Energy Efficient Portable Clay Stoves
- **When:** June 2014
- **Description:** This project will support KCU in establishing the production and distribution of energy efficient clay stoves.
- **Scale up:**
 - Phase 1 – Year 1-4: reach 48,000 members
 - Phase 2 – Year 4-7: reach entire population in Kagera region
- **GHG emission reduction:** 600 kg CO₂ /year/stove
- **FLO-CERT:** monitor social, economic and environmental impacts

1. Carbon FP and reduction/compensation plan. GEPA
2. Development of a training manual on Climate Change Mitigation for (East African) tea producers. ITC
3. Carbon FP (re-)assessments. Fairtrade Germany
4. Carbon FP (re-)assessment. Fairtrade Foundation
5. Carbon FP for tea. Belseri/Jalinga Tea Estates
6. Environmental FP assessment. Carrefour
7. Development of a Carbon Program. Coop Switzerland
8. Assessment of the Organizational Carbon FP. Fairtrade Africa
9. Carbon FP assessment of four products. Marks & Spencer
10. Carbon FP assessment of KCU in Tanzania. Max Havelaar Netherlands
11. Carbon FP assessment of Pro Planet-Fairtrade roses from Austria. REWE Group
12. VERs reforestation project in Peru. San Martin. REWE group
13. Carbon FP assessment of the banana supply chain of Agrofair. TASTE
14. Carbon FP assessment and implementation of a compost pilot project in tea production. Tesco UK
15. Carbon FP of a grape co-op in Chile. Mi Fruta
16. Carbon FP of coffee co-ops in Nicaragua and identification of potential carbon credit projects. GMCR
17. Carbon FP & Water FP assessments and Feasibility study on different reduction strategies in wine production. La Riojana Cooperative
18. Technical assistance in the development of the Green Coffee PCR and Field testing of the methodology in Honduras. SAI Platform and Sustainable Trade initiative (IDH)



Project:

- Develop a consistent and robust methodology for the calculation of GHG emissions from green coffee production.

What is a PCR?

- A Product Category Rule is similar to a footprint standard but tailored for a ***specific product***.

Purpose:

- **Drive consistency** in the application of GHG emissions calculation.
- Create conditions to make **fair comparisons** between carbon studies.
- Drive **effective** mitigation/adaptation strategies.
- Encourage **behaviour change** in the supply chain.



Driving organization

- SAI Platform Coffee Working Group (Sustainable Agriculture Initiative).

Project Steering Committee

The NESCAFÉ logo, consisting of the word 'NESCAFÉ' in a bold, black, sans-serif font on a white background.

- Illy Cafe

- Nestle

The Mondelēz International logo, with 'Mondelēz' in a white, stylized font and 'International' in a smaller font below it, all on a purple background.The LAVAZZA logo, with the word 'LAVAZZA' in a blue, bold, sans-serif font on a white background.

- Tchibo

- Mondelez



- DE Masterblenders 1753

- Lavazza



Sponsor

- IDH (Sustainable Trade Initiative)

Collaborating implementers



- FLO-CERT
- 4C
- RA
- UTZ



Phase 1

- Create Steering Committee
- Create Technical Committee
- Develop PCR for green coffee production

Phase 2

- Pilot case studies
 - Honduras (Cocafelol)/ Kenya (Kofinaf)/ Vietnam (Volcafé)
- Provide further guidance for implementing



Results:

- CF-PCR for green coffee production ready to use
 - www.environdec.com/en/Product-Category-Rules/Detail/?Pcr=8539#.UoDh89WSCZQ
- Pilot case studies documented
 - Attached to CF-PCR



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Smallholder facts

- Smallholder farmers grow 70% of the world's food.
- Around 17 out of 20 of the world's farms are 2 hectares or less.
- Some 30 million smallholder farmers produce most of the world's coffee and cocoa.
- Over 90% of the world's cocoa is grown on 5 million small farms.



INSETTING...CHALLENGES

Reconciling the 3 pillars:

- Social need
- Environmental impact
- Financial requirement

Identification of best technical partner

- The developer
- The implementer

Large scale

- Limited coop size
- Limited financial availability

Long term commitment

- Carbon credit projects