

*coffee
dinner &
summit*



Towards Carbon Neutrality: Coffee Industry main challenges

coffee dinner & summit



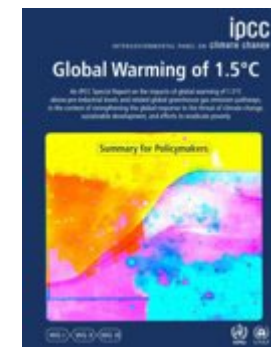
MARIO CERUTTI

**Chief Institutional Relations &
Sustainability Officer Lavazza Group**

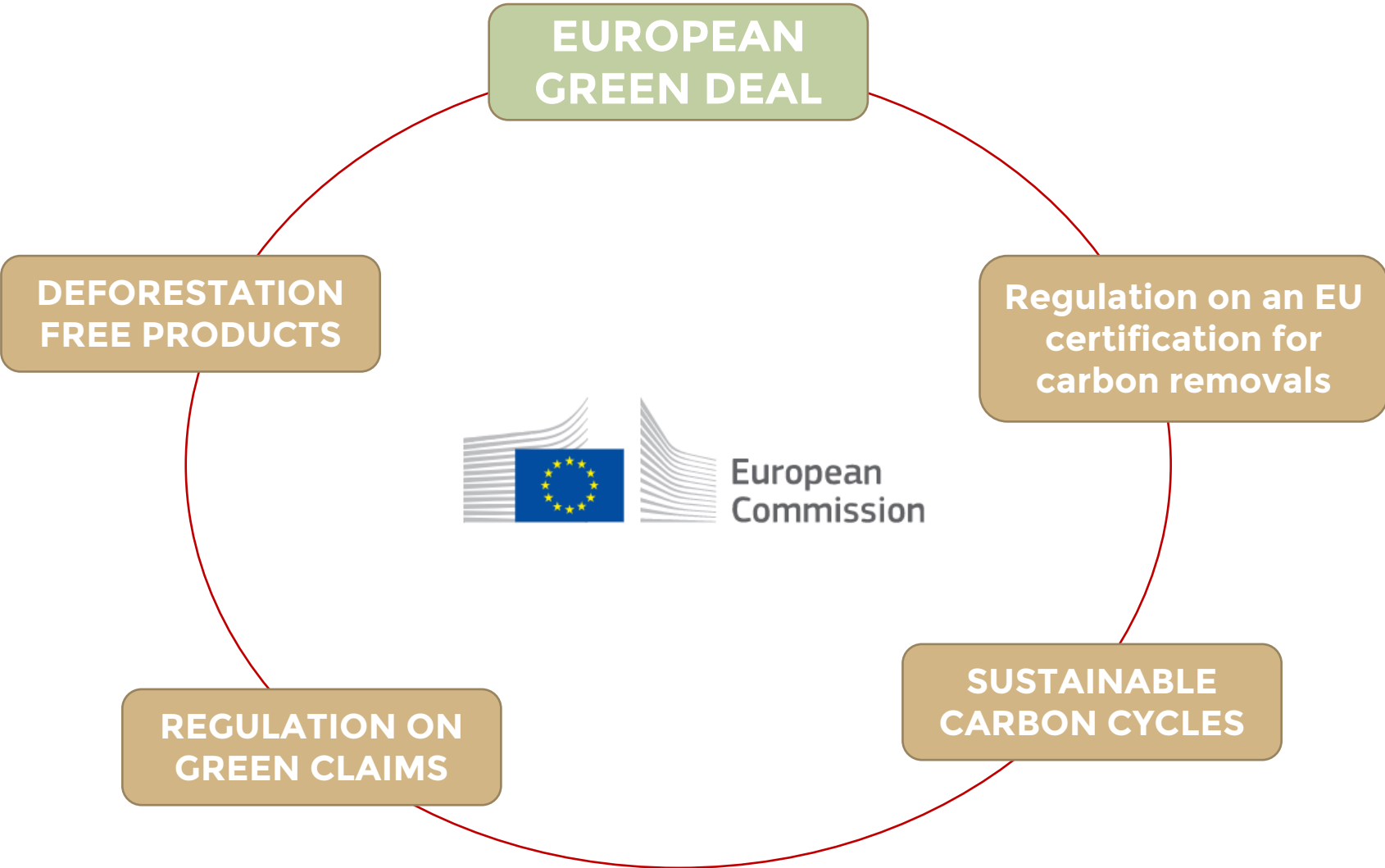
**By 2050, 50%
of coffee-
growing
areas could
disappear**

“We have at most 12 years to make the drastic and unprecedented changes needed to prevent average global temperatures from rising beyond the Paris Agreement’s 1.5°C target.”

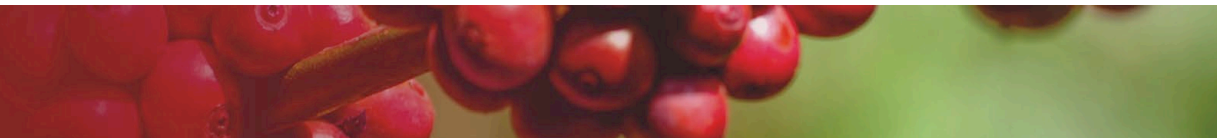
Sources:



EU's calling for Climate Action - Regulations and directives



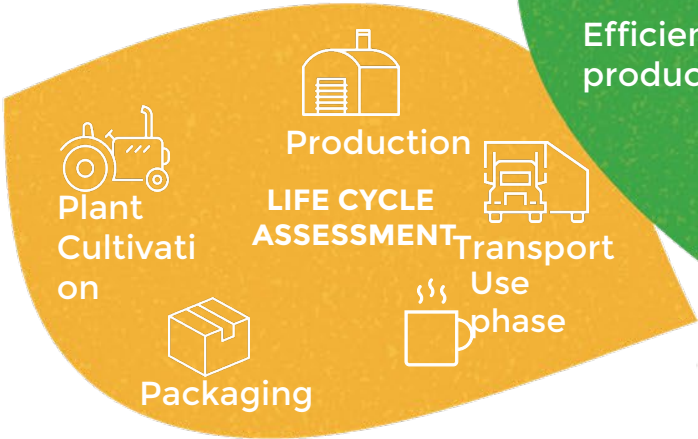
- But also...
- Due diligence
 - Child labor
 - Human rights
 - ...



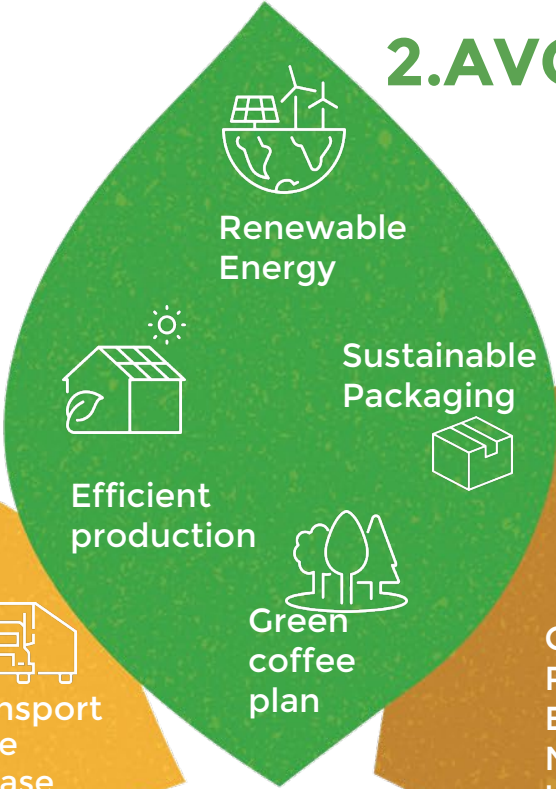
Lavazza's approach towards Carbon Neutrality

LAVAZZA GROUP's Roadmap to zero is an environmental sustainability strategy organized in **3 pillars**.

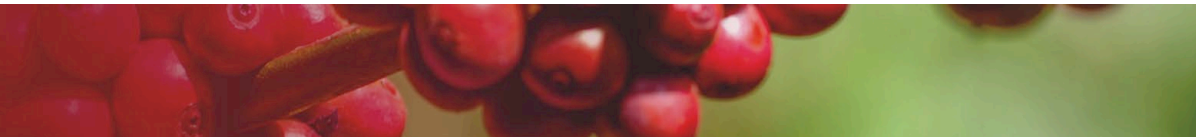
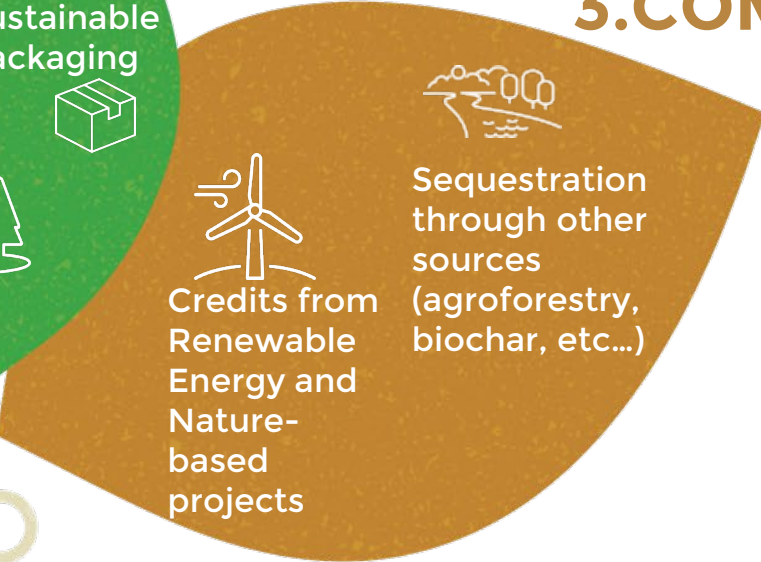
1. MEASURE



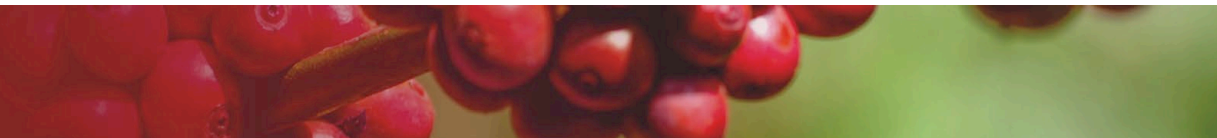
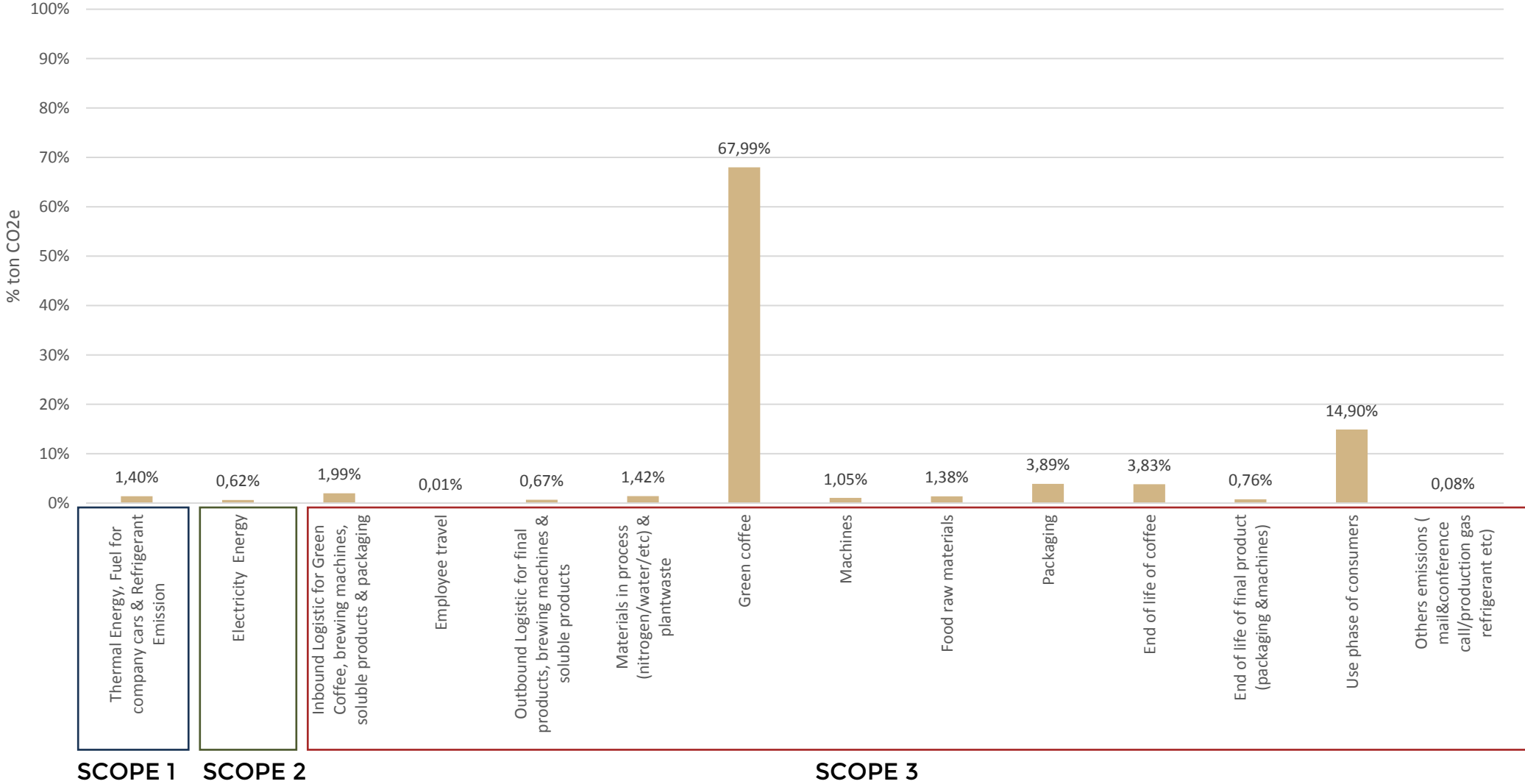
2. AVOID/REDUCE



3. COMPENSATE



Lavazza's Impacts - From 2021 Sustainability Report



What we have done - 3 examples of mitigation activities

1 - Cecafé & other partners

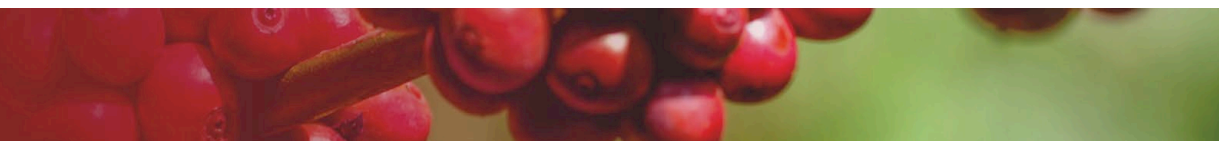


Low-carbon coffee from Minas Gerais: estimate balance of emissions and sequestration of greenhouse gases in the three main coffee-producing regions: Cerrado, Sul and Matas de Minas.

Objective: Determine the net balance of GHG emissions in Minas Gerais three main coffee-producing regions. The project highlights the state of the art of coffee production, as well as outline recommendations and strategies for improving the process where applicable. During phase two, the different methodological approach for emissions assessment will also be evaluated.



Conilon Robusta will be evaluated as well.



2. Consorcio Cerrado das Aguas - Supporting the implementation of Climate-smart agriculture practices (i)



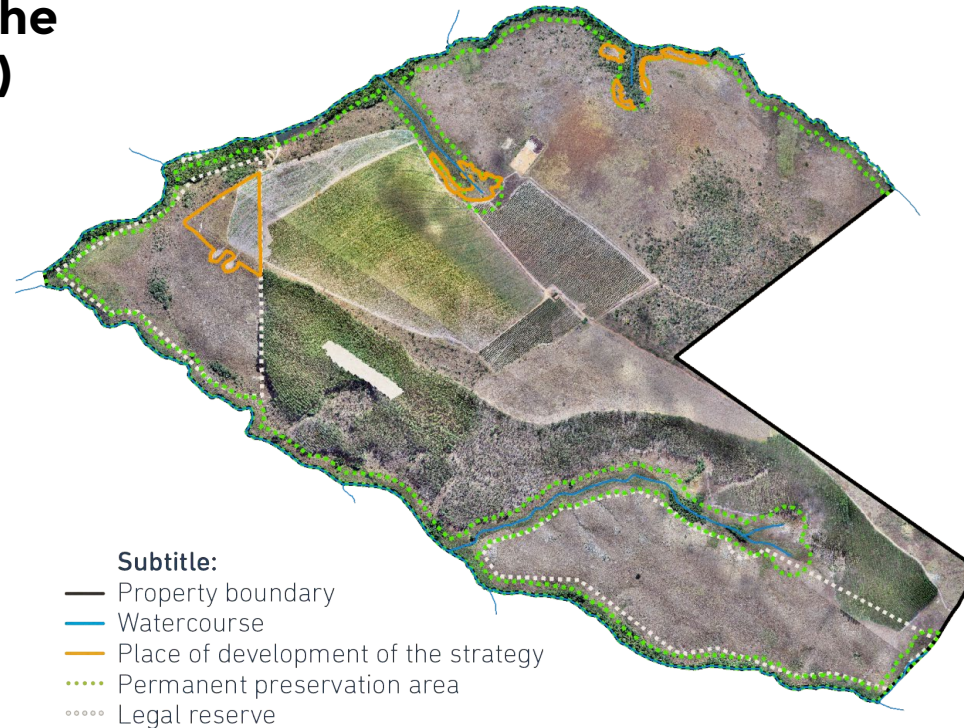
The **Consorcio Cerrado das Aguas (CCA)** is an open collaborative platform that unifies business, government and civil society, and that brings together farmers, researchers and environmentalists to **develop strategies to restore and conserve the ecosystem services** through the implementation of **climate-smart agriculture practices** in the coffee value chain.



2 - Consorcio Cerrado das Aguas - Supporting the implementation of Climate-smart agriculture practices (ii)

a) Investment Program in the conscious producers (PIPC)

Provides producers with technical assistance from land assessment to training and field technical support related to restoration, climate-smart agricultural practices, and efficient management of water resources.



b) Climate Adaptation Plan (PAC)

The Investment Program in the Conscious Producers seeks to increase the climate resilience of the region, offering producers a Climate Adaptation Plan for the development of climate-smart agriculture strategies on their properties.



Everybody is invited to find out more about the project and to participate.



3 - Optimizing irrigation scheduling for saving water under digital agriculture conditions. X-Farm (i)



The screenshot displays the X-FARM web interface. At the top, there is a navigation bar with menu items: Dashboard, Campi, Mappa, Attività, Meteo, Sensori, and Altro. On the right side of the navigation bar, there are icons for a shopping cart, notifications, a flag (Italy), and a user profile for Ricardo Barth. Below the navigation bar is a search bar with the placeholder text "Inserisci una posizione" and a search icon. To the right of the search bar are three icons: a book, a location pin, and a document. The main content area shows an aerial satellite view of a coffee farm. A large area of the farm is highlighted in a semi-transparent orange color, labeled "Crop Irrigation". Within this highlighted area, there are two sub-zones: the upper one is labeled "100% New Irrigation Strategy" and the lower one is labeled "50% New Irrigation Strategy". A river labeled "Córrego Feio" flows through the farm. The interface also includes a "Nuovo campo" button with a location pin icon and a "2020" label. In the bottom left corner, there is a "Legenda" (Legend) box with two entries: "Caffè arabica" represented by an orange circle and "Nessuna" represented by a red circle. At the bottom of the interface, there are buttons for "Visualizza" and "Catasto", and an "Aiuto? =>" button with a microphone icon.

How much water can a coffee farm save through the implementation of a Farm Management platform integrated with an Irrigation Support System?

Crop Irrigation

100% New Irrigation Strategy

50% New Irrigation Strategy

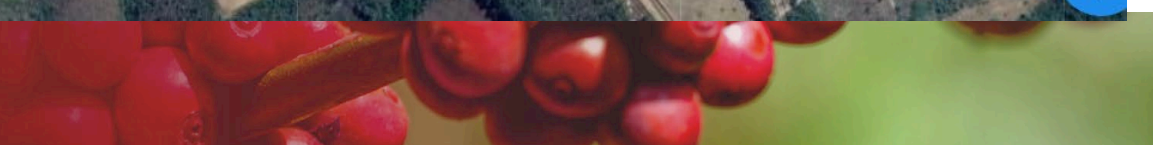
Crop Irrigation

Legenda

- Caffè arabica
- Nessuna

Visualizza Catasto

Aiuto? =>



3 - Optimizing irrigation scheduling for saving water under digital agriculture conditions. X-Farm (ii)



xSense PRO Weather Station (xFarm Technologies SA) installed on the farm.



xNode Soil PRO soil moisture sensor (xFarm Technologies SA) installed on the farm.

A weather station and a soil moisture sensor were installed on a 14.2 he irrigated Arabica coffee field in Patrocínio, Minas Gerais, Brazil.

During the 4 months analyzed, after the implementation of the new irrigation schedule and with the help of the real-time measures of the sensors connected to the xFarm digital agriculture platform it was possible to **reduce water use by ~30%** compared to the previous irrigation recommendation used on the farm, with an average **water saving of ~4900 m³ month⁻¹**.

In collaboration with Prof. Jarbas Honorio de Miranda University of São Paulo.

Interested to participate? More than welcome!



Lavazza's participation in pre-competitive USAID - GREEN INVEST ASIA

*Establishing carbon footprint baselines for robusta coffee production in two key origins:
Central Highlands, Vietnam and Southern Sumatra, Indonesia*

Establishing such baselines is a critical first step in the journey toward **Net Zero** and an important guidepost to inform collaborative climate action. The goals of this project are:

- 1 Establish industry-accepted statistically sound, common framework for carbon footprint baseline
- 2 Create a standardized framework and mechanism for regular data collection, sharing, and analysis
- 3 Increase the capacity of supplier partners to understand, document, and report on carbon emissions and sequestration in coffee systems.

PHASE 2 of this Project: Brazil and other origins

Funding partners:



Technical partners



Lead Implementing partner:



Discover the project [here](#)

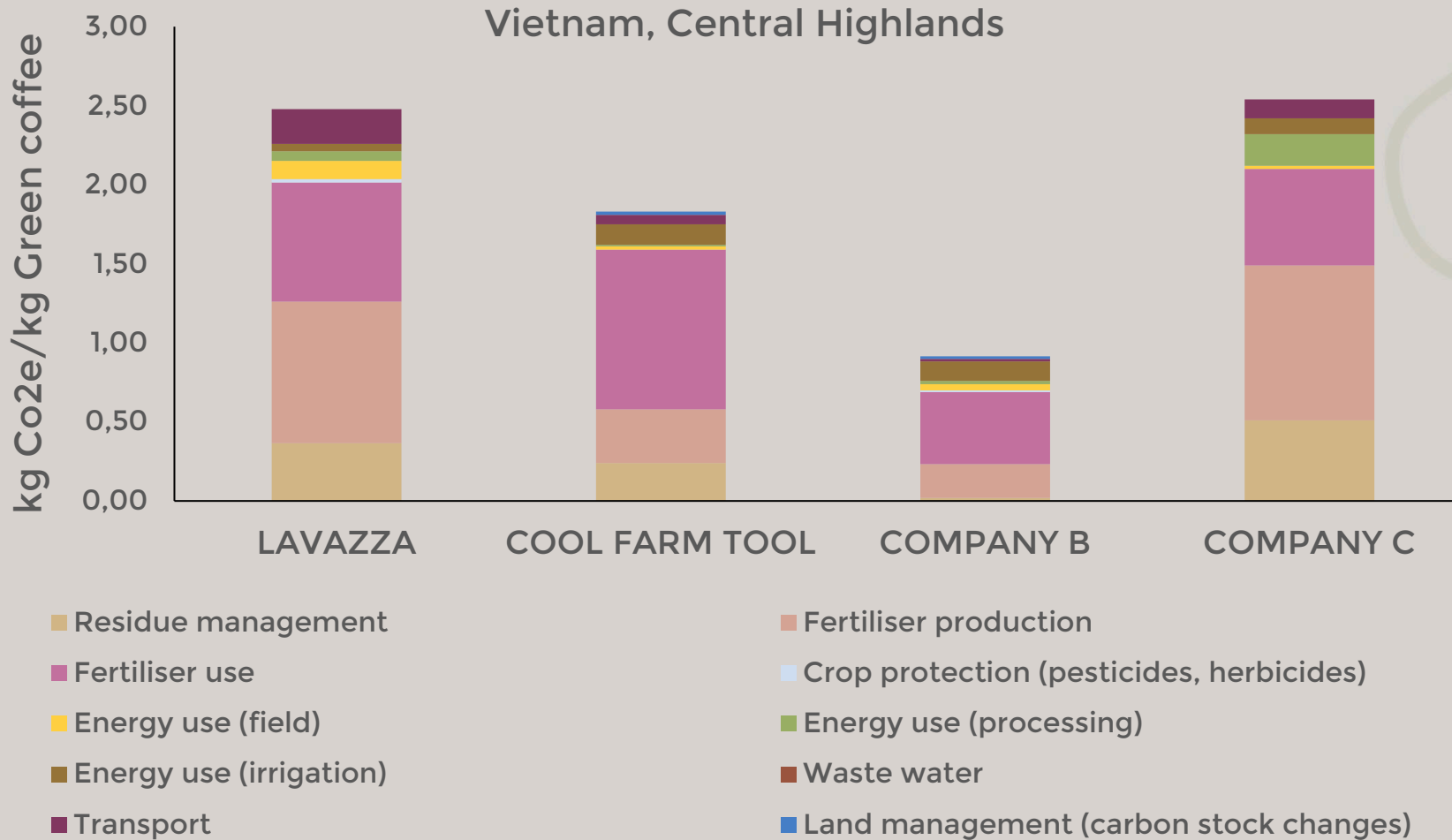


Participating supplier partner:



Carbon footprint comparative analysis – Vietnam example

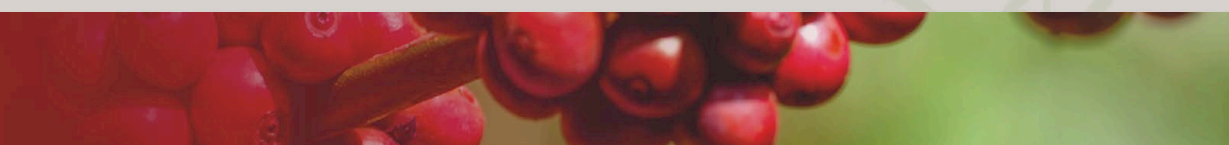
Four methodologies compared



We compared 4 calculation methodologies using the same primary data and found out that:

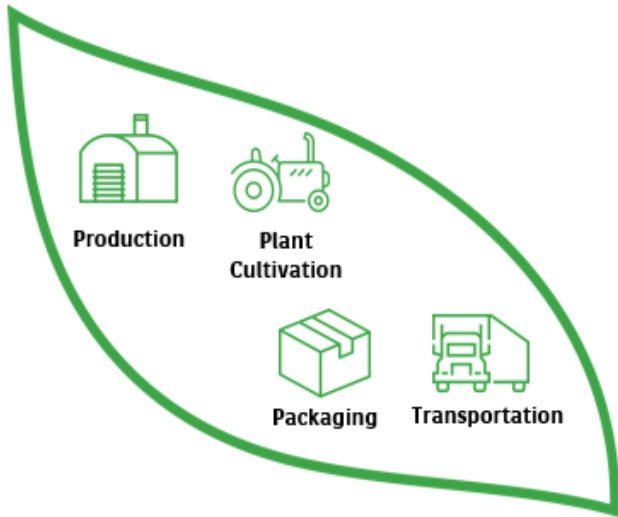
- Looking at the absolute values there are discrepancies
- For similar absolute values, the partials are different one from another

Find out more at this link:
[USAID Green Invest Asia Reports - USAID](#)



Measuring emissions - main problems we are facing

1. MEASURE



Lack of a standard methodology for company-level emission accounting and sequestration



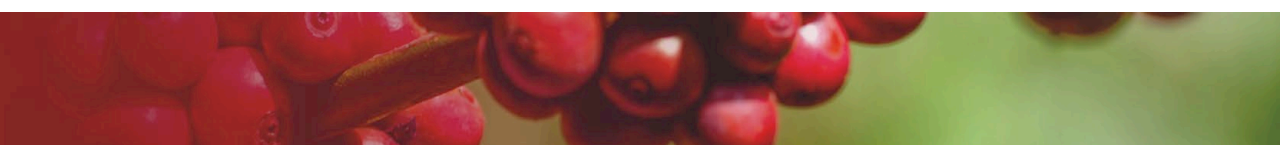
Lack of a coordination mechanism to pull in data from different sources



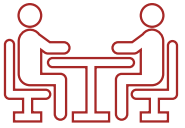
Lack of public verified LCA studies to be used as common baseline



Not comparable GHG inventories & risk of misleading results



Our Proposal



Continue **working towards a homogeneous environment** (LCA span, algorithms, modelling, etc...)



At least for public claims → Publish LCA 3rd parties verified studies in a homogeneous framework (such as scientific publications)

These will result in...

- Better data quality and results
- Comparable and open-source results
- Improved primary data

BY COLLABORATING WE CAN REACH OUR COMMON GOAL!



*coffee
dinner&
summit*



Realização: **Cecafé**
são paulo, BRASIL, maio 2023

Thank you

Obrigado

Grazie

for your attention!

Mario Cerutti - Lavazza Group
Institution Relations & Sustainability