

**Climate Ledger Initiative - Cooking as a Business**

Presenter: Jasmeet Singh  
Director India, FCF



- > Social enterprise active in carbon markets since 2009
- > Mission: use carbon markets to improve livelihoods, income, health, biodiversity and position of women in low income households
- > Owned by Cordaid, iNGO
- > > €10 million project portfolio, Africa + Asia
- > 10 staff Utrecht, 10 staff in India

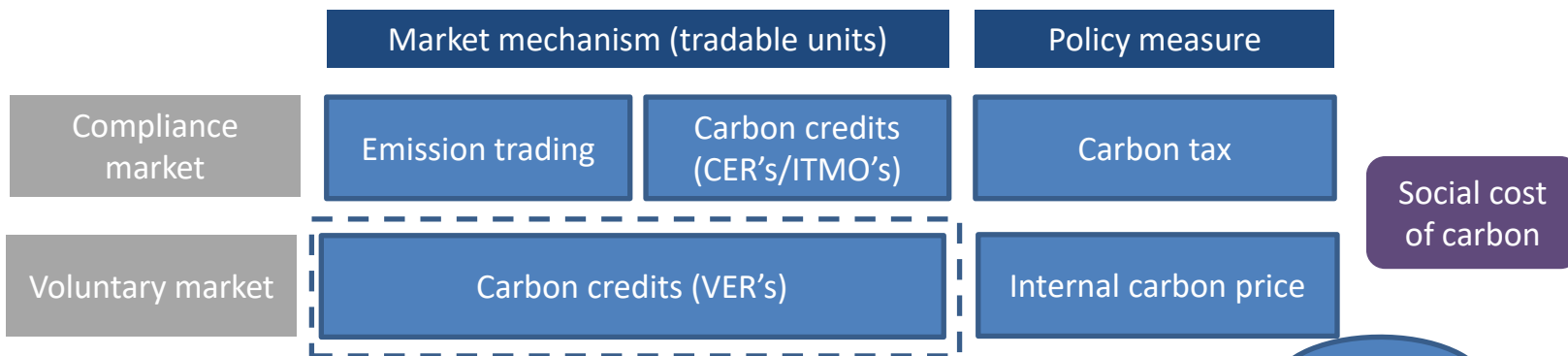


# What is the carbon market?

## Putting a price on carbon emission reduction

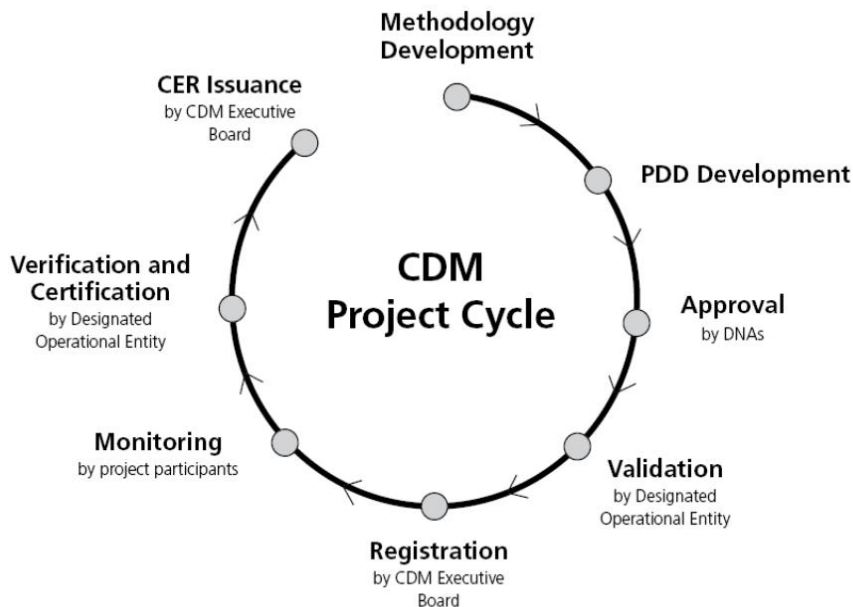
*A market is a place where goods are traded at a certain price. This price is determined by supply and demand.*

*The **carbon market** refers to trading **rights to emit CO<sub>2</sub>e** or to trading **rights to claim** realized CO<sub>2</sub> reductions*




# Carbon credits – how does it work?

*Realizing emission reductions in developing countries is cost effective and brings additional social benefits.*



## International and independent crediting mechanisms

1997  Clean Development Mechanism (2005)

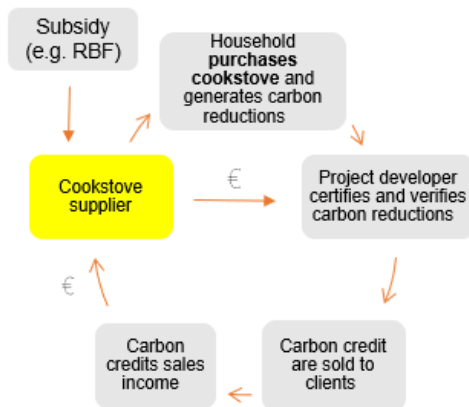
2003  **Gold Standard**  
Climate Security & Sustainable Development

2005  **Verified Carbon Standard**  
A VERRA STANDARD

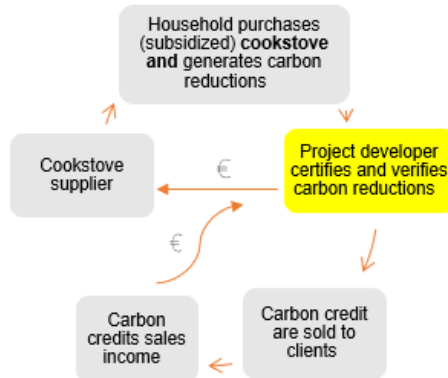
2008  **Plan Vivo**

# Three dominant models in the carbon market (VCM)

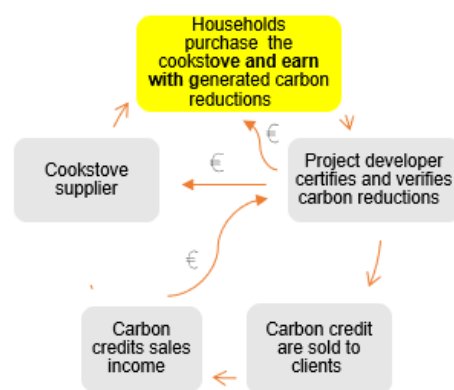
## Model 1 Carbon credit income to cookstove supplier



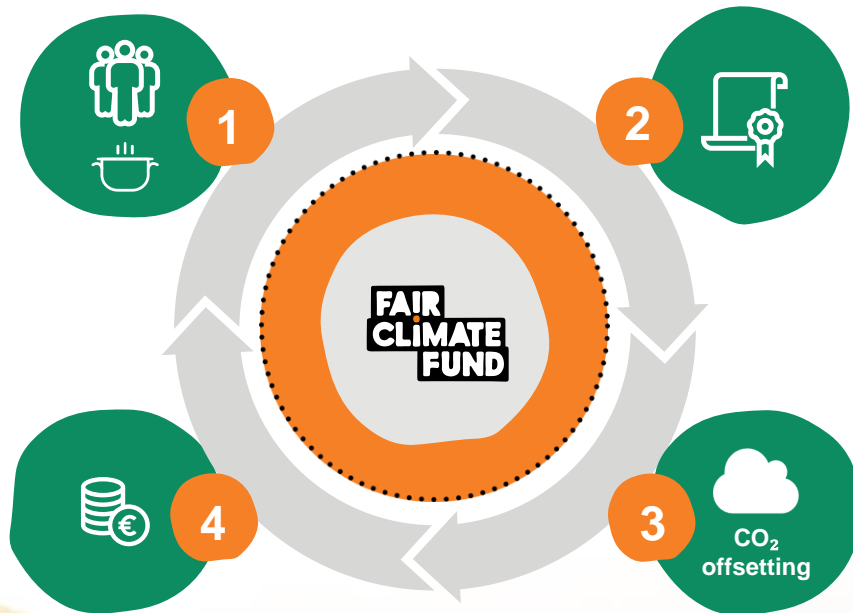
## Model 2 Carbon credit income to carbon project developer



## Model 3 Carbon credit income to producer: the household



# How does FCF use carbon markets? -> model 3



- 1 We give low income households access to energy (SDG 7): clean cooking and biogas
- 2 We get carbon reductions certified with our local partners => certified SDG impact
- 3 We sell the carbon credits on behalf of local partner + SDG impact
- 4 Carbon income is used for:
  - covering technology cost + certification
  - covering sales cost
  - + adaptation

1. The **duration** of certification processes. Carbon credit generation takes 2-3 years and depends on long process of (manual) data collection, monitoring reporting and verification: external auditing with field surveys based on sampling and internal process in Gold Standard
2. **Cost** of registration: the carbon credit registration takes approximately 5% of the cost of a credit, especially in micro-scale projects
3. The **lack of real-time data** collection, which makes the data collection processes slow and inaccurate and which requires long pre-financing periods before the carbon credits can be monetized and function as repayment.
4. There is a **lack of transparency** on where carbon income flow goes: who benefits most of the carbon credit generation and trade when the HH purchases the cookstove ? (the project developer or the household producing the carbon reductions)?
5. Credits purchased by end-buyers are not really linked to the producers of the credits: the households, but withheld by project developers: **carbon markets are not fair and not inclusive**

## **Phase 1: CLI funded**

- Pilot in FCF project in India, 100 HH receiving stoves with a sensor for monitoring cooking time
- Cooking data are collected and uploaded on a platform
- Carbon reduction is calculated with the Gold Standard Methodologies and algorithms
- Cooking is monitored online and realtime

## **Phase 2: Search for funding**

- Expansion to different technology, different countries (next Rwanda), include higher tier stove (TIER 4, Mimi Moto)
- Financial link to households, QR code, cash back system in place





# Solution: Cooking as a Business



**PRODUCER /  
HOUSEHOLDS**



**PROJECT DEVELOP-  
MENT**



**BUYER/  
INVESTOR**



End user finance for Women



Incentive to increase  
adoption and reduce  
emission



Household Level  
Monitoring easier



Digital Data Collection,



High transparency



ERPA Accountability

**SECURED REMITTANCE TO WOMEN USER  
BUSINESS TRANSACTION INSTEAD OF  
GRANT**

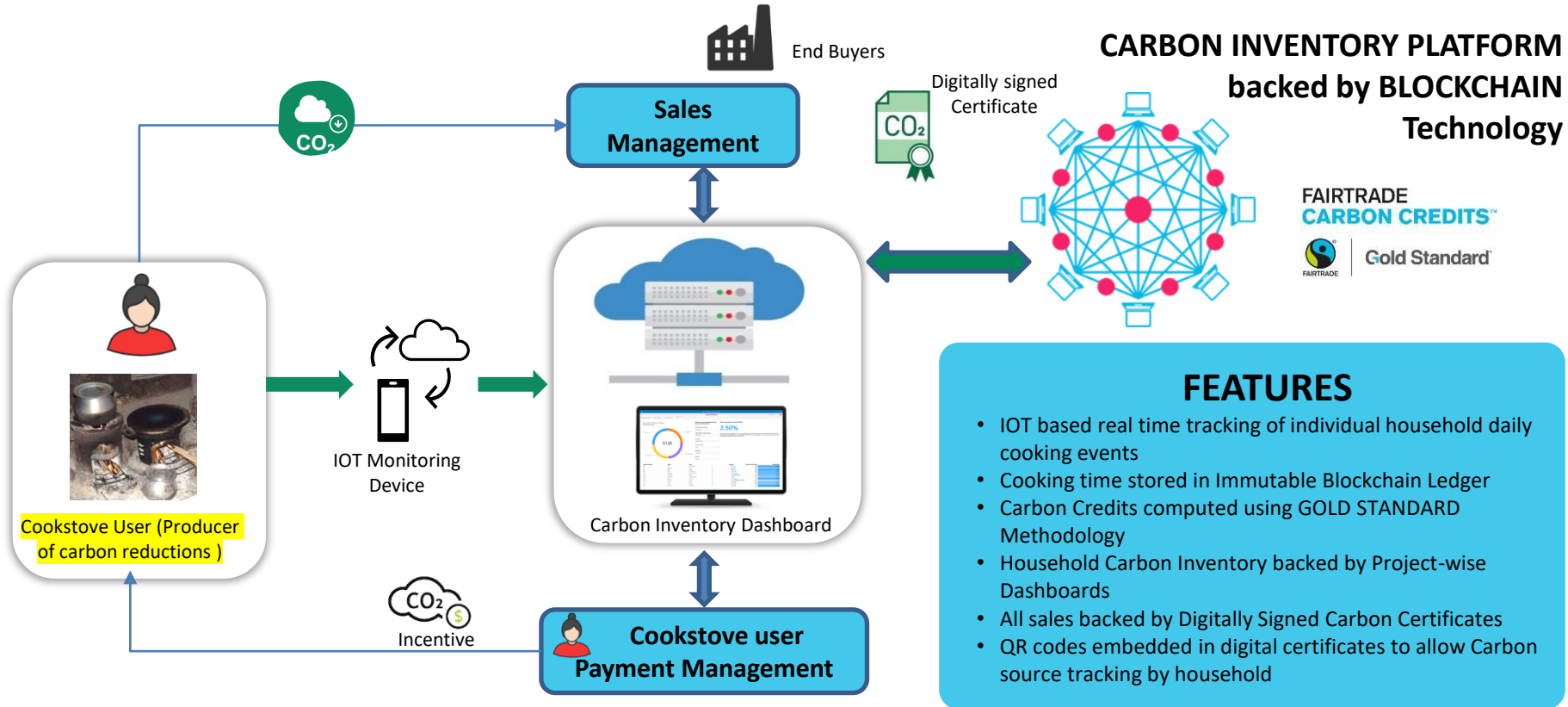
**IMMUTABLE DATA  
REAL TIME**

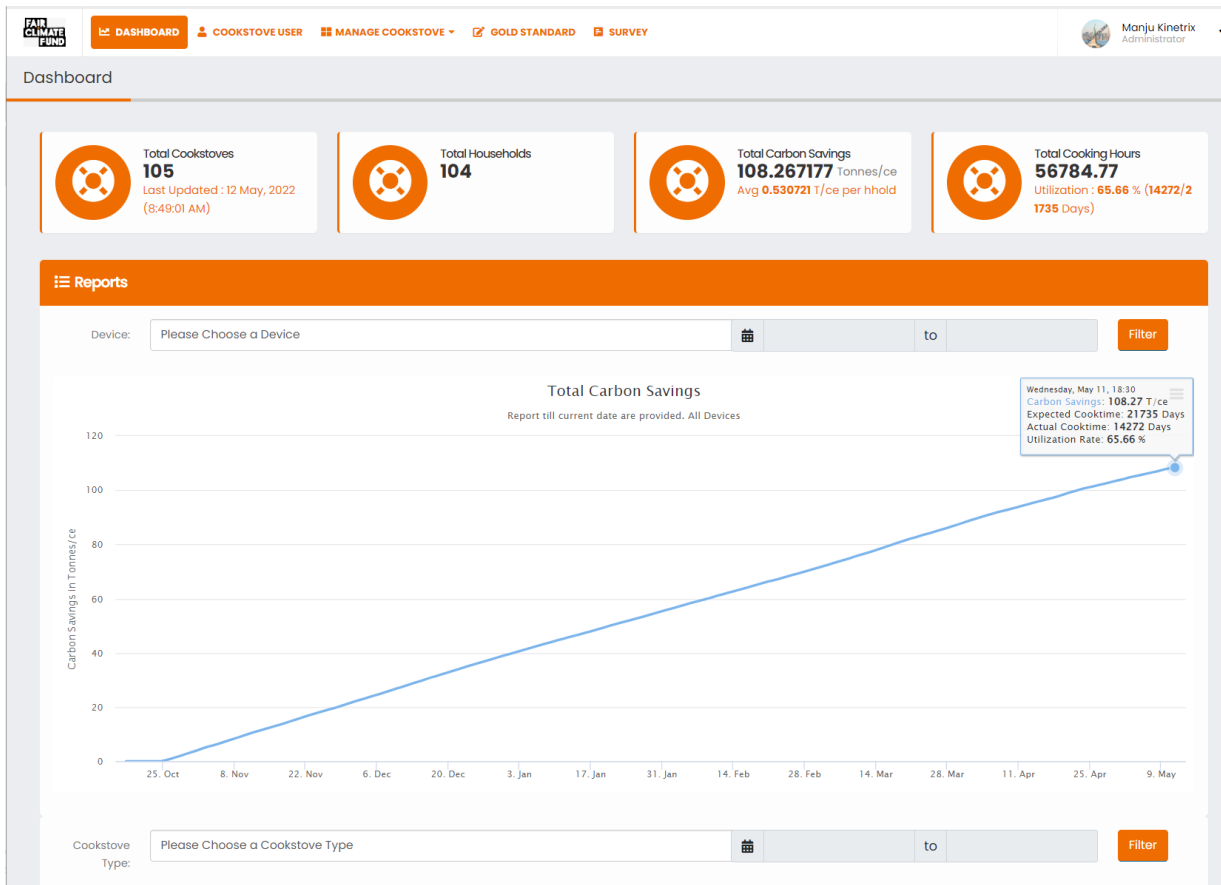
**TRACEABILITY  
SMART CONTRACT**

# CLI - Cooking as a Business



# Financial flows Cooking as a business = earning by cooking





Platform Provides an intuitive live Dashboard that display the live carbon data for any given project at any given time.

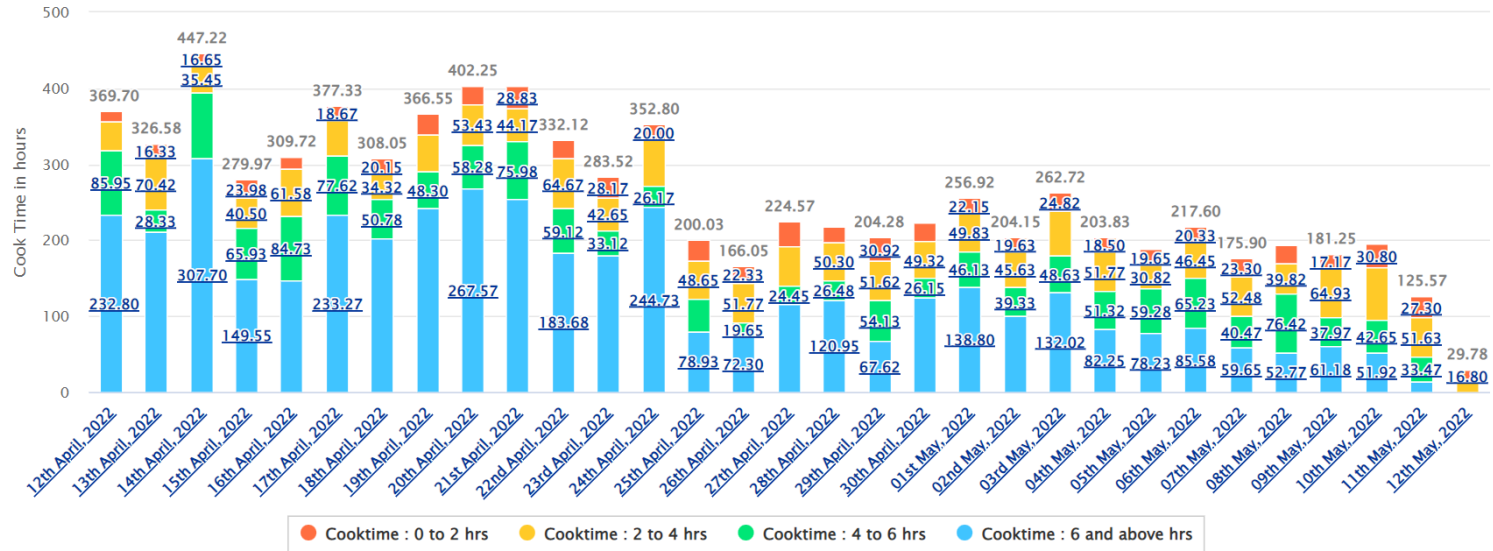
- Number of households
- Carbon generated
- Utilization rate
- Actual cooking hours
- Expected cooking hours

On mouseover on user can get to see the cumulative data for all the parameter listed above.

This also provide user data at the project and household levels.

# Dashboard : monitoring usage

## Dashboard



This represents the cookstove performance, data is segregated based on the number of hours ticked and also provides the total number of hours used in each category. This would be very useful for the field staff to focus on the improvement of the project performance.

# SUM: Benefits of digital MRV – Cooking as a Business



Real Time  
Monitoring –  
Accelerate access to  
carbon finance



Accurate Impact  
Quantification –  
Avoids Over/Under  
Estimation



Digitally Signed  
Certificate for the  
buyer with QR code  
for carbon source  
tracking



System in place to  
distribute the  
incentive among  
the stakeholder in  
fair, inclusive and  
transparent way



Interactive platform  
to create value add  
for other SDGs  
beyond Carbon



## Phase 1: CLI funded

- Piloted in our project in India, 100 HH receiving stoves with a sensor
- Cooking data are collected and uploaded on a platform
- Carbon reduction is calculated with the Gold Standard Methodologies and algorithms

## Lessons learned:

- > Sensors are quite expensive, business model can only work with large roll out and lower cost sensors
- > works only with higher TIER stoves and high prices per ton
- > Stacking cannot be measured, so still field checks are needed
- > Blockchain credit generation faces limitations in Indian context
- > Platform can be linked to different projects in different countries with different technologies

## Phase 2: search for funding

- Expansion to different technology, different countries (next Rwanda), include higher tier stove (TIER 4, Mimi Moto)
- Financial link to households, QR code, cash back system in place

USE CASE - COOKING AS A BUSINESS

[geest@fairclimatefund.nl](mailto:geest@fairclimatefund.nl)

[singh@fairclimatefund.nl](mailto:singh@fairclimatefund.nl)

ಜೆಎಸ್‌ಎಂಬಿಟಿ  
JSMBT

 Crecientech  
Infosystem

 NEXLEAF  
ANALYTICS

 aKasmika

 Kinetrix  
Technology for Life