Microsol

Building Sustainable Communities in Latin America by providing access to sustainable energy

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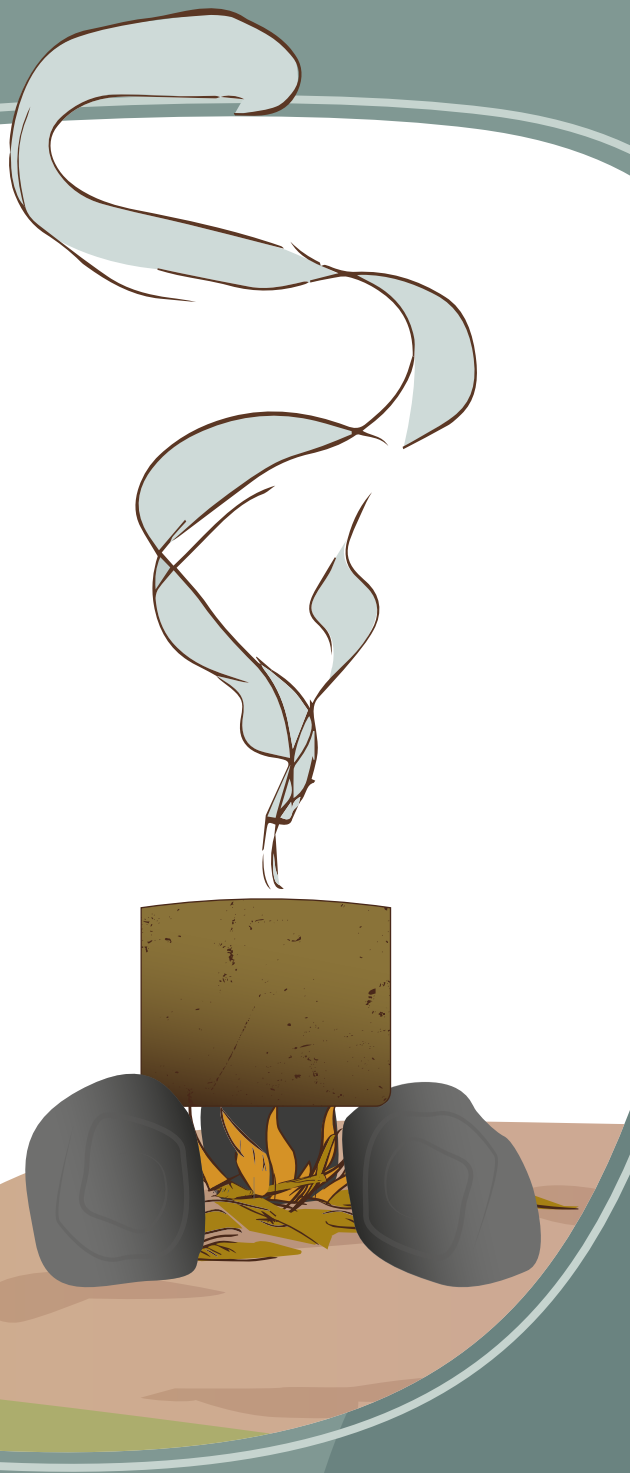
#SustainableCommunities

Climate crisis and access to SUSTAINABLE • ENERGY •

The challenge: A significant proportion of the world's population still cooks on open stoves using biomass. This has a huge impact on the environment and people´s health.

At the household level, combustion of solid fuels produces pollution that is damaging to health and a leading cause for respiratory health conditions worldwide; and imposes a high time burden on those collecting firewood, typically women and young girls.

At a global scale, the burning of biomass and coal in inefficient household stoves, releases large amounts of black carbon and other greenhouse gases (GHG).



Worldwide:

3 **BILLION PEOPLE COOK** on an open fire or use inefficient stoves. (Clean Cooking Alliance)

34% **OF FIREWOOD** is collected unsustainably. (Clean Cooking Alliance)

4 **MILLION PEOPLE DIE** each year from exposure to polluted indoor air. (WHO)

In Latin America:

83 **MILLION PEOPLE COOK** with biomass in open stoves. (WHO)

Our Commitment

Microsol was established more than a decade ago with the purpose of **creating a powerful** link between the **communities** of Latin America and Europe, to achieve a **sustainable** and **inclusive world.**

We are passionate about finding new ways to solve a multitude of problems related to the **lack of access to sustainable energy**, especially in rural families that still cook with open stoves. These initiatives have a **positive impact** on much more than the environment, they also improve the beneficiaries´ health, help them access quality education, provide decent jobs and improve the **overall well-being** of the community. The participation and empowerment of the local communities we work with is key to guarantee the **acceptance** and **long-term success** of our programmes.

For this reason, Microsol works under the **Gold Standard**, which is one of the most rigorous and recognised **certification standards** worldwide. It not only certifies environmental impacts through the calculation of GHG emission reductions, but also monitors the **social and economic benefits** of the projects. These impacts on the communities are carefully reported and validated to ensure the project´s contributions to the United Nations (UN) Sustainable Development Goals (**SDGs**).

Gold Standard for the Global Goals

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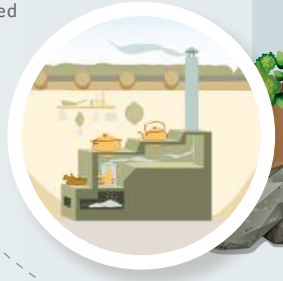
TIMELINE MICROSOL

2008
The **"Qori Q'oncha"** programme is created in **Peru** to value the impact of **improved cook stoves** on the voluntary carbon market.



2010
Qori Q'oncha becomes the **first** programme of improved cookstoves to be **registered** by the **Gold Standard** (GS) worldwide.

2012
The **"Utsil Naj"** programme is created in **Central America** and **Mexico.**

2013
The **Qori Q'oncha** programme **expands** to include the participation of 8 local organisations, covering **10 regions** of Peru.

2014
The **first carbon credits** of the Utsil Naj programme are issued. It is then **certified** by the **GS** the following year.

2015
Baseline study for **World Vision Peru** on clean and efficient kitchens in **rural communities** within the Cusco, Ayacucho and Ancash regions.

2016
Comparative study for the **Climate & Clean Air Coalition** (CCAC) on the state of **rural cooking practices** (progress and challenges) in Mexico, Colombia and Peru.

2017
Design of the Rural Electrification, Cooking and Heating **NAMA** of **Peru.**

2018
Design of the **MRV** system of the Efficient use of Fuel **NAMA** of **Guatemala.**

2019
Start of the **pilot** phase to test an **ITMO** between Switzerland and Peru (implementation of the **"Tuki Wasi"** project).

2020
Installation of the first **improved cookstove** in the "Tuki Wasi" project.

OUR PROGRAMMES:

Qori Q'oncha – "Golden Kitchens"

- Where and when: **Peru - 2008**
- Number of beneficiaries: **412,703**
- Certification: **GHG + 7 SDGs***
- GHG avoided from the atmosphere (tCO2e): **742,627** TONNES
- Technology: **Improved Cookstoves**
- Contributions: **+ 2 MILLION** EUR

Recognised by the prestigious **Energy Globe Award 2020.**

*First improved cookstoves programme certified by the Gold Standard in the world.

Utsil Naj – "A Healthy Home for all"

- Where and when: **Mexico, Guatemala, Honduras, El Salvador - 2012**
- Number of beneficiaries: **73,165**
- Certification: **GHG + 7 SDGs***
- GHG avoided from the atmosphere (tCO2e): **125,102** TONNES
- Technology: **Improved Cookstoves and Water Filters**
- Contributions: **+ 557 THOUSAND** EUR

Utsil Naj **- Mexico -** was recognised by the **Latin America Green Awards** 2020.

*The programmes in Guatemala and Honduras will be verified in 2020.

Our Approach

- Microsol implements a Monitoring, Reporting and Verification (MRV) system based on the Gold Standard's guidelines.

- This rigorous methodology is applied throughout the project, supporting our partners on the field during the registry, certification and financing stages of their carbon projects.

- Implementing these types of programmes has allowed us to gain a great deal of experience working in rural areas in Latin America, especially in the field of energy efficiency; working alongside many private companies, international organisations, NGOs and government entities.

Our Experience

Based on our experience in carbon certification, we provide technical assistance to different organisations in order to help them design and implement their energy efficiency or climate action projects. Some of our more memorable collaborations are:

ROADMAP FOR THE DISSEMINATION OF IMPROVED COOKSTOVES IN LATIN AMERICA AND THE CARIBBEAN –

Climate & Clean Air Coalition (CCAC) - **2017**

CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

- Comparative analysis of the rural cooking sector in Peru, Mexico and Colombia; focusing on 6 public and private pillars of intervention: strategies of sectoral support; coordination platforms; financing mechanisms; tax, tax benefits and rates; norms, standards and MRV; and awareness and information tools.
- Tools for decision-making for countries developing mitigation measures in the rural cooking sector.

DIAGNOSTIC, ANALYSIS AND ASSESSMENT OF THE FINANCING SCHEMES FOR THE IMPLEMENTATION OF BIOENERGY PROJECTS IN PERU –

Netherlands Development Organisation (SNV) - **2018**

SNV

- Financial risk system for biodigesters in the Arequipa and Cajamarca regions (Peru), to assess their activity as a viable financial product to be offered by Micro-Finance Institutions (MFI).
- Organisation of meet-ups with MFIs interested in investing in biodigesters.

The design of public policies through NAMAs

What are NAMAs?

Nationally Appropriate Mitigation Actions (NAMAs) refer to actions aiming at reducing GHG emissions in developing countries and are developed under the umbrella of a national governmental initiative.

DIAGNOSTIC, ASSESSMENT, ANALYSIS AND PROPOSAL STUDY TO SUPPORT THE DESIGN OF THE RURAL ELECTRIFICATION, COOKING AND HEATING NAMA IN PERU –

Ministry of Energy and Mining (MINEM) – **2017**

- Gathering and analysis of information about cooking technologies available in rural areas and initiatives for their development.
- Calculation of avoided GHG emissions under various scenarios.
- Design of strategies to establish an appropriate NAMA.

PERÚ Ministerio de Energía y Minas

MONITORING, REPORTING AND VERIFICATION (MRV) SYSTEM PROPOSAL FOR THE EFFICIENT USE OF FUEL NAMA IN GUATEMALA –

Inter-American Development Bank (IDB) – **2018**

- Analysis of the country's legal and institutional framework, highlighting the need for the MRV system.
- Proposal of a MRV system to assess GHG emissions, governance schemes and appropriate costs.

IDB Inter-American Development Bank

Other partnerships and collaborations include:

Gold Standard for the Global Goals

AFD Agence Française de Développement

UNEP DTU Partnership

USAID From the American People

olade

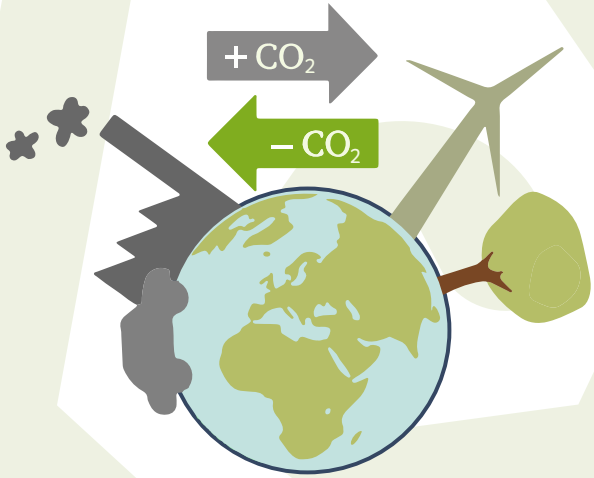
Schneider Electric

INTERNATIONALLY TRANSFERRED MITIGATION OUTCOMES (ITMO)

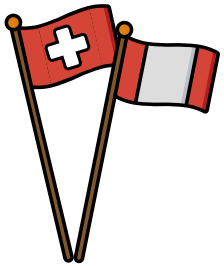
Through the **Paris Agreement**, each country committed to reach the goals set in its Nationally Determined Contributions (NDCs) within and beyond national boundaries to limit the rise in global average temperature.

Article 6: the nations are allowed to negotiate "**cooperative approaches**" to reach their NDCs, including by using Internationally Transferred Mitigation Outcomes (ITMO).

They are meant to replace other existing forms of **international carbon credits** in the new international climate framework.



FIRST PILOT TO ESTABLISH ITMO USING IMPROVED COOKSTOVES



In 2019, the Peruvian and Swiss governments managed to reach a series of agreements that paved the way to establish a Pilot to allow Internationally Transferred Mitigation Outcomes (ITMO), by installing improved cookstoves in rural communities from Peru.

In this context, Microsol was chosen by the Swiss organisation Climate Cent Foundation (CCF) to implement the "Tuki Wasi" Project, which could potentially lead to the first ITMO generated by improved cookstoves worldwide.

Tuki Wasi

www.tukiwasi.org

The Steps to Guarantee Its Success:

1. Gather costs to make projections in order to implement other improved cookstoves projects under the same scheme.
2. Test a results-based financing mechanism under ITMO using improved cookstoves.
3. Develop the financing structure needed for improved cookstoves projects in the framework of ITMO.
4. The implementation will go through the Monitoring, Reporting and Verification (MRV) process in order to ensure a high level of confidence in the project's results (mitigation and co-benefits).
5. The final monitoring report will serve as the basis for the results-based payments for our partners on the field.

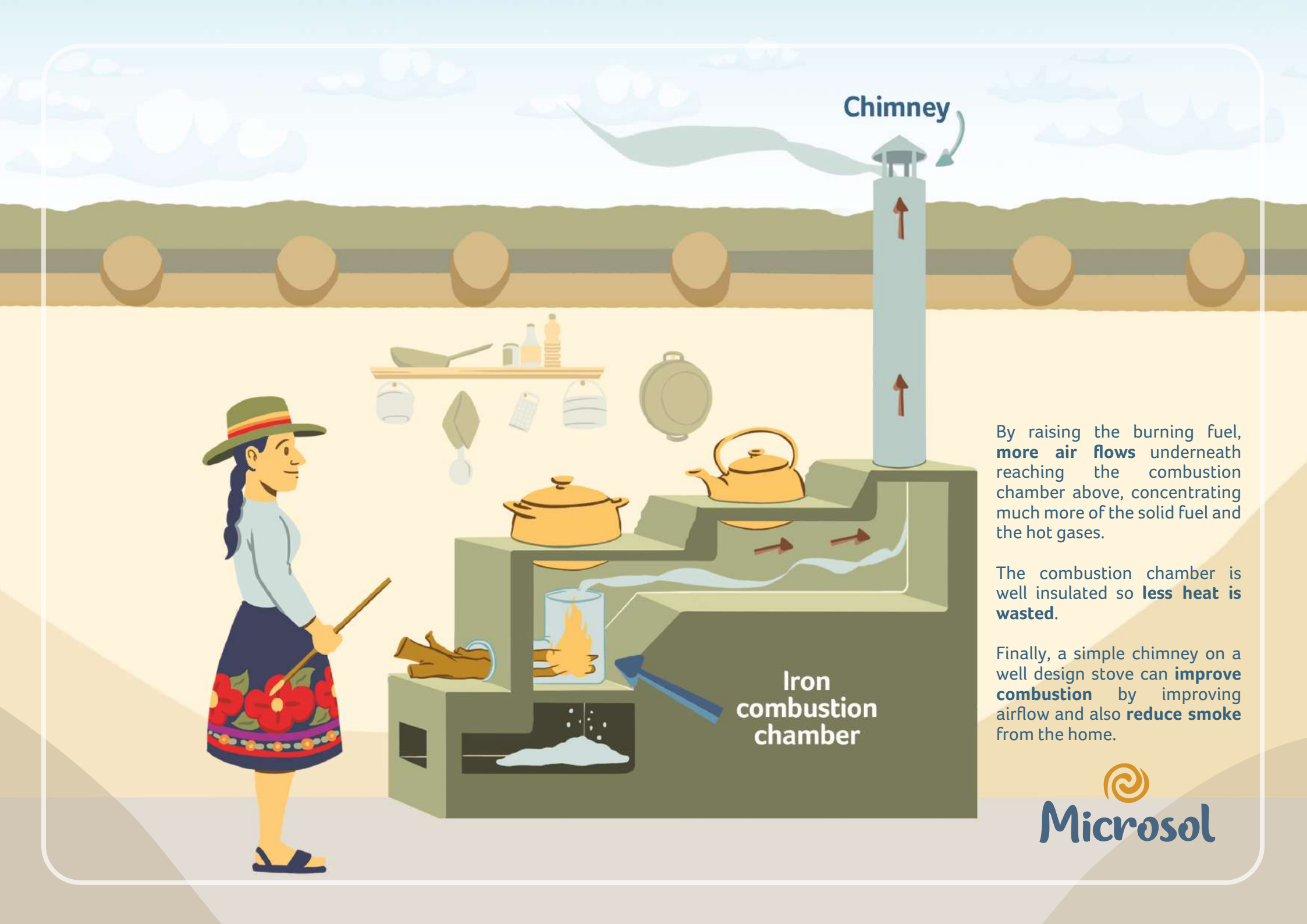
Why Improved Cookstoves?

Adopting this technology improves the combustion process, reduces the use of firewood and **lowers carbon emissions**; all while expelling the toxic fumes outside the users' homes. This drastically **decreases indoor pollution**, respiratory conditions and other related illnesses.

In addition, an improved cookstove has multiple impacts the **same day it is installed** and, therefore, reduces the emissions related to its use immediately, unlike alternative projects which generate impacts that are uncertain or hard to quantify, and only later in time.

The **Gold Standard** recently conducted a study demonstrating that improved cookstove projects achieve maximum social, economic and environmental impacts, while enabling them to be measured more accurately. Research showed that improved kitchens contribute **$ 1.8 billion** per year in environmental and social benefits worldwide.

Each tonne of CO2 kept from being released into the atmosphere by the project becomes one carbon credit. Organisations or individuals who want to contribute to reduce our global footprint can then purchase these carbon credits. The carbon revenues collected allow the projects to be sustainable and potentially expanded, thus contributing further to the well-being of the communities.



By raising the burning fuel, **more air flows** underneath reaching the combustion chamber above, concentrating much more of the solid fuel and the hot gases.

The combustion chamber is well insulated so **less heat is wasted**.

Finally, a simple chimney on a well design stove can **improve combustion** by improving airflow and also **reduce smoke** from the home.

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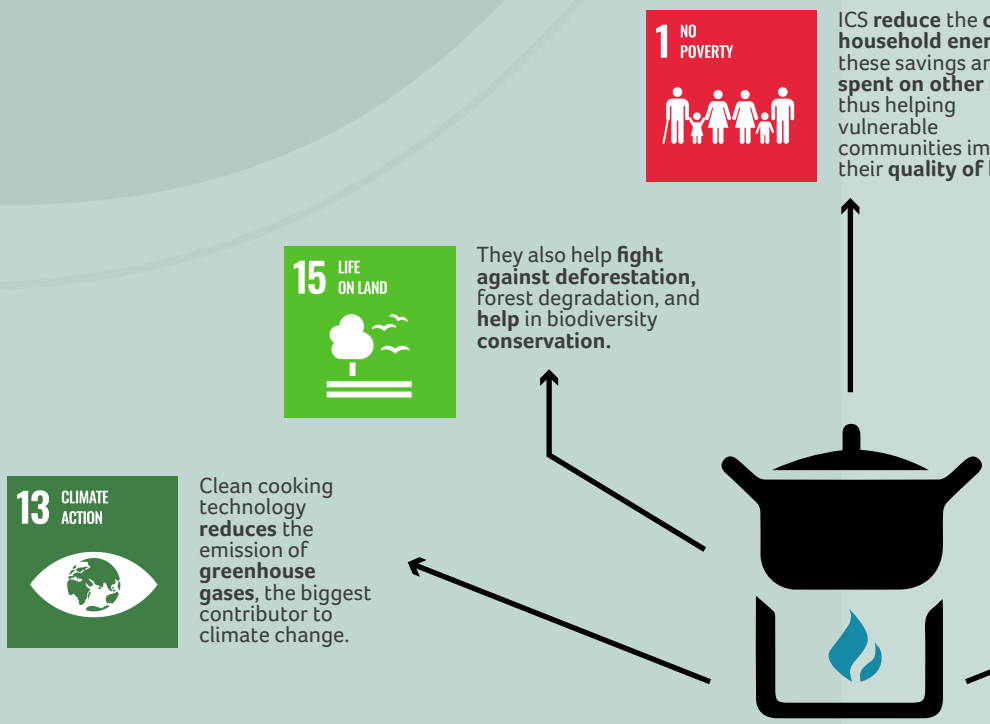
The Impact of Improved Cookstoves

Improved cookstove projects allow us to **maximize** our impact and **diversify** the positive effects on the communities.



1 NO POVERTY

ICS **reduce** the **cost of household energy**, these savings are **spent on other needs,** thus helping vulnerable communities improve their **quality of life.**

3 GOOD HEALTH AND WELL-BEING

The use of ICS can greatly **lower household air pollution** (HAP) by **reducing** the amount of **smoke produced**. HAP is a leading cause to many heart and lung diseases.

15 LIFE ON LAND

They also help **fight against deforestation,** forest degradation, and **help** in biodiversity **conservation.**

13 CLIMATE ACTION

Clean cooking technology **reduces** the emission of **greenhouse gases**, the biggest contributor to climate change.

4 QUALITY EDUCATION

The **time saved** from collecting firewood allows the cookstoves users to dedicate **more time to study** or develop new skills.

8 DECENT WORK AND ECONOMIC GROWTH

These initiatives allow for **new projects** to be developed, **stimulating** a local and inclusive economy, leading to more **local employment.**

7 AFFORDABLE AND CLEAN ENERGY

Installing this technology helps make **cleaner and efficient** energy **accessible** in many rural communities.

In the near future, we hope to get our projects certified for contributing to other Development Goals such as:

- **Zero Hunger**
- **Gender Equality**
- **Reduction of Inequalities**
- **Partnerships to Achieve the Goals**

SUSTAINABLE DEVELOPMENT GOALS

DONATE

If you or anyone you know wish to support our commitment in creating a more inclusive and sustainable world, don´t hesitate to contact us.

Microsol

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