

# Dissemination of Ecological Cook Stoves in the Northeast of Brazil

## An Initiative to combat Desertification and Respiratory Diseases



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# Basic Considerations

Fire wood consumption for cooking purposes:

World wide :

Two million tons per day;

Brazil: 6000 tons per day;

Health Problems :

Smoke from inefficient stoves is as dangerous as smoking two packages of cigarettes per day.

World wide more then 2.5 million death per year are related to smoke from stoves.



# Project Location



State of Ceará:  
Highest level of ecological devastation of Brazil, remaining just 16% of the native forest.

# Objectives

Reduce fire wood consumption;  
Recuperate the native vegetation;  
Eliminate indoor air pollution.

## First Initiative of that kind in Brazil

While fuel-efficient stoves have been effectively disseminated in many countries, they are almost totally ignored in Brazil, despite their beneficial effects in mitigating deforestation and curbing health problems.



# Excessive fuel wood cutting:

Lower Soil Fertility

Increase of Desertification

Decrease of Rainfalls

Dry-up of Water Resources

Advance of migration from the rural areas to the cities



# Indoor Air Pollution

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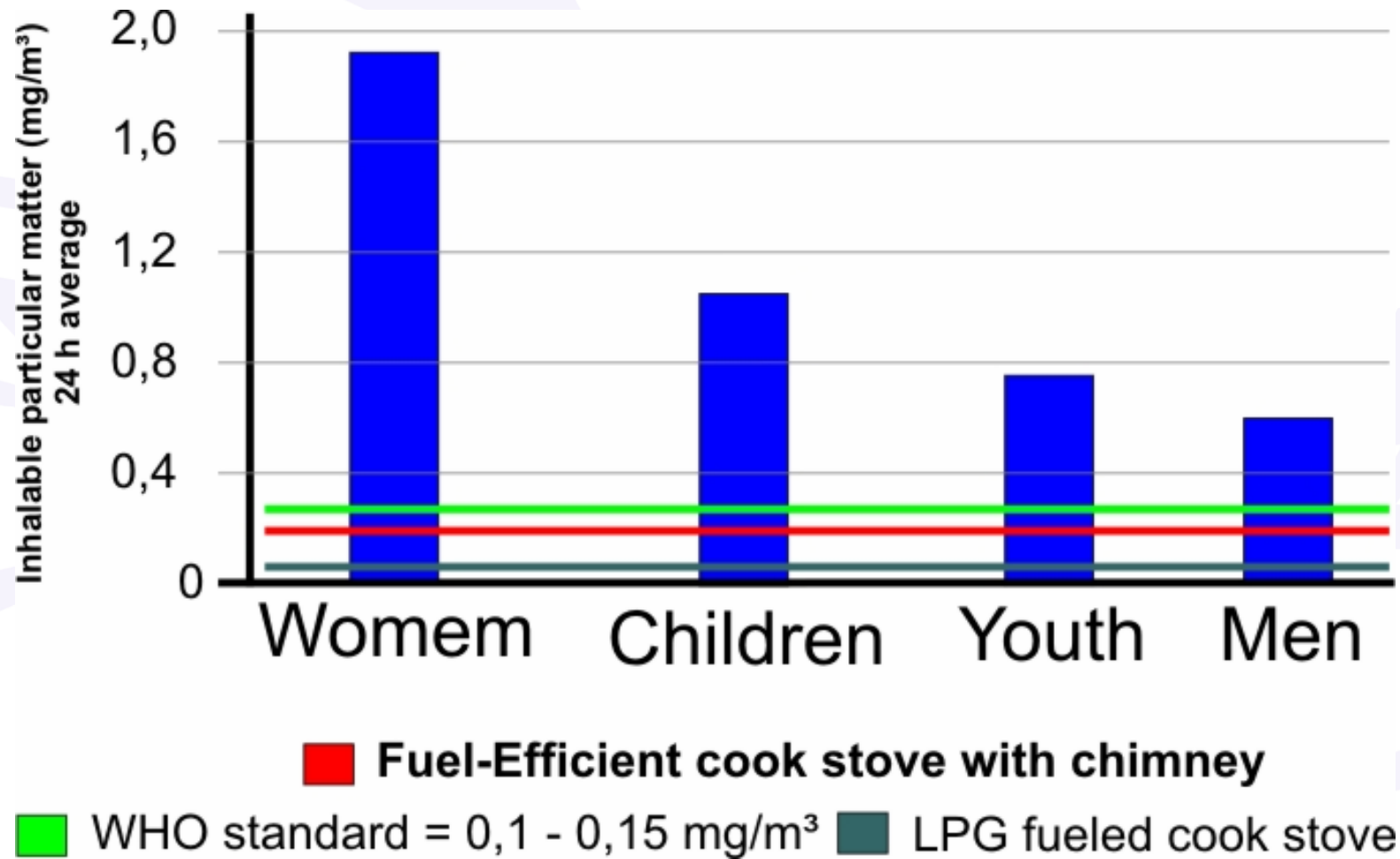
The smoke of inefficient stoves effect first of all woman and children

Illnesses caused by smoke:

Allergies, Bronchitis, Asthma,  
Pneumonia, Lunge Cancer,  
Tuberculosis, Heart disease, Blindness.



# Indoor Air Pollution



# Characteristics of efficient cook stoves:

- Improved fuel burning;
- Elimination of the smoke;
- Less heat losses from the burning chamber;
- Better heat transfer to the pots.



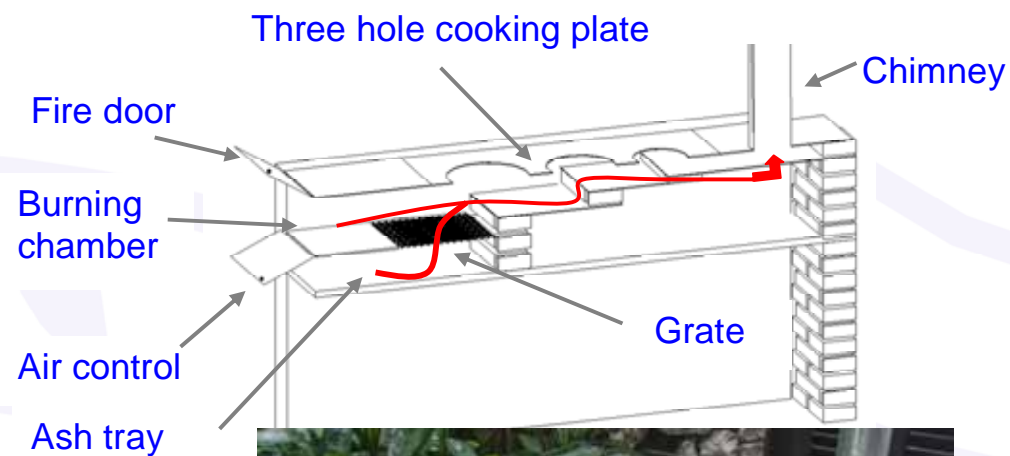
## Consequences :

- Burning half of the currently necessary fire wood;
- Less respiratory illnesses.





# Pre-fabricated cook stove adapted to the Brazilian culture



# Dissemination Program

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Approved by the World Bank (GVEP)

Implementation of 100 cook stoves in 3 communities;

Training of local shops and bricklayers to manufacture and install the stoves;

Base line and follow-up study on health in the communities;

Introduction of selective branch cutting and recuperation of native vegetation (*Caatinga*);

Involvement of local governmental entities responsible for environment and health and the Development Bank BN.

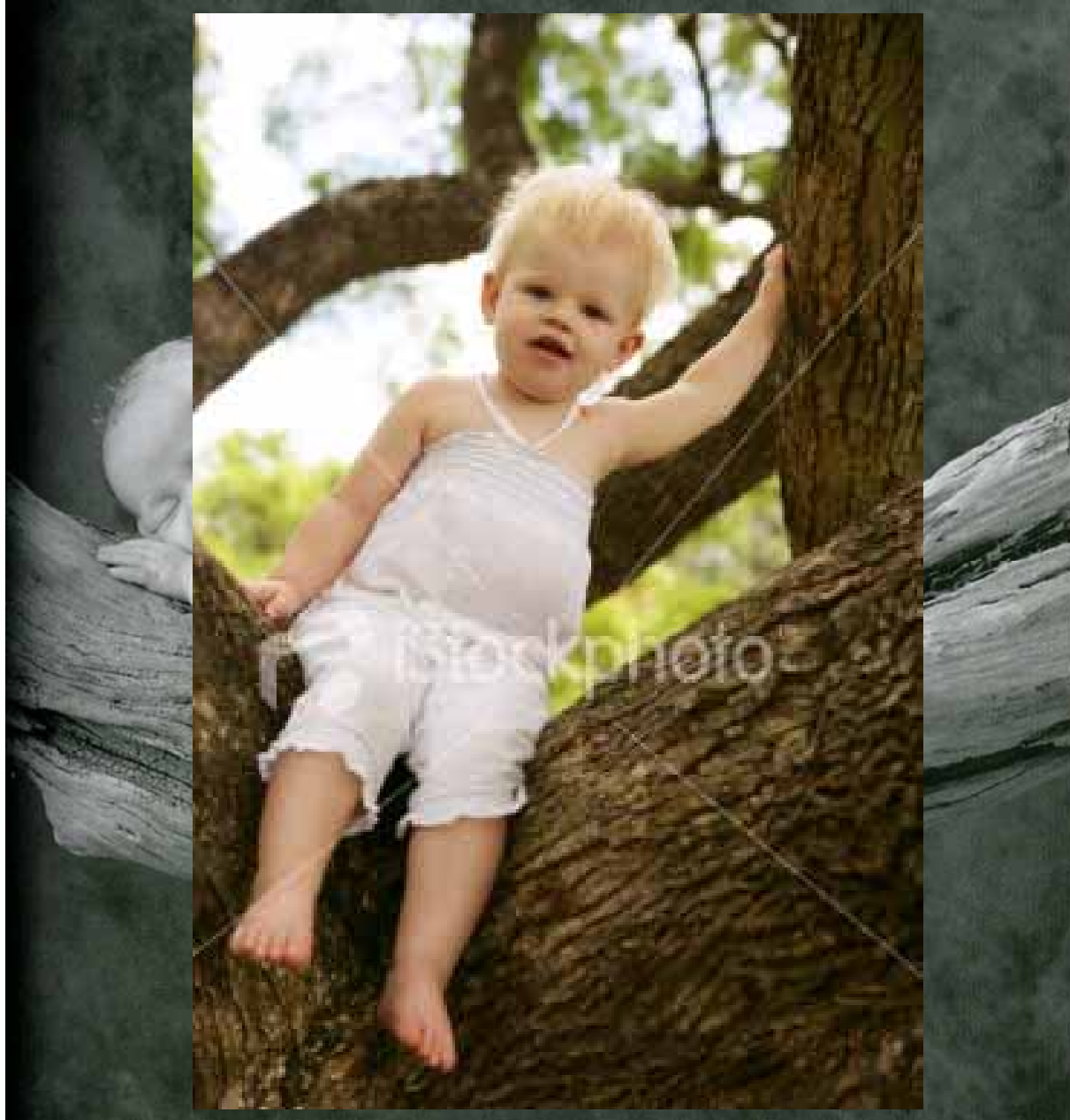
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# Thank you

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