



Die Ofenmacher e. V.

Rauchfreie Küchenöfen statt offenes Feuer
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Climate Security & Sustainable Development

Project Description

Smokeless Cook Stoves for Rural Districts in Nepal

Local Situation

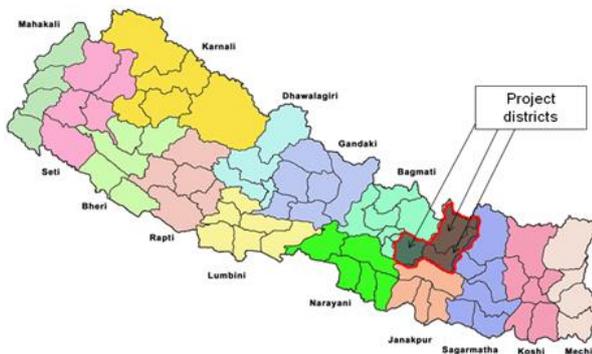
About three quarter of all households in rural Nepal prepare their meals at open fire places day by day. The smoke generation inside the huts exposes especially women and children to toxic smoke gases several hours every day.

This causes serious health effects: numerous diseases of the respiratory system and lungs, eye irritations and vessel sufferings. Heavy burning accidents of children and infants are not seldom. According to investigations of the World Health Organisation (WHO) 1000 open fire places are responsible for about 1 premature death and 2 serious burning accidents of children below 6 years.

Furthermore due to inefficient combustion a lot of firewood is consumed. Mostly women and children have to collect it cumbersome from surrounding woods. For that reason deforestation is on the rise. Disruptions of water balance, landslips and depletion of nature are following.

Project Area

The stoves with smoke outlets are built in three districts of Central Region of Nepal about 50 kilometers away from the capital Kathmandu.



Project Measures

The traditional open fireplaces inside the cottages are substituted by masoned mud stoves (Improved Cook Stoves). Construction materials are available on-site. The brick material consists of mud, straw, cow dung. It is mixed and filled into prepared wooden forms. All family members strongly work together with the stove builder by making stove bricks which are dried afterwards at

Projekt Characteristics

Name	GS 1191 Smokeless Cook Stoves for Rural Districts in Nepal
Project Type	Energy Efficiency – Domestic
Region	Districts of Kavre-Palanchok, Ramechhap and Dolakha
Country	Nepal
Local Partner	Swastha Chulo Nepal
Standard	Gold Standard
Number Stoves	ca. 11.000
Emission Reduction	max. 10.000 tons CO ₂
Crediting Period	10 years
Status	Issued VERs since 2013



open air. After about one week of drying period the stove builder returns and assembles the stove with the finished bricks inside the house. The chimney is made out of particular formed brick stones. Some iron rods serve as stabilisation of the stove. A hole is struck by the host into the outer wall of the house and the pottery outlet is integrated by the stove builder into the wall. The building shell of the stove is plastered with mud to obtain a smooth outer surface. The stove has two holes above the combustion chamber. And the kitchen pots are tightly fitted into them. Thus



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leading to a good heat transfer between the combustion spot and the pots. After that last manufacturing stage the stove is finished and can be used after a short drying period.



Each stove saves about half amount of firewood compared with a traditional fireplace and cooking times are shorter. That leads to savings of CO₂ emission. Gold Standard climate protection project GS1191 has to prove all CO₂ savings every year. After verification by Gold Standard issuance of VERs (verified emission reduction) is declared. The terrible earth quakes in April 2015 hit the project area tremendously. About 70 percent of all houses with 11.000 built stoves were destroyed or unusable. That is a huge catastrophe for the people there. And the project has the task to build nearly all stoves a second time.

Sustainable Effects for Humans and Nature

The main purpose of the stove project is increasing the efficiency of biomass combustion which saves local resources. The stove project for rural people of Nepal has a lot of positive effects improving the livelihood of the inhabitants of one of the poorest countries in the world on a fundamental and sustainable manner:

- **Human health:** Clean breathing air without smoke gases improves the health situation of people and prevents sicknesses especially of the respiratory system, eyes and vessels.
- **Accident hazards:** Accidents with open fire are prevented. Especially little children are involved.
- **Protection of forests:** According to the rules of UNFCCC biomass is in case of Nepal non-renewable because much more wood is cut than is growing back.
- **Water balance:** Protection of forests preserves the water balance on a long run and ensures the water supply.

- **Soil:** Protection of forests avoids erosion of farm land and prevents landslips which are a big problem in Nepal.
- **Biodiversity:** Protection of forests reduces the pressure on endangered animal species.
- **Livelihood:** Collection of fire wood is a hard and time-consuming job for women. Improved cook stoves burn less fire wood. About half of the amount of open fireplaces. And cooking is faster. Even money is saved if fire wood has to be purchased. Women and children can use the saved time to improve their conditions of living e.g. to expand farming and sell agriculture products, to earn additional money by offering services or to spend time for education.
- **Empowerment of women:** The position of women is sustained because they have more spare time. Besides that many of the stove builders are women.
- **Employment:** Jobs are offered in Nepal by the installation of stoves. These are opportunities to earn money in cash. "Die Ofenmacher" employ about 100 stove builders.

Project Developer

"Die Ofenmacher e.V." are a small German non-profit association founded in 2010. The purpose of the association is to install smokeless cook stoves in developing countries and to banish the extremely harmful open fire places from the cottages of poor people. The independent NGO (non-government organization) Swastha Chulo Nepal is responsible for the construction of stoves in Nepal. All planning, building and documentation follow high-quality rules.



Detailed Information: <http://ofenmacher.org>