

# Biogas for rural Households in India



April 2018: Manisha and her mother Janabai are cooking on their new biogas stove. They were able to build one thanks to donations through the myclimate-project. Karnataka. © myclimate

**The overall objective of this climate protection programme is the installation of domestic biodigesters as a clean, sustainable energy source throughout India. The biogas generated from cow dung replaces fuels that are currently used for domestic energy needs such as firewood or kerosene.**



**43,500**

**people benefit from better air**



**6,890**

**biodigesters installed**



**6.5**

**t CO<sub>2</sub> and 5.3 t wood avoided per biodigester**

The first installations take place in Gulbarga, Yadgir and Bidar District in Karnataka State. The project encompasses to install biodigesters in 6,900 households. The biogas installations are fed with animal dung and kitchen wastewater. The generated gas is used for cooking. In addition, the slurry of the remaining manure serves as high quality fertiliser replacing chemical products. Traditionally, domestic energy needs for cooking in the project area are met with firewood and kerosene. The inefficient cook stoves that people traditionally use have a thermal efficiency of only eight

## Project type:

Biogas

## Project location:

Rural areas, India

## Project status:

In operation, credits available

## Annual CO<sub>2</sub> reduction:

54,217 t

## Situation without project

Using firewood and kerosene for cooking

## Project standard

**Gold Standard<sup>®</sup>**

CER

## Awards



## Impressions



Sept 2017: Before they had to cook on a simple cook stove and collect firewood. Cooking with biogas is now faster and cleaner. © myclimate

to ten percent. Low family incomes make it impossible for local people to substitute this traditional fuel. This led already to a degradation of the forest cover in the districts.

**There is 75% less forests than there used to be. People recognize deforestation as a pressing problem, not only because there is less firewood but also because there is more erosion and stronger monsoons.**

Moreover, domestic biogas installations have positive sustainable development effects such as alleviating the workload for women and children and easing health problems caused by indoor pollution. The biogas unit will be of either two or three cubic metre capacity depending on the number and type of cattle owned by the household and the number of people in the household.

**My father was a small farmer. He advised me to do something to help the rural people.**

**Vidya Sagar, CEO of SKG Sangha, local partner of myclimate**

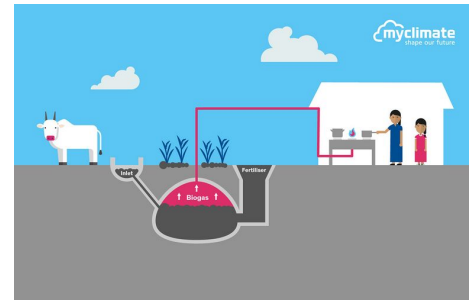
The programme results in greenhouse gas (GHG) emission savings in the following ways: The biogas displaces GHG emissions from kerosene and fuel wood that used to be used for cooking. The biogas produced from cattle manure is a renewable source of energy. The biogas displaces GHG emissions from cattle manure that is currently dumped in pits near the household. The cattle manure is dumped along with other waste such as straw from the cow shed, some kitchen waste, crop residues and other organic matter and liquids in the pit. This organic waste is never dry and does not get mixed therefore animal waste is decaying anaerobically and emitting methane.

**It's my dream to become an agricultural officer so that I can work with the farmers and help them switch to organic farming.**

**Malasri Markal, loves her biogas plant and has a Master's degree in Horticulture**

SKG Sangha, local partner of myclimate, coordinates the programme throughout India installing the systems with the help of people from the households. SKG Sangha is a very experienced Indian non-governmental organisation working already over 20 years in this field of activity.

**This project contributes to 11 SDGs:**



The biogas is used for cooking. The slurry serves as organic fertiliser on the fields replacing chemical products. ©myclimate



Shantabai loves her biogas plant as she doesn't have to collect firewood anymore - a daily 2 km walk. Afzalpur Taluk, Karnataka. ©myclimate



Kallappa Markal and his daughter Malasri have a higher yield that fetch them a higher income thanks to the switch from chemical to organic fertiliser. Bidar District, India. © myclimate



The use of slurry (organic fertiliser produced by the farmers themselves) helps to prevent small farmers from becoming dependent on chemical fertilisers, thus improving their families' financial situation.



To date, the biogas systems have produced 181,580 tonnes of organic fertiliser and thus reduced 4,242 tonnes of chemical fertiliser, thus contributing to sustainable agriculture.



43,500 persons have benefited from better air quality since the start of the project.



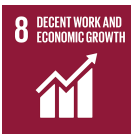
Because the time-consuming collection of firewood is no longer necessary, children have more time to go to school and do homework. This gives each family almost 3.5 hours of additional time per day.



Only women are entitled to buy and own a biogas plant. This helps to level out the balance of power in the family and to strengthen the position of the women.



6,890 biogas digesters have been installed since the start of the project.



87 permanent jobs have been created for the local population and more than 7,600 people have been trained in the use of biogas plants.



The recycling of organic waste contributes to sustainable waste management.



Each biogas biodigester avoids 6.5 t CO<sub>2</sub> and reduced wood consumption by 5.3 t per year.



To date, the programme has reduced wood consumption by 174,704 tons and has thus saved 2,393 hectares of forest from deforestation.



The programme enables the transfer, dissemination and implementation of environmentally friendly technologies in India.