Biogas Plants in Rural Settings

With the biogas plants in their household, Ms. Uma Mayal (2nd from left), a progressive organic rice farmer, and her colleagues now have more time for their kids and are less prone to tiger and elephant attacks. Devirampur, Kotabag, Nainital © myclimate

The project, financed by Coop and implemented in partnership with WWF Switzerland, Helvetas and the local NGO Partners in Prosperity (PnP), involves the construction of totally 3,900 biogas plants in households in rural areas in the state of Uttarakhand in India. By substituting wood as a fuel with biogas, greenhouse gases are being reduced. These biogas plants complement the commitment for regional rice farmers on behalf of Coop, Reismühle Brunnen and Helvetas: a fair, value-added supply chain has been developed for the local rice production, aiming at improved incomes for farmers and adjustments for eco-friendly farming methods.

21,450 persons benefit from better air quality

3,900 biogas plants installed

536 ha of forest saved

Project type: Biogas
Project location: Uttarakhand, India
Project status: In operation, exclusively for Coop
Situation without project
Using wood, forest litter and dung as fuel

Project standard
Gold Standard
VER

Partner

Impressions

The use of biogas plants is adding further local benefits and helping to reduce the consumption of wood as a fuel. But it is not only carbon...
emissions that are being reduced; the project's benefits are: a substantial
decrease in deforestation in and around the area and therefore protection
of the habitat of endangered tigers, an increase in carbon sequestration in
these forests, better health among women and children due to less smoke
in kitchens, less time spending on collecting wood, especially women,
reduced methane emissions in paddy fields thanks to the application of
biogas slurry instead of undecomposed farm yard manure, improved
farming productivity due to slurry application (less temporary nitrogen
blockage in the soil, more easily available nutrients for top dressing), an
opportunity for skilled workers to provide their services for the
construction, maintenance, marketing and financing of biogas plants, and
increased climate resilience among the population as earnings increase
due to savings and income generation grows thanks to skill development.

This project supports the farmers in the fair-trade rice
project of COOP with a biogas plant. That means less
time for collecting firewood, clean cooking and organic
fertiliser for their rice fields.

Annina Böhlen, Sustainability Fund of COOP
Switzerland

The use of biogas slurry for the organic production of rice in the area is an
important sustainable benefit of the project. This procedure emits less
methane into the atmosphere compared to the direct use of manure. The
project partner is promoting organic basmati rice production in this area,
explaining poor and marginal farmers to earn more from its premium pricing
than with rice produced conventionally using chemical fertilisers. This
shows that by financing the project, Coop and Reismühle Brunnen will
contribute strongly to the sustainable development of the rural population
participating in the project. Thanks to all these sustainable benefits, the
project is to be implemented as a small-scale project under the Gold
Standard.

For WWF, this project is of great importance, as it
helps reduce conflict between tigers and people, as the
women no longer have to head to the forests to collect
firewood.

Bella Roscher, WWF Switzerland

The capacity of the units installed varies and is decided based on the
number of people and the number of cattle they own. The cost for a biogas
unit is pre-financed by Coop to cover one third. Subsidies from the Indian
government and/or corporate sources cover another third. Families have
to contribute one third of the total biogas digester costs. To secure
ownership, households either provide locally available materials and
labour or contribute their share in monetary terms. Carbon finance will be
used towards subsidisation of the units, training, operations and
maintenance, reaching people in remote areas and other activities
pertaining to the project.
This project contributes to 11 SDGs:

1. No Poverty
   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.

2. Zero Hunger
   The biogas digesters produce organic fertiliser and thus reduce chemical fertiliser, thus contributing to sustainable agriculture.

3. Good Health and Well-being
   21,450 persons have benefited from better air quality since the start of the project.

4. Quality Education
   Because the time-consuming collection of firewood is no longer necessary, children have more time to go to school and do homework.

5. Gender Equality
   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.

7. Affordable and Clean Energy
   3,900 biogas digesters have been installed since the start of the project.

8. Decent Work and Economic Growth
   7 permanent jobs have been created for the local population and more than 600 people have been trained in the use of biogas plants.

12. Responsible Consumption and Production
   The recycling of organic waste contributes to sustainable waste management.

13. Climate Action
   Each biogas biodigester avoids 5.7 t CO₂ and reduced wood consumption by 3.5 t per year. Since the start of the project, 33,909 tonnes of CO₂ have been saved.

15. Life on Land
   To date, the programme has reduced wood consumption by 39,149 tons and has thus saved 536 hectares of forest from deforestation.
The programme enables the transfer, dissemination and implementation of environmentally friendly technologies in India.