Animal Manure Produces Clean Biogas

Increased harvest! Farmer Suparjono uses the bio slurry as organic fertiliser on his fields.

The overall objective of this climate protection project is the installation of domestic biogas digesters as a clean, sustainable energy source throughout Indonesia. Domestic biogas provides a sustainable way for individual households with livestock to reduce dependence on firewood and expensive fossil fuels for cooking and lighting.

**Project standard**

![Gold Standard](image)

**Project type:** Biogas, Biomass  
**Project location:** Indonesia  
**Project status:** In operation, no credits available  
**Annual CO₂ reduction:** 19,149 t  
**Situation without project**  
Non-renewable wood as energy source

**Contribution to the SDGs**

1. **No Poverty**
2. **Affordable and Clean Energy**
3. **Decent Work and Economic Growth**

111,000 people benefit  
26,400 biodigesters installed  
275 jobs generated

Biogas digesters convert the dung into biogas that can be used for cooking and lighting. The slurry left over from this process is also an excellent organic fertiliser that can be used to improve crop yields. The programme subsidises the purchase of a biogas plant. The programme seeks to distribute biogas digesters as a local sustainable energy source by developing a commercial, market-oriented sector for them that also provides job and business opportunities for masons and partner organisations in construction.

The construction of biogas digesters in rural households reduces
greenhouse gas emissions on different levels: the methane appearing as a result from the fermentation of the dung in the traditional way escapes no longer into the air. The methane is used instead as energy source replacing firewood or charcoal and can be utilized for lighting as well. The slurry replaces chemical fertilizers, whose production and transportation also is omitted. In addition, this organic fertilizer does not cause soil degradation as chemical fertilizers do. It has also a three times higher nutritional value compared to normal animal manure.

I used to spend USD 15 monthly on LPG for cooking. Now I can spend the money on better meals and milk for my child.

Nurlaila, Benteng Gajah, South Sulawesi

Thanks to a biogas plant, women and girls in particular enjoy the daily time savings of 60-90 minutes on average. The saving in time accrue largely from reduced time in cooking and collection of fuel wood. The clean energy produced by the biogas produces minimal smoke soot, which in turn decreases cleaning time. Families save money as they no longer have to buy fuel for cooking and fertilizer for the fields. Therefore repaying the loan is not difficult. The healths of women and girls improves as a result of decreased smoke and dust in the kitchen. Thanks to these social and economic benefits for women, the programme has been certified by the W+Standard - a unique label developed by WOCAN that distinguishes projects that empower women and at the same time have a positive impact on the environment.

The programme is implemented by Hivos, a Dutch non-for-profit organisation with widespread experience and international reputation. Hivos is working closely with the Indonesian Ministry of Energy and Mineral Resources and SNV Netherlands Development Organisation. The programme of activities covers ten provinces throughout the country. At present, some 60 construction partner organisations and 3 manufacturing partner organisations (producing biogas stoves, lamps and other appliances) work with the programme.

This project contributes to 11 SDGs:

1. No Poverty

   Over 111,000 people benefit.

2. Zero Hunger

   The households benefit from increased yields thanks to the application of the slurry on the fields.

3. Good Health and Well-being

   The project improves the health of the people thanks to decreased smoke and dust in the kitchen.
Over 19,000 people trained.

Mostly women and children benefit from 1 hour daily time saving per household (certified by W+ Standard).

26,400 small biodigesters installed.

275 jobs generated.

The bio-slurry generated by the biodigester replaces the use of chemical fertilizer and improves the soil quality.

Almost 270,000 tonnes of CO₂ reduced.

94,000 tonnes of firewood saved.

The project reflects a strong North-South collaboration.