

# Gold Standard VER Project, Xuyong (China)

## Clean biogas for poor rural households

### Background

The rural areas in Sichuan Province are among the poorest in China. The average annual per capita income in remote Sichuan is approximately EUR 500. In 2012, the province contained 36 counties that have been officially defined as „national poverty counties“ to qualify for economic assistance from the government. Sichuan is also strongly affected by natural hazards. In May 2008, Sichuan has been severely hit by a heavy earthquake that claimed the lives of nearly 70,000 people, left another 5.8 million homeless and killed an estimated 12 million animals of productive livestock.

### Project Description

The project target is to support up to 2,000 poor Sichuan farmer households by installing efficient biogas digesters on their premises. These proven and reliable systems reduce methane emissions originating from the widely used pits to store animal manure and provide the households with clean biogas for cooking, heating and lighting.

By granting reimbursements from VER sales revenue – in addition to an existing national subsidy scheme – only to those farmers that cannot afford the digester system despite the government aid, the recipients are enabled to raise the necessary investment and to start construction.

Since this project is integrated into the existing infrastructure framework of UPM’s Sichuan Biogas Programme of Activities (PoA), the Rural Energy Offices in Sichuan will additionally provide the project households with free annual maintenance service and on-demand technical support.

Due to the reduction of methane emissions originating from the pits and of carbon dioxide emissions caused by the common use of coal and wood as cooking fuel, the 2,000 chosen households account for an annual GHG emission reduction of approximately 4,500 t CO<sub>2</sub>e.



Biogas generated from animal manure and kitchen waste is used for cooking.

### Key Facts

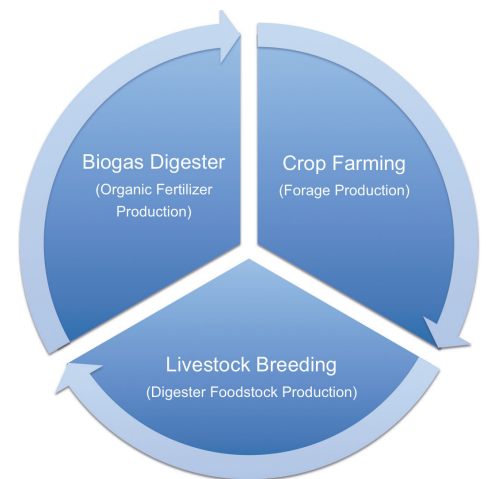
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| <b>Project Type</b>                  | Household Biogas   |
| <b>Location</b>                      | China, Sichuan Province, Xuyong county   |
| <b>Methodology</b>                   | CO <sub>2</sub> emissions from coal use in the baseline situation - AMS-I.C<br>CH <sub>4</sub> emissions from widely used pits for manure treatment - AMS-III. |
| <b>Carbon Credit Standard</b>        | Gold Standard Voluntary Emission Reductions (GS VERs)  |
| <b>Validator/verificator (DOE)</b>   | Gold Standard Foundation   |
| <b>Development Status</b>            | Credits issued   |
| <b>Registration Date</b>             | 23/02/2012   |
| <b>Date of First Credit Issuance</b> | 31/08/2013   |
| <b>Number of Households included</b> | up to 2,000  |
| <b>Annual Credit Volume</b>          | approximately 4,500 GS VERs  |
| <b>Crediting Period</b>              | 10 years   |



## Sustainability Benefits

Compared to the currently prevailing habits of manure storage in pits below the animal confinements and the use of coal and/or firewood as cooking fuel, the use of biogas digesters and stoves has several advantages beyond GHG emissions reduction:

- Reducing the time spent by women collecting firewood or travelling to purchase fuel.
- Reducing the amount of household income spent on cooking fuel.
- Improving the indoor air quality: By providing smoke-free fuel, the project can significantly reduce the concentration of SO<sub>2</sub>, CO, CO<sub>2</sub>, NH<sub>3</sub> and PM10. In regions with traditionally high coal consumption, respiratory diseases are a serious health issue, especially for both women, who do the cooking and stay home during the day, and their children.
- Improved sanitation systems: The project helps providing a clean and proper way of treating the animal manure, thus preventing zoonotic diseases and infections due to improper manure handling.
- Providing high-quality fertilizer: The manure treated in a biogas system has a much higher fertilizer quality than manure originating from incomplete digestion processes in the commonly used pits. It can therefore substantially increase the income of the project households.



## Project Location

The project area is located in Xuyong county of China's Sichuan Province.

## Contact

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The GS VER household biogas project covers selected rural counties in Sichuan.