

Internal Verification:
Biogas Tanks in Guizhou Province in China
GS614



INTERNAL VERIFICATION FORM: GS VER MICRO-SCALE PROJECTS

Title: Biogas Tanks in Guizhou Province in China
GS ID: GS614 (GSv1 version)
Submitted by: GoodPlanet
Submitted on: March 3, 2009 (proof of payment)
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Form Version: Version 3.1, 12 January 2011
Monitoring Period: 1st April 2008 to 31st March 2009
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542 tCO₂e, 2008 (1 April 2008 - 31 December 2008)

196 tCO₂e, 2009 (1 January 2009 - 31 March 2009)

Total of 738 tCO₂e

Documents Provided and Reviewed:

- Monitoring Report Version 3, 20th December 2010
- Monitoring Data Danzhai (DZMT_report_calc_v3.xls)
- Monitoring Data Weining (WNMT_report_calc_v6.xls)
- Monitoring Plan from final GS PDD, Version 4, 25th November 2009

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Summary:

The project activity reduces GHG emissions associated with the use of coal and non-renewable biomass for cooking by promoting biogas utilization in Guizhou's countryside. Beneficiaries save money by reducing the purchase of traditional fuels or save considerable time currently spent on collecting firewood. The project also improves their living conditions (reduction of indoor pollution, enhanced hygiene) and contributes to the mitigation of local deforestation. The proposed project activity does not generate any income for the project coordinator other than revenues from the VER credits.

Implementation started on September 1st, 2007. The start date of the first crediting period is defined as April 1st, 2008. The chosen crediting period is a fixed period of 10 years. With annual average emission reductions of 4,441 tCO₂e, the estimated total reductions would be 44,411 t CO₂e over the whole crediting period.

The project was registered on 6th January 2010. The first monitoring period is from 1st April 2008 to 31st March 2009. By end of this monitoring period, there were 318 bio-digesters installed in Weining and 151 installed in Danzhai. Project proponent claims emission reductions of 738 tCO₂e over this period. In Weining, farmers saved an average of RMB 782 on their yearly fuel expenses and biogas contributes to 40% of their energy needs. In Danzhai villagers saved RMB 75 in average and biogas contributes to 65% of the energy needs. Livelihood of the beneficiaries and their access to clean energy were improved by the project.

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General comments:

This project is of great interest and very much in line with Gold Standard objectives as it is associated with substantial sustainable development co-benefits. Overall, project documentation is of high quality and the monitoring report shows that objectives of sustainable development were gained as they are promised in the PDD. There are two climate zones in the project and each has different income level and different access to natural resources, and hence different practice in meeting their daily energy demand in baseline scenario. Impacts of the project to the beneficiaries in two zones are also at different extents. Furthermore, energy consumption in winter and summer are also not at the same level. Complexity is the biggest challenge for monitoring and for verification. Efforts have been made to achieve preciseness and conservatives while maintaining readability of the monitoring report.

Decision:

Rejected	<input type="checkbox"/>
Request for clarifications and /or corrective action	<input type="checkbox"/>
To be submitted for external verification	<input type="checkbox"/>
Verified	<input checked="" type="checkbox"/>

Requests for clarifications and/or corrective actions:

Sections	Clarifications and/or corrective action needed	Reasons for clarification and/or corrective action	Suggestions on how to proceed	Response by Project Proponent	Conclusion
Version and Date	<i>Cover page.</i> PP shall provide a version history in first page of monitoring report to include version numbers, dates and nature of revisions.	This will help for a better overview of the review process and revision history.		A version history has been added to the first page of the report.	This issue is closed.
Section 1	Monitoring Report (page 4) states that 'therefore there are two monitoring surveys conducted per year...thus the <i>monitoring period</i> is not a full year but a season.' This is not correct because the monitoring period does cover a full year. It is the survey that only covers a season.	Monitoring period is the period covered by a monitoring report. From 1 st April 2008 to 31 st March 2009 is the monitoring period of this monitoring report, which is a full year.	PP shall state that 'period covered by each survey is not a full year but a season'.	The appropriate modification has been made.	This issue is closed.
4.2	<u>4.2 Representativeness in</u>	As stated in PDD, the	Clarification shall be	For 4 surveys the data for the winter	This issue is closed.

	<u>Danzhai</u> For Jiaogui area, 'number of baseline surveys' in summer is 88 while it is 84 in winter.	baseline study in summer and in winter was carried out through one survey hence 'number of baseline surveys' should be the same.	made in the monitoring report.	season were not recorded. That why they were not taken into account.	
Section 4.3 Baseline Emission Danzhai	<u>4.3 Baseline Emissions</u> Monitoring Report (page 6) states that 'for the baseline survey of Danzhai, the fuel consumptions taken into account were the averages for the whole year instead of the average for <u>one monitoring period</u> '	Usually a 'monitoring period' refers to the period covered by a monitoring report.	PP shall use 'one season (summer or winter)' instead of 'one monitoring period' to avoid confusion.	The modification had been made.	This issue is closed.
4.3 Baseline Emission Danzhai	<u>4.3 Baseline Emissions</u> The Monitoring Report states that 'even if it overestimates the ER for summer and underestimates the ER for winter, it shall not change the total ER at the scale of one year.' This is only correct if number of digesters in summer is the same as the number in winter.	This is only correct if number of digesters in summer is the same as the number in winter (so that extent of overestimation in summer is equal to the extent of underestimation in winter)	PP shall further elaborate this issue and its impact in overall conservativeness in monitoring report to avoid confusion.	There are more questionnaires in Winter than in Summer so the result is conservative.	Since there were more digesters installed in winter than in summer, the calculation is conservative. This issue is closed.

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<p>4.3 Baseline Emission Weining</p>	<p><u>4.3 Baseline Emissions</u> The Monitoring Report states that the baseline fuel consumption in Weining region during summer had been under evaluated because baseline survey only collected fuel consumption for cooking food of human beings. This is not an issue if project survey also didn't take into account the fuel consumption for cooking animals' food.</p>	<p>It is deemed that different questionnaires were used in baseline survey and project survey.</p>	<p>PP shall further elaborate this issue in monitoring report to avoid confusion.</p>	<p>The questionnaires have evolved a lot from the first baseline in march 2008 up to now. It appears to make more sense to ask for the consumption for both human and animal food since sometimes it is cooked on the same stove and anyway farmers knows better their total consumption rather than their specific consumption for each separate purpose. So we don't have the consumption data for human food cooking alone in the survey made in December 2008 and afterwards. It is then easier to</p>	<p>This issue is closed.</p>
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				<p>update the data for the 60 baseline survey in Weining.</p> <p>A diagram had been added in the MT report to show clearly the project boundaries.</p>	
4.6.2 Monitoring Results	PP shall provide a table of monitoring results of the parameters subject to monitoring plan. All parameters in Annex I of the Monitoring Report should be included.	This is for viewers to have an overview of all monitoring results.		<p>For readability reason the table had been added to the annex II. Main data had been summarized in this table.</p> <p>It should therefore be noticed that these data are the average values. Calculations have been made separately for every beneficiary, as it can be seen in the corresponding Excel sheets.</p>	This request is closed.
Monitoring	In Danzhai spreadsheet			Sometimes we asked for the weekly	This issue is closed.

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Data Spreadsheet Danzhai	(monitoring data and baseline data) the coal and charcoal consumption (kg) in some questionnaires are less than 1 kg/day. PP shall clarify how preciseness was ensured while monitoring such small figure through questionnaires.			consumption rather than daily consumption. Then all the values have been converted into daily consumption. That's why there are some small values with fractions of kg. See the paper questionnaire if needed.	
Monitoring Data Spreadsheet Danzhai and Weining	Units of coal/charcoal consumption in the spreadsheets vary from Kg/day to Kg/week and Kg. The formula used in emission calculation suggests that all consumption values are supposed to be on daily basis. If this is the case, PP shall correct the units used in the spreadsheet.			All the data are actually in kg/day but some headers were not updated. The column title had been changed.	This issue is closed.
Monitoring Data	In Weining area, it seems that the Gaohua village consumes			The data match with the paper questionnaire. The	This issue is closed.

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Spreadsheet Weining	more wood in project scenario than they did in baseline scenario in summer. Clarification shall be made.			monitoring data are obviously overestimated (which is conservative). That is why there are no emission reduction in Weining for the first season.	
Monitoring Data Spreadsheet Weining	Fraction of waste going to biodigester has been considered twice in the calculation of summer CO2 emission due to animal waste handling for project scenario for Weining region. PP shall revise the calculations.			This has been corrected. The values have been updated into the report.	This issue is closed.
Data Records	<ol style="list-style-type: none"> 1. PP shall provide photocopy of all questionnaires, including baseline and project surveys, to GS for verification purpose. 2. PP shall provide copy of project database detailing the id 		Please burn a DVD ROM and send to GS via mail. Address is: Leon Wang The Gold Standard Foundation Suite 84, 24th Floor, Tower 3, Huamao Center No. 77 Jianguo Rd.,	This has been done. Please confirm to us the reception of the DVD to the Gold Standard Foundation Office in Beijing.	This request is closed.

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	<p>number, location, date of installation of each biodigester etc.</p> <p>3. Agreements for transfer of credits signed by village heads should be uploaded to the registry.</p>		Beijing, China 100025		
Sustainable Development Indicators	<p>1. PP shall clarify if qualitative information, on use of biogas lamp and hygiene related improvements, was collected during monitoring surveys.</p> <p>2. PP shall provide update on setup of 'Association of Biogas Beneficiaries' as was discussed during stakeholder consultation process.</p>	<p>1. This was stipulated in monitoring plan of the registered PDD in section D.2.1.2</p> <p>2. This association was supposed to help villagers with maintenance of biogas systems and make them aware of security issues, which form essential component of sustainable development aspects of the project activity.</p>		<p>1 Some qualitative information were collected during monitoring survey and informal questions were asked to beneficiaries about their use of the biogas lamp. It appears that the biogas lamp is not used very often. Most of villages have electricity and electric bulb is brighter than biogas lamp. But is really appreciated when there are</p>	This issue is closed.

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				<p>electric outages (and that can be quite frequent in some villages). A paragraph was added about that into the report.</p> <p>Hygiene improvement data were not collected in those early surveys, but it is now included into the questionnaire. So the next monitoring report will assess the hygiene improvement when data is available.</p> <p>2 Some Biogas User Association had been set up but they didn't worked very well and they were abandoned. The</p>	
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				<p>member and/or the president are not paid and there were little motivation for them. The maintenance is now insured by a technician from ID who goes and visits the tank every year. The monitoring surveys are also the opportunities to talk to the villagers and assess to proper work of the biodigesters.</p>	
Abstract	The monitoring report states that the emission reductions over the monitoring period are 807 tCO ₂ eq, however it is 806 tCO ₂ eq in the rest of the document.	The figure shall be rounded down to be 806 tCO ₂ eq.		Due to the following comments, ER over the monitoring period are finally 738 tCO ₂ eq.	This issue is closed.
Number of digesters installed	With the list of bio-digesters provided by PP, the number of digesters installed in the beginning of summer and		PP shall ensure consistency between the spreadsheet and the monitoring report.	Two beneficiaries are indeed missing in Dajie township. In fact, some biogas	This issue is closed.

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	winter in Weining area was 198 and 318 respectively rather than 200 and 320 in the monitoring report.			units were built far from the center of the village and couldn't be find again. Consequently, calculations have been modified without taking into account these two units.	
Project emission for winter season for Danzai region	The project emission for winter season for Danzai region in revised excel spread sheet 'DZMT_report_calc_v2_16092010' are calculated as 3.16 ton CO2 per tank however the value listed in previous version of MR and revised version of MR is 3.21. Apparently 3.21 is the correct value because emission reduction calculation done in excel file 'WNMT_report_calc_v5_07112010' uses a value of 0.86 ton CO2 emission reductions per tank for Danzai region in winter, which is calculated as			This comment permitted to identify 2 mistakes in the calculation spreadsheets (concerning average, st.dev. and nb of surveys for the sheets 'DZ winter MT' and 'WN Y1 winter BL'). This correction reduces the amount of emission reductions to 738 tons CO2e. The project emission	This issue is closed.

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	<p>4.07 – 3.21 = 0.86. It is actually not clear how the project emission for winter season for Danzai region in revised excel spread sheet has changed from 3.21 calculated previously to 3.16. PP shall use consistent values.</p>			<p>for winter in Danzhai is now 3.32 tCO₂e.</p>	
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Forward Action Request 1

For future monitoring reports, PP shall provide an overview of relevant surveys as an annex to the monitoring reports. Following table could be used, but not limited to, for providing an overview:

Climate Zone	Village Name	Number of Tanks Summer	Baseline Survey ID	Project Survey ID	Number of Tanks Winter	Baseline Survey ID	Project Survey ID
Danzhai	AAA						
Danzhai	BBB						
Weining	CCC						
Weining	DDD						

For each survey performed to collect baseline or project data of a certain village (or a few villages), an excel spreadsheet table shall be made for purpose of statistics and calculation.

Forward Action Request 2

Monitoring report provided for next periodic verification should assess the hygiene improvement.