



**Ministry of Agriculture
EU - GTZ Biogas Promotion**



gtz

GTZ PSDA
Promotion of Private Sector
Development in Agriculture
PO Box 41607
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ASSESSMENT OF INSTALLED BIOGAS PLANTS

PROJECT PERIOD CONSIDERED: 1ST JAN 2008 -31ST OCT 2010

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ACKNOWLEDGEMENT

I must say that the objectives of this survey could not have been realized without the immense support of the management for entrusting me with this work and giving me the necessary equipments for the same. Am deeply indebted to the Akut technical team for the support they gave me, trying to retrieve the contacts of clients that had had been installed with plants long time ago. Especially to Stanley Chepkwony who really assisted me in reaching out clients. Without the database of clients then my work could have been futile. I also thank Mr. Wycliffe Nyangaresi who also kept me informed and also regularly updated the database. I have to acknowledge the contractors and supervisors who also helped me. God bless you all.

EXECUTIVE SUMMARY

EU and GTZ have been promoting and supporting a bilateral technical cooperation program implemented by the government of Germany and the Government of Kenya. PSDA works closely with other ministries in promoting the private sector.

The program supports small and medium scale enterprises in selected value chains in agriculture. Among the many activities that it has undertaken is promoting resource friendly technologies which include:

- Training of construction companies and artisans to build biogas plants.
- improving the waste and waste water management in processing plants
- building capacity among stove producers and marketing agents
- Promoting awareness of energy-saving stoves, training of construction companies and artisans to build biogas plants, has been enhanced in the country in all selected clusters within the country. Biogas has the potential to conserve resources, increase food production and generate income for farmers by savings from the substitution of other energy sources, savings from substitution of purchased mineral fertilizers with bio-fertilizer (slurry) and increasing crop yield by using the fertilizer and more so time previously spent in collecting firewood can be used in other productive activities thus the project has been able to install more than 400 plants since its inception in 2006.

The assignment included contacting (on phone) all the clients with installed biogas plants since 1st January 2008 under the subsidy scheme to ascertain and assess their status if they are functional or not and if they were constructed as indicated and any progress of the biogas plants that is worth noting.

BACKGROUND

Biogas is a key component of PSDA and is co- funded by the European Union (EU) and GTZ with PSDA as an implementing agent and acting in a few districts in Central, Western, Eastern, Rift Valley and Nyanza provinces.

By October 2010, the biogas promotion had assisted individuals and institutions install more than 300 biogas plants, too ensure functionality and sustainability of the project, the telephone survey aimed at establishing if the installed plants are offering the expected benefits to the clients.

This will enable the project to achieve its objective of putting up more biogas plants that are working and giving the anticipated results and benefits to the respective clients to ensure efficiency.

OBJECTIVES OF THE SURVEY

1. To find out the functionality of the installed plants, from the time period of 2008 to October 2010.
2. To assess if the biogas plants are providing the anticipated benefits to the clients.
3. To assess the contractors performance working under the programme

METHODOLOGY

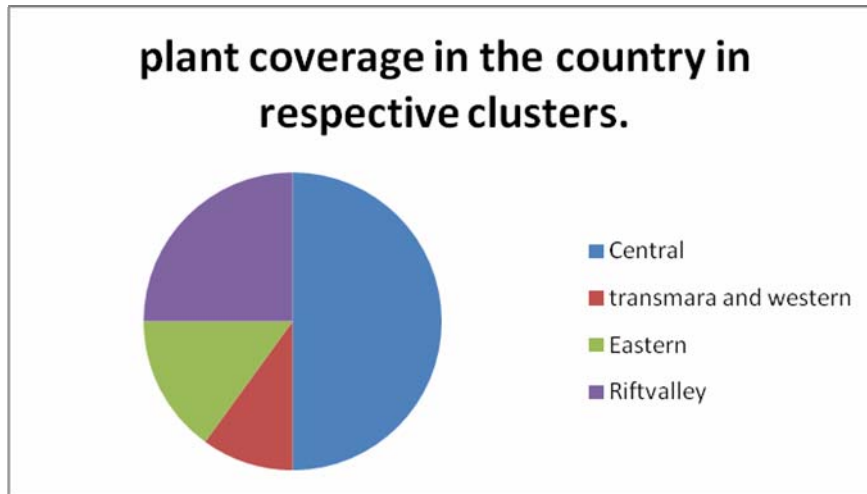
The methodology used in collecting data included different methods to obtain the necessary data needed.

- Phone interviews were exclusive and majority of information assessed was through phone conversations.
- I involved the use of questionnaire for the people going to the field to meet the clients face to face.
- Face to face conversations when I happened to go to the field to meet the clients.
- Other information sourced was made available through contractors whom I interviewed when necessary.

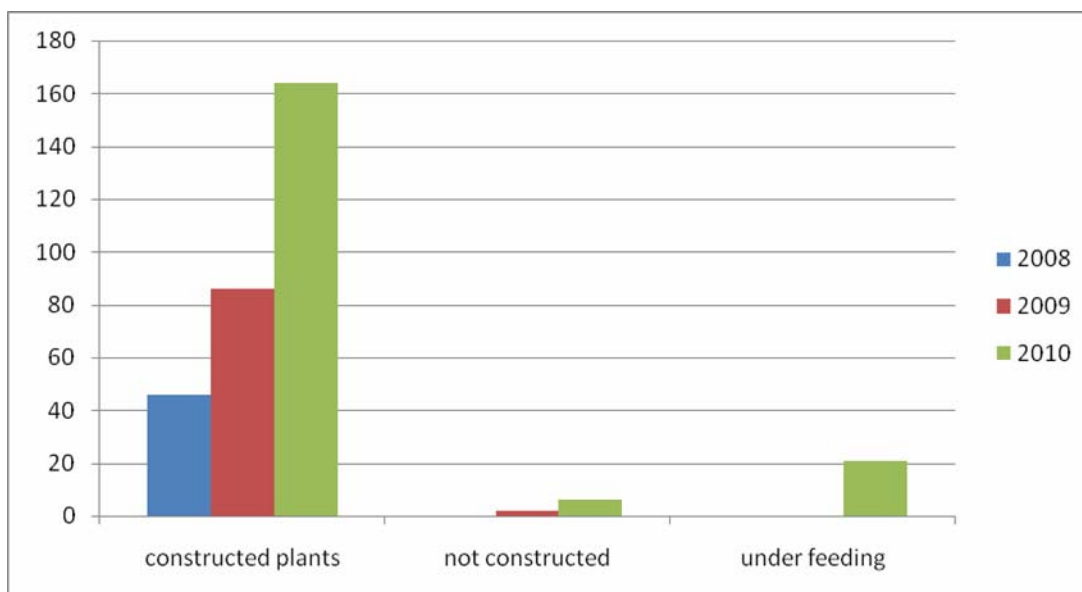
FINDINGS

These findings are a summary and inferences drawn from the data collected, recorded and stored in a separate excel or access file. The database file can be accessed from the biogas office. In brief the key findings were:

- The largest numbers of biogas plants are located in central cluster of PSDA. This could be contributed to the fact the region has a long history of dairy farming and due to intensity of agriculture the availability of alternative sources of biomass as energy is low. Biogas is therefore adopted to address energy needs considering dung is always available at household level.



- The conversations showed that still, most farmers are generally not well informed of the technology as much as they have the biogas plant units put up in their farms
- There is need to supply the biogas plant manual to all clients to serve as an information material and also teach them on maintenance of the plants.
- Contractors and supervisors and all those who are going to the field to serve as information givers to the clients, taking a few minutes to explain the basic parts of the biogas plants and how the technology works.
- Some farmers are facing hard punishment' from the office due to negligence of contractors and farmer mobilizers who do not follow up the laid down rules of subsidy, like Arthur Luvai in Vihiga, Kisii special school, and some of SCODE plants.
- It came out clearly that some contractors don't give the full bill of quantities to clients hence creating a loophole of overcharging the clients, making them feel the technology is very expensive.
- Majority of training sites in Transmara and Western clusters were noted not to be performing to expectation.
- Plants done early should be closely followed up to see if farmers are really reaping the fruits of their projects.
- Some clients were not ready to give any information about the biogas plants claiming that they are not directly in charge especially in administrators of schools and other institutions.
- Most male clients feel that it should be the mama's to give me the accurate readings of the pressure of the plant since it's the mothers that use the gas



There was steady increase of and uptake of the technology among the clientele maybe due to increased awareness that has been massively done by the office over the past one year. There was also increase in functionality of the plants unlike other years.

ACHIEVEMENTS

Plants constructed as from 1 st January 2008 to 30 th	346
Contacts of clients missing	49 (able to contact the difference)
Plants never constructed	8 (2 of which construction commenced but left halfway undone.)
2008 2009 2010	46 plants 86 plants 164 plants (There was steady increase in the installation of biogas due to greater and increased awareness done by the office, also the inception of subsidy enhanced the adoption a lot.)

The analysis above may be inaccurate in some places because some of the plants that were not working have been repaired as I notified the officers in charge.

Some clients are not ready to give all information needed over the phone and so recommended data collection should be done through face to face interviews and also visiting of the sites physically.

Some clients felt at ease talking in their language which made us look for a better way of talking in Kiswahili, so language barrier was an issue.

CONSTRAINTS AND CONCLUSIONS

I must say notably that during the period of this survey the office was able to rework on particular plants in Western and Transmara clusters that were non-performing since they were constructed and the response from the clients is worth noting.

Some farmers were not readily willing to disclose any information either because of being treated badly by the contractors in the past.

Majority of them are more concerned about their last or first installment of the subsidy and it seems to be a major motivating factor in the adoption of the technology.

Some plants constructed recently are still under feeding hence clients feel they shouldn't disclose information until when the plant is working.

So far the response of most farmers is quite encouraging and most plants are performing well and the clients are contented about the performance of the plants, the few that have had challenges here and there majority will bear witness that the office has been swift enough to act and reverse the situation except for Transmara region where the farmers felt it took so long before the office came in and this is well recorded in the statement the clients were making.

It is quite clear that the adoption and awareness of this technology is growing with time and the office needs to work harder to satisfy the growing demand especially in Transmara and Western clusters which are far from the area of office operation.