

Life Cycle Thinking Assessment Applied to Three Biogas Projects in Central Uganda

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This report applies the life cycle thinking assessment to three biogas projects in central Uganda. Previously the life cycle thinking assessment has been applied only to a rainwater harvesting project and a small drip irrigation project by evaluation after the completion of the projects. For these case studies the assessment was done after completion of the project but the case studies are compared using the life cycle thinking assessment to help determine best practice methods for future biogas projects in Uganda.

The three biogas projects are Jim's Education Center (case study 1), Katosi (case study 2), and James Mugerwa (case study 3). The case studies are of the same fixed dome design but vary in the community set up as well as the source of the material to be used in the digester. Only one of the three case studies is currently in operation. The overall scores for Jim's Education Center, Katosi and James Mugerwa biogas projects are 61/100, 20/100 and 67/100 respectively. These scores indicate how well a project did in the different sustainability factors as well as the five different life stages.

Conclusions include recommendations for future biogas projects such as; making sure the community has a manual to provide a guide as how to operate and maintain the system. It was also observed that the life cycle assessment tool can also be made more specialized, having a different matrix for water projects and sanitation projects.