

PSC MEETING

Quarter 3 - Year 2018 (and Project Activity Overview)

Project Name: Promoting Production and Utilisation of Biogas from Agro-Waste in South-Eastern Botswana

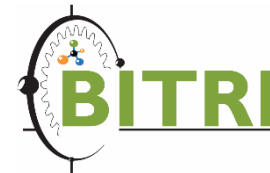
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2. Project Site



OUTLINE:

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1. Standard Project Details:

Project Period	2017-2020
ATLAS Award ID	00098758
ATLAS Project ID	00101976
PIMS #	5299
Start date	01/01/2017
End date	31/12/2020
Management Arrangement	NIM

Total resources required	
Total resources allocated	19,316,300
GEF	2,632,300
2018 Allocated funds	715,650
Other Cash contributions	
DWMPC	309,000
BDC	4,600,000
BMC	3,000,000
In-kind contributions	
MEWT	75,000
DWMPC	1,150,000
BMC	7,150,000
BITRI	200,000

2. Project Objective

The objective of the project is:

- To facilitate low-carbon investments and public-private partnerships in the production and utilization of biogas from agro-waste in the districts of South-eastern Botswana
- The project will facilitate the most practical and affordable biogas technology that can meet the operational conditions in Botswana and address the most critical waste issues and energy demands.

3. Project Targets

Targets at all levels (number of small, medium, large scale digesters) and substrate availability

- One thousand (1,000) small-scale biogas digesters constructed and operational.
- Three medium-sized biogas digesters constructed and operational.
- Finalised proposal to construct a centralised biogas digester of an estimated 15,000 m³ or larger with facility to upgrade to bio-methane and utilisation.
- At least 3,000 m³ biogas per annum and 3 MW of electricity installed.

4. Project Budget and Delivery Summary 2018

Total Funds allocated for the year (USD)	Expenditure: (Current Quarter)	Expenditure: (Cumulative from Q1- Q3)	Target delivery (%)	Current Delivery (%)

5. Graphical Representation of Project Budget and Delivery

6. Disaggregated Delivery Report

7. Narrative Report

STATUS KEY

On track/
normal

Off
track/delayed

Achieved/done

Outcome 1: Increased capacity of Government, private sector and community stakeholders to develop, finance and implement PPPs in the agro-waste sector

OUTPUT PROGRESS	Targets, baseline & indicators	Implementation Status:
<p>Output 1.1 Specific guidelines and standards on low-carbon alternatives and utilisation technologies for agro-waste and wastewater developed and disseminated to all relevant stakeholders in the sector.</p> <p>Botswana Bureau of Standards (BOBS) has been contacted to assist with the Standards as the body responsible. BOBS still working on the draft standard which will be used as baseline for the Committee to discuss the standard.</p>	<p>Output indicator: Existence of guidelines and standards (on low-carbon alternatives)</p> <p>BL: None</p> <p>T(2019): draft guidelines and standards</p> <p>T(2020): Approved guidelines and standards</p>	<p>Off TRACK</p>
<p>Output 1.2: Framework agreement for public-private partnerships (PPPs) in the waste sector adopted and disseminated.</p> <p>ToRs for PPP Framework under development and once completed Framework will be developed and experts called to share their experiences on the Framework in other parts of the world.</p>	<p>Output indicator: Existence of Framework Agreement for public-private partnerships (PPPs) in the waste sector</p> <p>BL: None</p> <p>T(2019): draft Framework Agreement</p> <p>T(2020): Approved Framework Agreement</p>	<p>ON TRACK</p>
<p>Output 1.3: Training conducted for all relevant stakeholders on the new guidelines and PPP framework agreement (1.1. and 1.2)</p> <p>The materials to be used for training will be developed from the PPP Framework agreement developed</p>	<p>Output indicator 1: No. of people trained (public & private)</p> <p>BL: 0</p> <p>T(2019): 20</p> <p>T(2020): 40</p>	<p>Off TRACK</p>

7. Narrative Report continued

Outcome 2: Increased investment in clean-energy technologies and low-carbon practices in the agro-waste sector.

OUTPUT PROGRESS	Targets, baseline & indicators	Implementation Status:
<p>Output 2.2 : Training conducted for training institution facilitators and masons for small scale digester construction</p> <p>Training curriculum for masons on biogas digester construction, operation and maintenance of small scale digesters developed. CITF to submit to BQA for accreditation 20 out of 40 masons trained on how to construct, operate and maintain small scale biogas digesters at CITF. 16 Brigade, MTTC and CITF Instructors trained on construction, operation and maintenance of small scale digesters</p>	<p>Output indicator 1: Existence of mason training curriculum BL: None T(2019): Draft curriculum T(2020): Approved curriculum Output indicator 2: No. of trained masons BL: 0 T(2019): 40 T(2020): 75</p>	<p>ON TRACK</p>
<p>Output 2.3 Robust research undertaken on the biogas technology</p> <p>Research agenda on the biogas technology developed Research undertaken on the technical, social and economic aspects of the technology, first paper expected by Dec 2018</p>	<p>Output indicator: No. of research projects on biogas BL: 0 T(2020): 5 research papers</p>	<p>ON TRACK</p>
<p>Output 2.4 Updated regulations developed and adopted for the successful monitoring of effluent flows and by-product waste in all abattoirs in the country, including launch of a “green certification”</p> <p>Harmonising Trade Effluent Agreement (TEA) with council Bye-Laws undertaken. Other stakeholders to be engaged. Training on sludge management and pre-treatment methods planned for September</p> <p>Concept shared with WUC for adoption of the idea to develop and pilot green certification protocol</p>	<p>Output indicator 1: Effluent regulations BL: draft Regulations T(2020): Approved Regulations Output indicator 2: Level of monitoring and enforcement of regulations BL: unsatisfactory T(2020): satisfactory</p> <p>Output indicator 3: Green certification framework in place BL: No T(2020): Yes</p>	<p>ON TRACK</p>

7. Narrative Report continued

Outcome 2: Increased investment in clean-energy technologies and low-carbon practices in the agro-waste sector.

OUTPUT PROGRESS	Targets, baseline & indicators	Implementation Status:
<p>Output 2.5 Support provided to the Department of Waste Management and Pollution Control (DWMPC) and District Council authorities to improve monitoring and enforcement of Trade Effluent Agreements between industries and local authorities</p> <p>Training on sludge management and pre-treatment methods planned for September Benchmarking on monitoring and enforcement of trade effluent planned for October</p>	<p>Output indicator: Level of monitoring and enforcement of TEAs BL: unsatisfactory T(2020): satisfactory</p>	<p>ON TRACK</p>
<p>Output 2.6 Corrective EIA measures implemented</p> <p>EIAs to be undertaken once construction of medium scale digesters commences.</p>	<p>Output indicator: Level of compliance to EIA measures during construction of biodigesters BL: None (dependent on construction of bio-digesters) T(2020): full compliance</p>	<p>ON TRACK</p>
<p>Output 2.7 Dedicated investment facilitation platform on low-carbon waste-utilisation technologies established at BITRI, and operational with independent budget</p> <p>One on one sessions held with Financing Institutions for them to appreciate the technology Biogas Financing Conference planned for October to share information on how Botswana Financial Institutions could finance biogas. Concept developed on investment-facilitation platform or similar structure. Benchmarking planned for November 2018</p>	<p>Output indicator: Existence of investment facilitation platform BL: No T(2020): Yes (at BITRI)</p>	<p>ON TRACK</p>
<p>Output 2.8: Level playing field created for all energy providers and REFIT in place</p> <p>Consultant to develop REFIT has been procured and commenced work. REFIT Experts to be called to share experiences from other countries on REFIT to TRG</p>	<p>Output indicator: REFIT tariffs BL: draft REFIT tariff guidelines T(2020): approved tariff guidelines</p>	<p>ON TRACK</p>

7. Narrative Report continued

Outcome 2: Increased investment in clean-energy technologies and low-carbon practices in the agro-waste sector.

OUTPUT PROGRESS	Targets, baseline & indicators	Implementation Status:
<p>Output 2.9 Sensitisation campaign conducted with district councils, stakeholder and community groups in targeted biogas plant sites</p> <p>Various presentations are made in platforms like agric shows and workshops to share information on biogas technology.</p> <p>Activities on biogas project shared in the BITRI and UNDP Facebook pages and websites</p>	<p>Output indicator 1: No sensitisation campaigns BL: 0 T(2019): 15 T(2020): 30 (2 per sub-district)</p> <p>Output indicator 2: Level of awareness BL: low T(2019): medium T(2020): high</p>	<p>ON TRACK</p>
<p>Output 2.10 Feasibility study undertaken for small-scale biogas digester component</p> <p>Consultant solicited who will assist in identifying 1000 potential sites for small scale biogas digester</p>	<p>Output indicator: Existence of knowledge product on feasibility biogas BL: pre-feasibility study report T(2020): feasibility study report</p>	<p>DELAYED</p>
<p>Output 2.11 Business plan developed for the three potential medium-scale biogas sites near agro-industrial plants with potential off-take uses analysed.</p> <p>Feasibility study/business plan for BMC has commenced with the consultant on recruited. KBL and Kweneng Ventures (Gamodubu Landfill) have expressed interest in medium scale digesters.</p>	<p>Output indicator: No. business plans for medium-scale biogas sites BL: 0 T(2019): 1 T(2020): 3</p>	<p>ON TRACK</p>
<p>Output 2.12: Environmental impact assessment of selected biogas sites completed</p> <p>ToRs for EIA for BMC has been developed and will be advertised in September. EIA for other sites will be developed once sites are identified.</p>	<p>Output indicator: No of EIA for Medium Scale biogas sites BL: 0 T(2019): 1 T(2020): 3</p>	<p>ON TRACK</p>

7. Narrative Report continued

Outcome 2: Increased investment in clean-energy technologies and low-carbon practices in the agro-waste sector.

OUTPUT PROGRESS	Targets, baseline & indicators	Implementation Status:
<p>Output 2.13 Legal establishment of biogas operators based on public-private partnerships and concessional agreements with chosen agro-industrial partners (including guaranteed supply of substrate and purchase agreement for supply of biogas).</p> <p>2.13.1 PPPs not yet facilitated and established as still developing business plans</p> <p>2.13.2 Prepare and develop sample PPP contracts and incorporate best practices from similar projects</p>	<p>Output indicator: No of legally registered Biogas Operators BL: 0 T(2019): 1 T(2020): 2</p>	<p>DELAYED</p>
<p>Output 2.14 Construction and commissioning of biogas plants</p> <p>6 out of 28 small scale digesters for demonstration of the technology have been constructed. Construction still ongoing in other sites</p> <p>Construction of 3 medium scale biogas plants will commence once PPPs are forged.</p>	<p>Output indicator: No. of operational biogas plants (medium-scale) BL: 0 T(2019): 1 T(2020): 3</p>	<p>DELAYED</p>

7. Narrative Report continued

Outcome 3: Increased investment in less GHG-intensive energy systems using biogas.

OUTPUT PROGRESS	Targets, baseline & indicators	Implementation Status:
<p>Output 3.1: Partnership established between biogas plant operators and selected district councils for supply and purchase of biogas from the plants.</p> <p>Ongoing as the REFIT is being developed and once completed concrete agreements will be forged. Training on utilization of biogas (technical and financial) will be conducted once PPPs are forged.</p>	<p>Output indicator: No. of partnership on biogas sales BL: 0T(2019): 1 T(2020): 3</p>	<p>ON TRACK</p>
<p>Output 3.2: District council staff trained on the biogas-utilisation technologies selected for investment, including operations and maintenance.</p> <p>Benchmarking planned for Councils to visit a biogas landfill in eThikwini in October Participatory Gender analysis study ToRs to be advertised in September</p>	<p>Output indicator: No. stakeholders trained BL: 0T(2019): 10 (BMC) T(2020): 30 (inclusive of other stakeholders to be identified)</p>	<p>ON TRACK</p>

8. Focus for Next Quarter (Oct to Dec)

Activities

- Feasibility Study for BMC
- REFIT Study
- Waste to Energy (Biogas) Financing Conference
- Benchmarking excise for REFIT (BERA and Dept of Energy)
- Benchmarking excise for Abattoir waste to energy (BMC)
- Benchmarking excise for Trade Effluent monitoring and Enforcement (WUC)
- Benchmarking excise for Investment Platform (BITRI and Financial Institutions)
- Participatory Gender Analysis Study
- Construction of Small Scale demo sites.
- Research on substrate and biogas digester performances

9. Implementation Analysis - Challenges, Opportunities, Lessons & Recommendations

Challenges

- Slow in responding to up take activities by activity implementers

Opportunities

- Small scale digesters (demonstrations) at strategic points within sub-districts
- Biogas Project display at various Agric shows within the project area

Adaptive management being implemented to enhance delivery of outcomes

- Use of combined events that covers different subcomponents of the project

Actions necessary for consolidation and sustainability of results

- Establishment of buy in from Project Partners is an ongoing exercise to encourage project ownership and publicity.
- More publicity of project activities through one on one meetings, focused group discussions with stakeholders.

10. Implementation Analysis - Challenges, Opportunities, Lessons & Recommendations

Lessons learnt

- Need to work with existing structures to ensure sustainability after the project
- Buy in from end users should be ensured so that digesters don't remain white elephants after the project

Issues for PSC Consideration

- PSC to consider revising the budget downward for possible submission to GEF's consideration.
- Addition of activities supporting waste management Policy– especially plastic ban
- Use of extension officers to spearhead publicity at district

Recommendations (by Project Team & Project Board)

- Fast tracking of small scale demonstration digesters in sub-districts (2 per sub district) to ensure publicity by engaging demonstration officers in the districts

THANK YOU