

Opportunity for Practice Change (OPC)

Country/region

Ethiopia

Title

Stimulating policy change for reduction of SLCPs by engaging farmers and local stakeholders in proper management and maintenance of bio-digesters and slurry from livestock manure

Situation analysis OPC

The Ethiopian National Biogas program is run by the Ministry of Water and Energy. In its initial phase, the focus was on energy production and bio-slurry was not considered as a fertiliser, since farm fertilisation is more related to the Ministry of Agriculture. On the other hand, the Ministry of Agriculture strongly promotes the use of synthetic fertilisers and even compels farmers to use it. Agricultural extension workers are hesitant to promote the use of organic fertilisers as this will reduce the demand for synthetic fertilisers and their performance is judged based on the amount of fertiliser they distribute to farmers. Therefore, if the policies of the Ministry of Agriculture and those of the Ministry of Energy are more coherent, use of manure and/or bio-slurry as a fertiliser will be better promoted by agricultural extension workers and increasingly applied by farmers.

Experience with previous projects indicates that there is a high degree of abandonment of biogas by the smallholder farmers. This is mainly due to two reasons: some farmers lost interest as they didn't enjoy the full benefits of the biogas since slurry was just wasted; and secondly, there is very limited capacity on maintenance of biogas units. Ethiopian farmers are very reliant on the state for support and extension services. Although the Ministry and NGOs are busy building biogas plants, there is less focus on maintenance and slurry management; both of which pose large risks in terms of potential SLCP and other GHG production. Therefore, training ministry extension workers on how to maintain the biogas units should reduce abandonment.

Lack of coherence between Ministries is the main problem in Ethiopia. Without coherent policies and a good knowledge on maintenance, many of the investments in biogas units will be unsustainable. Also, without changes to policies and how performance evaluations of extension workers are done, it is likely that bio-slurry (and manure in general) will be wasted.

There has not been a common forum for exchange between ministries on this topic. There is lack of knowledge and trained personnel to handle technical issues related to biogas plants. The Ethiopian government (Ministry of Water, Irrigation and Energy) is responsible for the envisaged changes.

The second phase of the National biogas program, which started in 2014, has a stronger focus on the use of bio-slurry as a fertilizer and the adoption is increasing.

Opportunity

The Ministry of Water and Energy and of Agriculture develop a coherent manure policy including training elements of bio-digester maintenance and integrated manure management leading to proper manure application.

The OPC is additional to current programs of the Ethiopian government.

Objective(s) OPC (*what achieved*)

Sustainable biogas programs and manure management programs consider the whole manure chain and not a limited part.

Target group(s) OPC (with whom)

Policy officers of different Ethiopian ministries, extension workers, biogas technicians.

Method & Activities OPC (how)

- Meetings with policy workers from three ministries (agriculture, energy and health).
- Field trips to show practical problems and advantages of manure application on crops.
- Trainings for extension workers and biogas technicians, with focus on:
 - Maintenance of biogas units
 - Handling of technical problems related to the functioning of biogas units,
 - Quality control for newly constructed as well as biogas units on operation
 - Management of bio slurry - preparation of compost

The LMMC support will be additional and complementary to ongoing activities as current government programs do not plan workshops for alignment of policies, nor do they train the extension workers on digester maintenance.

Implementers (by whom)

Ethiopian Ministry of Water, Irrigation and Energy is engaged in this OPC in order to have a more sustainable biogas program. They will provide technical staff and assist in transportation. The program already provides subsidies to farmers for new investments and supports them in acquiring credits. They are also actively running the entire National Biogas Program.

The National Biogas Program has about 500 permanent employees from the Ministry of Water and Energy who play various roles to ensure continuity. The short term plan is to subsidize adoption of the biogas technology and sensitize farmers on its usefulness. In the long run, they will progressively withdraw from financial support, but still monitor and provide guidance to farmers with biogas units.

(Expected) Results & Impact OPC

- Policy workers will be more aware of the need of coherent policy. This will lead to policy change.
- Extension workers will play a more important role in promoting Integrated Manure Management.
- Increase proportion of functional and sustainable biogas units in the total constructed units.
- Changes will be better policy, helping farmers to improve the efficiency of the bio-digesters and the utilization of the manure/bio-slurry as a fertilizer.
- It is expected that better bio-digester maintenance and capturing methane will reduce SLCP, will improve livelihoods. Better utilization of bio-slurry will reduce other environmental harm and improve livelihood via productivity gains.
- The National Biogas Program estimates coverage of 20,000 new beneficiaries in the year 2014 and to continually monitor about 50,000 beneficiaries from the previous phase of the project.

Additionally, increased crop productivity and better food security will be co-benefits from proper manure management.

No trade-offs have been identified so far.

Risks & Assumptions OPC

There is a strong commitment from the Ethiopian government over the last four years and the efforts are even stronger as the lessons learned from the past are used to improve on the future.

Added value LMMC

Without the LMMC support the use of manure or bio-slurry as a fertilizer will be very limited and more of the constructed biodigesters will become non-functional.

Multiplier/Leverage

- National Biogas plans and other manure management schemes should operate under coherent policy environment where key ministries (Agriculture, Energy, Health, and Environment) align their policies on IMM.
- Continuous maintenance of biogas units is indispensable for their sustainability.

Communication

- The national and local radio will be used to propagate results for policy makers and extension workers.
- Bi-lateral contacts between agricultural extension agents and farmers.
- Demonstrations on the farms of successful farmers to other farmers.