ANNEX Q – LSC REPORT TEMPLATE

CONTENTS

SECTION A. PROJECT DESCRIPTION

A. 1. Title of the project activity

Title: African Biogas Carbon Programme (ABC)
Date: 26 January 2018
Version no.: 1.0

A. 2. Project eligibility under the Gold Standard

The African Biogas Carbon Programme (ABC) Programme of Activities (PoA) aims to support the dissemination of small-scale biogas technologies for domestic and institutional use across East Africa. This will enable the switch from non-renewable biomass to biogas as a renewable fuel. This Gold Standard Voluntary Programme Activity (VPA) is located in Kenya (VPA006), and operates as part of the Kenya Biogas Programme (KBP).

According to Gold Standard v2.2 rules, the eligibility of the project activity is defined by a number of aspects. The justification of the project eligibility criteria are discussed as follows:

- *Scale of the project activity*: The VPAs within the PoA remain within the CDM small-scale thresholds. The PoA applies the Gold Standard's methodology '*Technologies and Practices to Displace Decentralized Thermal Energy Consumption*' (version 01) (11/04/2011). The SSC-VPA's aggregated power capacity remains below 45 MW throughout the crediting period.
- *Host country or state*: The VPA006 is located in Kenya. Kenya is listed as a non-Annex 1 country and is not a country with a cap on greenhouse gas emissions.
- *Type of project activity*: The proposed project activity falls both under renewable energy project and waste handling and disposal category. Additionally, according to the Guidance on Project Type Eligibility from the Gold Standard revised Annex C rules, it classifies under the improved distributed heating and cooking devices and distributed micro-scale electricity generation units.
- *Greenhouse gases:* The project activity involves reduction of methane (CH_4) and carbon dioxide (CO_2) gases. CH_4 and CO_2 gases are included in the project boundary and this is eligible under the Gold Standard.
- *Official Development Assistance:* According to the Gold Standard's rules, a project is not eligible under the Gold Standard registration if it receives ODA under the condition that credits coming out of the project are transferred, directly or indirectly, to the donor country requirements. The VPA has received support from the Directorate General for International Cooperation (DGIS) under the Netherlands Ministry of Foreign Affairs provides public funding. The SSC-VPA is being supported by DGIS through two Dutch development NGOs, the Humanist Institute for Cooperation with Developing Countries (Hivos) and the Netherlands Development Organisation (SNV). There has been no diversion of Official Development Assistance (ODA) as demonstrated in the ODA Declaration Form[1].
- *Project timeframe:* The project was not previously announced to be going ahead without the revenues from carbon credits. The project will undergo retroactive registration, as per the GS Toolkit V2.2, pg 20 and permitted by the Gold Standard[2] A fast-tracked pre-feasibility assessment has been carried out in consultation with the Gold Standard.

[1] Please refer to the ODA declaration in the VPA-DD Appendix 2

[2] See GS confirmation of Prior Consideration of Carbon Revenues, 30 March 2017

- *Other certification schemes:* the programme does not receive Green or White certificates, or the equivalent under any scheme.

A. 3. Current project status

The VPA documentation is under development for the voluntary Gold Standard. The Kenya VPA006 will be retroactively included as a VPA under the African Biogas Carbon (ABC) Programme (GS2747). The national implementing agency for the VPA006, which is part of the wider African Biogas Partnership Programme (ABPP) is the Kenya Biogas Programme. The design and implementation of the Kenya VPA006 is exactly as per the design and implementation of VPA001 of the ABC PoA. Moreover, the geographical location of VPA001 and VPA006 are identical, as both cover the entire territory of Kenya. The reason for inclusion of VPA006 is simply that VPA001 has reached capacity; the project remains the same in all other aspects.

This LSC report is based on two separate local stakeholder consultations. The first LSC was held on 19 October 2011 (from now on referred to as '2011 LSC'), at Pan Africa Hotel, Nairobi. This LSC meeting was designed to discuss the African Biogas Carbon Programme and had 38 participants. The second LSC meeting was held on 29 May 2015 (from now on referred to as '2015 LSC'), in Nairobi. The 2015 LSC discussed the use of bio slurry, and had 75 participants. It was confirmed by the Gold Standard that the combined outcomes of the 2011 LSC and the 2015 LSC can form the inputs for the LSC for the Kenya VPA006 under the African Biogas Carbon Programme.

SECTION B. DESIGN OF STAKEHOLDER CONSULTATION PROCESS

B. 1. Design of physical meeting(s)

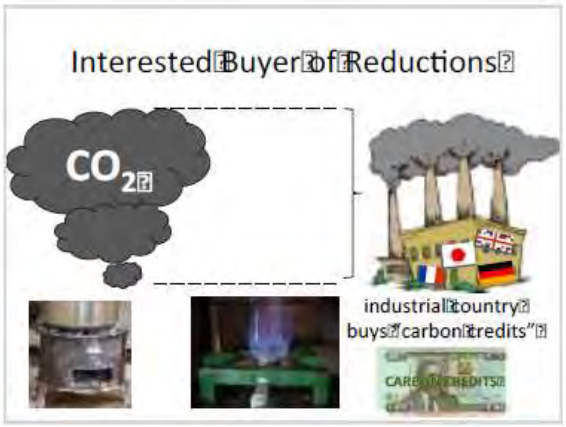
i. Agenda

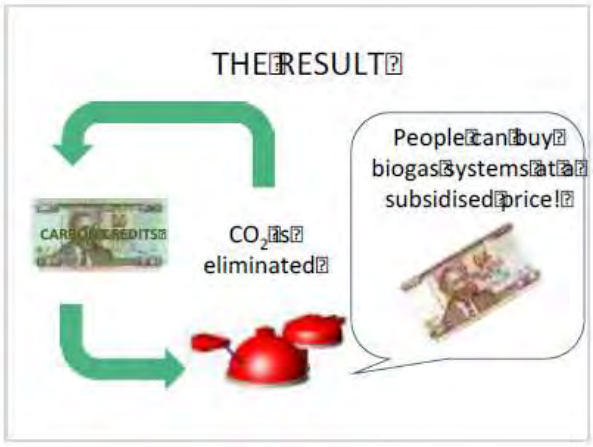
Agenda 2011 LSC meeting

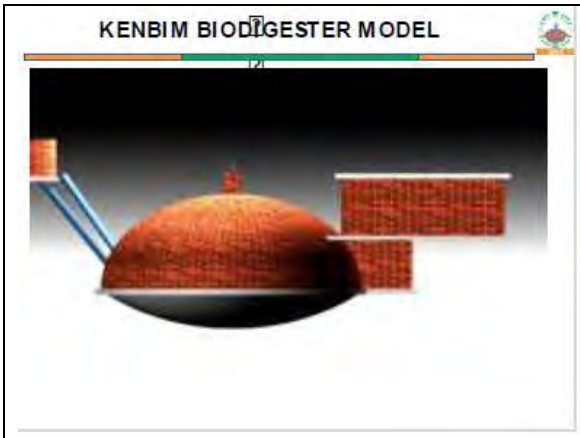
Time	Activity	By
09:00-09:30	Arrival/registration	All participants
09:30-10:00	Introduction and background information on climate change and carbon markets	Stuart Leckie, UCB
10:00-10:15	Introduction to ACES-Biogas PoA	Stuart Leckie, UCB
10:15-10:45	ACES-Biogas questions and comments	Stuart Leckie and all participants
10:45-11:15	Tea break	
11:15-11:35	Introduction to Kenya National Domestic Biogas Programme	George Nyamu, KENDBIP

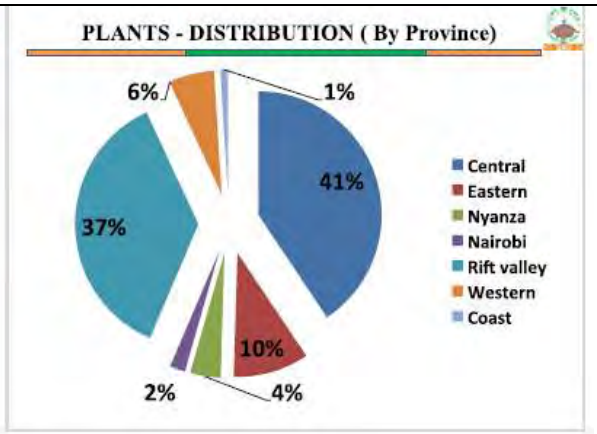
11:35-12:00	Kenya National Domestic Biogas Programme questions and comments	George Nyamu and all participants
12:00-13:00	Sustainable development discussion (blind sustainable development exercise and discussion on monitoring sustainable development)	Stuart Leckie, George Nyamu, and all participants
13:00	Close	

The sustainable development discussion was conducted interactively. The blind sustainable matrix was projected on a large display and all participants invited to have their inputs in the exercise. The final results of the sustainability assessment are provided in section D.2 of this report). A sample of the PowerPoint slides used during the meeting is shown below.









Agenda 2015 LSC meeting

Time	Activity
09:00	Registration of participants
09:30	Welcome notes, process and introduction of the participants and hosts
10:00	(1) Updates: Kenya National Domestic Biogas Programme implementation (2) Feedback from LSC in October 2011
10:30	Presentation & discussion: introduction to Gold Standard Agriculture, Hivos' involvement & bio slurry carbon pilot project
10:45	Presentation & discussion: bio slurry carbon study and project design
11:00	Health break
11:30	Discussion: monitoring sustainable development
1:00	Closure

ii. Non-technical summary

2011 LSC

Two sets of non-technical summaries were provided to the participants. The first gave a general description of the ACES-Biogas PoA and the other a summary about the first CPA under the PoA, the Kenya National Domestic Biogas Programme (KENDBIP). The nontechnical summaries are as given below:

African Clean Energy Switch – Biogas (ACES – Biogas) PoA

Background

In all the countries of East Africa deforestation is a major concern. Most people rely on wood and charcoal to provide their energy needs, particularly for cooking, and the resource is running out.

It is necessary to switch to other renewable fuels, such as biogas, to help slow the rate of deforestation. Biogas is a fuel that can be produced from animal manure and other waste, and is clean and safe to use in cooking and for other energy needs.

By switching to biogas, households and institutions reduce the amount of Greenhouse Gases (GHGs) that are released into the atmosphere. Increasing concentrations of GHGs around the world have led to climate change that alters weather patterns and the frequency of events like floods and droughts. Reducing GHGs also means that biogas users can earn carbon finance through the United Nations Clean Development Mechanism (UN CDM).

Switching to biogas also has significant health benefits through the near elimination of indoor air pollution compared to traditional cooking methods. The bio-slurry that is a by-product of making biogas can be used as a fertiliser on crops, and has been shown to significantly improve agricultural yields. The installation, distribution and maintenance of biogas systems will also help to spur local development and job creation.

What is ACES-Biogas?
ACES-Biogas is a carbon finance 'umbrella' to help projects that are involved in the dissemination of biogas systems to access carbon finance. It will cover the five countries of the East African Community (Kenya, Uganda, Tanzania, Rwanda and Burundi), plus Ethiopia. It is the Coordinating/Managing Entity of a Programme of Activities (PoA) under the rules of the CDM. A PoA is a new and efficient way of accessing the carbon market.

Aim of ACES-Biogas
The aim of the PoA is to help biogas projects become successful and earn the maximum amount of carbon finance from their activities, in the quickest and cheapest way. ACES-Biogas is not a broker, and will not purchase projects' carbon credits, but it may support projects with their carbon credit sales contracts.

Timeline
The CDM Project Design Document (PDD) is currently being completed, and will be posted on the CDM website for global public scrutiny before the end of 2011. The work to date has been supported by the Humanist Institute for Cooperation with Developing Countries (Hivos) and the Uganda Carbon Bureau. Registration is expected in mid-2012, and the PoA will be fully operational soon after.

The Kenya National Domestic Biogas Implementation Programme (KENDBIP)

Background
Farmers represent 80% of the rural poor population of Kenya, and depend on agriculture, mainly mixed farming, by rearing livestock and cultivating land for their livelihoods. The majority of these farmers form the main component of the rural poor, and rely on biomass as the main source of energy for both cooking and lighting. Wood fuel accounts for about 68% of the total primary energy sources in Kenya, with the national reliance on biomass being over 80%, with only 15% of Kenyans having access to the national electricity grid. This has resulted in the heavy depletion of the country's forest reserves and serious environmental degradation.

Biogas technology is an alternative energy source for cooking and lighting for rural farmers. The technology mainly uses the waste produced on farms to produce clean renewable energy. The biogas plants also produce slurry as a by-product that can be used to improve soil fertility. However, farmers in Kenya have not exploited the use of biogas technology for several reasons, including a poor awareness about the technology, and limited incomes from their farming

activities. The overall goal of the Kenya National Domestic Biogas Programme (KENDBIP) is the promotion, dissemination and increased adoption of domestic biogas technology as a local sustainable energy source, through the development of a commercially viable, market-oriented biogas sector.

The Kenya National Domestic Biogas Implementation Programme

KENDBIP is a component of the African Biogas Partnership Programme (ABPP), funded by the Directorate General for International Cooperation (DGIS) of the Netherlands Ministry of Foreign Affairs through two Dutch development NGOs - the Humanist Institute for Cooperation with Developing Countries (Hivos), and the Netherlands Development Organisation (SNV). The ABPP is part of a broader objective of DGIS, which is targeting the provision of sustainable energy to 10 million people in six African countries, including Kenya, by the year 2015.

In Kenya, KENDBIP will be implemented between 2009 and 2013 under the auspices of the Kenya National Biogas Steering Committee (KENBIP-NBSC), which is chaired by the Ministry of Energy, and draws its membership from relevant stakeholders from both the private and public sectors. The Kenya National Federation of Agricultural Producers (KENFAP) is the national implementing agency for this programme in Kenya.

KENDBIP will be implemented based on private sector market-oriented principles, but relying on Government support for a favourable regulatory and policy environment, as well as general buy-in, promotion and extension. The programme aims to achieve the installation of 8,000 domestic biogas plants of between 6m^3 - 12m^3 capacity by December 2013, prioritising high-potential agricultural regions. The successful implementation of this programme will positively contribute to the Government's goal of enhancing equity and wealth creation opportunities for the poor, and improved energy access, and science, technology and innovation (STI) as stipulated in Kenya's current development blueprint - the "Kenya Vision 2030: a globally competitive and prosperous Kenya". Furthermore, this blueprint envisages an increase in household energy demand from raised family incomes and urbanisation against a backdrop of diminishing energy sources; hence the urgent need to develop alternative and renewable sources of energy such as biogas.

Kenya Domestic Biogas Potential and Programme Implementation

The technical constraints have now been addressed through the development of the Kenya Biogas Model (KENBIM), which is a customised hybrid of models developed by various successful biogas programmes across the globe.

KENDBIP is designed with a subsidy component, calculated using the costs, benefits and returns to the users, to reduce the cost of each fully installed and commissioned biogas plant. The subsidy is uniform across the plant sizes, proportionately benefiting the small farmers more, and averages about 30% of the capital required to commission a 6m^3 biogas plant. In addition to the potential savings from family energy expenditures, the programme is promoting the use of the bio-slurry discharged from the bio-digesters as fertiliser to improve agricultural production.

KENFAP is working with various partners in the implementation of the programme, including the training of masons and users, promotion and marketing, plant construction, development and distribution of biogas appliances, bio-slurry utilisation, etc.

2015 LSC

Since 2009 the Kenya National Federation of Agricultural Producers (KENFAP now KENAFF Kenya National Farmers Federation) has implemented the Kenya Biogas Programme (KENDBIP) as part of the Africa Biogas Partnership Programme (ABPP) managed by Hivos Foundation with technical assistance from the Netherlands Development Organisation SNV.

KENDBIP contributes to the achievement of the Sustainable Development Goals (SDGs) through the dissemination of domestic biogas systems as a local, sustainable energy source and the development of a commercially viable, market-oriented biogas sector.

KENDBIP aims to support the installation of 20,000 unit bio-digesters across Kenya until the end of 2013. As per 31st March 2015, 14,664 units of bio-digesters have been constructed.

In 2011 Hivos started to develop a carbon finance mechanism making use of the Clean Development Mechanism (CDM) and Gold Standard (GS) certification schemes. Uganda Carbon Bureau (UCB) successfully registered at CDM a Programme of Activities called Africa Clean Energy Switch (ACES Biogas) with KENDBIP as its first CDM Project Activity. In 2013, Hivos started to design a Programme of Activities called Africa Biogas Carbon Programme (ABC), again with KENDBIP as a first Project Activity, under the Voluntary Gold Standard which as validated early 2015 and is currently under Gold Standard Review with registration expected soon. In the biogas PoA, bio-slurry use is a positive indicator, and requires the Programme to show that a percentage of farmers are applying bioslurry on farming fields.

Hivos is advocating the development of a methodology to account for carbon reductions and soil carbon sequestration which will occur due to an increased use of bio slurry as a fertilizer in households that already participated in the biogas programmes in Indonesia and Kenya and registered at the Gold Standard.

If the methodology is approved, then the KENDBIP bioslurry emission reductions and soil carbon sequestration can be verified by the Gold Standard. Therefore, Hivos plans to conduct a Local Stakeholder Consultation with relevant stakeholders which will take place in Nairobi.

The Gold Standard certification is an international foundation that offers additional sponsorship to clean energy initiatives that reduce greenhouse gas emissions and promote sustainable development. Receiving this certification will enable the programme to offer support to households that are interested in utilizing the bioslurry as part of carbon reductions and soil carbon sequestration methods, anywhere across Kenya.

iii. Invitation tracking table

2011 LSC

Stakeholders were invited from all five stakeholder categories of the Gold Standard.

A detailed list of the invitees is provided in the table below:

Category code	Organisation (if relevant)	Name of invitee	Way of invitation	Date of invitation	Confirmation received? Y/N
B	Ministry of Livestock development	Permanent Secretary	Email	05/10/2011	Y

B	Ministry of Agriculture	Permanent Secretary	Email	05/10/2011	Y
B	Ministry of Cooperative Development	Permanent Secretary	Email	05/10/2011	Y
B	Ministry of Environment and Natural Resources	Permanent Secretary	Email	05/10/2011	Y
B	National Environment Management Authority (NEMA)	Director	Email	06/10/2011	N
C	Designated National Authority National Environment Management Authority	Anne Nyatichi	Email	06/10/2011	N
B	Kenya Industrial Research Development Institute (KIRDI)	Director	Email	05/10/2011	Y
B	Kenya Bureau of Standards	Director	Email	05/10/2011	Y
B	Energy Regulatory Commission	Director	Email	05/10/2011	N
D	Association of Microfinance Institution	Chairman	Email	05/10/2011	N
A	Kenya Organic Agriculture Network (KOAN)	National Coordinator	Email	05/10/2011	Y
D	Family Bank	Director	Email	05/10/2011	Y
A	Association of Biogas Contractors Kenya (ABC-K)	Chairman	Email	05/10/2011	Y
D	GIZ	Programme coordinator	Email	05/10/2011	N
D	Visionary Empowerment Programme (VEP)	Director	Email	05/10/2011	Y
A	Kenya Institute of Organic Farming (KIOF)	Director	Email	05/10/2011	Y
A	Six no. Private Farmers	Farmer representati ve Kimende	Telephone	05/10/2011	Y
A	East Africa Farmer Federation	Program officer – EAFF	Email	05/10/2011	Y
D	Humanist Institute for Cooperation with Developing Countries (Hivos)	Jean Marc Sika	Email	05/10/2011	Y
D	Hivos	Els Rijke	Email	05/10/2011	Y

D	Hivos	Harry Celemens	Email	05/10/2011	Y
D	SNV Netherlands Development Organisation	Caroline Toroitich	Email	05/10/2011	Y
D	SNV	Jechoniah Kitala	Email	05/10/2011	Y
B	KEREA – Kenya renewable energy association	Director	Email	05/10/2011	Y
A	NBSC – National Biogas Steering Committee (KENDBIP-NBSC)	Chairman	Email	05/10/2011	Y
A	The National Biogas Users Association (NABUA)	Chairman	Email	05/10/2011	Y
B	Kenya Private Sector Alliance (KEPSA) – Energy board	Chairman	Email	05/10/2011	N
A	Kenya National Federation of Agricultural Producers (KENFAP)	CEO	Email	05/10/2011	Y
D	Jomo Kenyata University of Agriculture and Technology KUAT	Director	Email	05/10/2011	N
A	Kenyan National Domestic Biogas Programme (KENDBIP)	PC – Programme Coordinator	Email	05/10/2011	Y
A	KENDBIP	BE – Biogas Energy	Email	05/10/2011	Y
A	KENDBIP	FAO – Finance & Admin Officer	Email	05/10/2011	Y
A	KENDBIP	PMO – Promotion and Marketing Officer	Email	05/10/2011	Y
A	KENDBIP	TO – Training Officer	Email	05/10/2011	Y
D	Sustainable Community Development Services (SCODE)	Director	Email	05/10/2011	Y
E	Regional Manager of Gold Standard for Africa	Nahla Sabet	Email	05/10/2011	N
F	Greenpeace International	General Invitation	Email	05/10/2011	N
F	Mercy Corps	Dorothy Mcintosh	Email	05/10/2011	N

F	Mercy Corps	Lianne Thomas Country Representative	Email	05/10/2011	N
F	HELIO International	O'Connor Lajambe Assistant to DG	Email	05/10/2011	N
F	REEEP	Karin Harvey	Email	05/10/2011	N
F	WWF International	Bella Roscher	Email	05/10/2011	N
F	WWF Kenya	Josephat Nyongesa	Email	05/10/2011	Y
C	Designated National Authority (DNA) – Uganda	Chebet Maikut	Email	07/10/2011	Y
C	Designated National Authority (DNA) – Uganda	Philip M. Gwage	Email	07/10/2011	N
C	Designated National Authority (DNA) – Rwanda	Dr. Rose Mukankomeje	Email	07/10/2011	N
C	Designated National Authority (DNA) – Rwanda	Jean Ntazinda	Email	07/10/2011	N
C	Designated National Authority (DNA) – Burundi	Evariste Sinarinzi	Email	07/10/2011	N
C	Designated National Authority (DNA) – Burundi	Renilde Ndayishimiye	Email	07/10/2011	N
C	Designated National Authority (DNA) – Tanzania	Julius Ningu	Email	07/10/2011	N
C	Designated National Authority (DNA) – Tanzania	Richard Muyungi	Email	07/10/2011	N
C	Designated National Authority (DNA) – Ethiopia	Dessalegn Mesfin	Email	07/10/2011	N
C	Designated National Authority (DNA) – Ethiopia	Dereje Agonafir	Email	07/10/2011	N
D	GTZ	Benjamin Attigha	Email	07/10/2011	N
D	Vi-Life	Jean Marie Rukundo	Email	07/10/2011	Y
D	Consultant for Practical Action and Ministry of Infrastructure	Hwiote Teshome	Email	07/10/2011	N
D	SNV Rwanda	Ancalet Ndahimana	Email	07/10/2011	N
D	CARE Rwanda	Giuseppe Daconto	Email	07/10/2011	N

D	CARE Rwanda	Anatole Kayobi	Email	07/10/2011	N
D	CARE Rwanda	Courtney Blodgett	Email	07/10/2011	N
D	SNV Rwanda	Bert van Nieuwenhuizen	Email	07/10/2011	N
D	IDFC Rwanda	IDFC Rwanda team	Email	07/10/2011	N
D	SNV Uganda	Patience Turyareeba	Email	07/10/2011	N
D	Heifer Uganda	Edna Myamwaka	Email	07/10/2011	N
D	REO (U) Ltd	Kato Chris	Email	07/10/2011	N
B	Makerere University – Faculty of Technology	Richard Kizito	Email	07/10/2011	N
B	Ministry of Energy – Uganda	Michael Ahi	Email	07/10/2011	N
B	CREEC – Makerere University Uganda	Karsten Bechtel	Email	07/10/2011	N
B	Addis Ababa University	Hilina Getachew	Email	07/10/2011	N
C	Ethiopia DNA	Gebrie EPA	Email	07/10/2011	N
B	Institute of Sustainable Development (Ethiopia)	Sue Edwards (EU WP 1 on biogas)	Email	07/10/2011	N
B	Addis Ababa University (EU WP 1 covering biogas)	Prof. Mogessie Ashenafi	Email	07/10/2011	N
D	Practical Action - Eastern Africa	General Invitation	Email	07/10/2011	N
D	GVEP International	David Disch	Email	07/10/2011	N
D	Africa Carbon Exchange	Susan Gitau	Email	18/10/2011	Y

The above organisations were selected from the countries included under the PoA to include relevant government ministries, nongovernmental organisations both local and international, academics, experts in the field of biogas and local farmers from Kenya, some that had already installed biogas systems. This range ensures there would be a good mix of viewpoints. Invitations were mostly sent out by e-mail, although for some local stakeholders conversations were held also by phone.

2015 LSC

Category code	Organisation (if relevant)	Name of invitee	Way of invitation	Date of invitation	Confirmation received Y/N
B	Ministry of Argiculture, livestock and fisheries	Permanent Secretary	Email	09.01.2015	N
B	State Department of Fisheries	Permanent Secretary	Email	09.01.2015	N
B	State Department of Livestock development		Email	09.01.2015	N
B	State Department of Agriculture	Charles Muchemi	Email	09.01.2015	N
B	Director of Renewable energy, MoEP	Eng. Isaac Kiva	Email	09.01.2015	N
B	MoEP	Eng. John Maina	Email	09.01.2015	N
B	Livestock production department	John Makori	Email	09.01.2015	N
B	Ministry of Energy and Petroleum	Permanent Secretary	Email	09.01.2015	N
B	Ministry of Environment and Natural Resources	Permanent Secretary	Email	09.01.2015	N
B	National Environment Management Authority (NEMA)	Director	Email	09.01.2015	N
B	Kenya Industrial Research Development Institute (KIRDI)	Director	Email	09.01.2015	N
B	Kenya Bureau of Standards	Director	Email	09.01.2015	N
B	Energy Regulatory Commission	Pavel R Omieke	Email	09.01.2015	N
B	Kenya Organic Agriculture Network (KOAN)	National coordinator	Email	09.01.2015	N
D	Association of Biogas Contractors Kenya (ABC-K)	CEO	Email	09.01.2015	N
B	Biogas Programme GIZ	Kenda Mwenja	Email	09.01.2015	N
D	K Rep Development Agency	Dora Waruiru	Email	09.01.2015	N
A	Leshego Holding Ltd.	Mr. Samuel Gaita	Email	09.01.2015	N
D	Visionary Empowerment Programme (VEP)	Director	Email	09.01.2015	N

B	Kenya Institute for Organic Farming (KIOF)	Director	Email	09.01.2015	N
A	Scode	Maina Scode	Email	09.01.2015	N
A	Farmer - kimende	John Kathuku	Email	09.01.2015	N
D	East Africa Farmer Association	Programme Officer - EAFF	Email	09.01.2015	N
B	Chairman National Biogas Users Association	Kaaria Phineas	Email	09.01.2015	N
D	Kenya renewable energy Association (KEREA)	Charles Muchunku	Email	09.01.2015	N
B	KENFAP Biogas	Programme Officer Collins Odhiambo	Email	09.01.2015	N
D	SCODE	Director John Maina	Email	09.01.2015	N
A	Kentainers Ltd.	Director Chandu Shah	Email	09.01.2015	N
A	JKUAT – Renewable energy department	Eng. Njeri Kahiu	Email	09.01.2015	N
A	JKUAT – Renewable energy department	Doreen Irungu	Email	09.01.2015	N
A	Egerton University	Prof Daudi Nyaanga	Email	09.01.2015	N
D	Seed Savers network – Slurry Extension service provider	Daniel Wanjama	Email	09.01.2015	N
D	Center for innovative Development (CIDES LTD) – slurry extension SP	Joseph Kuria	Email	09.01.2015	N
A	KENBI Enterprises – slurry extension service provider	Charles Ngure	Email	09.01.2015	N
D	Lengo center for demonstration	Director Eliud Makokha	Email	09.01.2015	N
A	Farmer – Kibichoi	Mrs Kimunya	Email	09.01.2015	N
A	Farmer – Rukuma	Mr. Waithaka	Email	09.01.2015	N
A	Farmer – Limure	Stephen Gichura	Email	09.01.2015	N
A	Farmer – Kimende	Helen Waithera Mbiyu	Email	09.01.2015	N
D	Kaaga Bio-intensive Slurry extension service provider	Martin Kirigia	Email	09.01.2015	N
A	Egerton University	Dr Jane Nyanga	Email	09.01.2015	N
D	International center for insect physiology and ecology	FCP coordinator Dr. David Amudavi	Email	09.01.2015	N

D	Kenya climate change working group KCCWG	Chairman, John Kioli	Email	09.01.2015	N
E	Gold Standard	Regional manager Africa Johann Tahler	Email	09.01.2015	N
E	Gold Standard Agriculture Secretariat	Daniel Bachmann	Email	09.01.2015	N
D	Green Society Hivos East Africa	Programme manager Edith Kirumba	Email	09.01.2015	N
D	Gender youth, M&E Hivos East Africa	Programme Officer Tabby Karanja-Lumumba	Email	09.01.2015	N
D	SNV Kenya	Advisor Judith Libaisi	Email	09.01.2015	N
D	Green Energy and Financial services Hivos East Africa	Programme development officer Zeph Kivungi	Email	09.01.2015	N

Hivos invited a broad range of both national and regional stakeholders. Invitations were distributed to a broad range of stakeholder types representing regions and sectors likely to be affected by the programme. Since the beginning of the programme in 2009, Hivos has developed wide range of network in both energy and agriculture sectors. In total 50 invitations were sent out, covering individuals, organizations, companies and government entities.

A public announcement was also put up in the Daily Nation newspaper on May 19th 2015, as well as on the ABPP website (africabiogas.org).

iv. Text of individual invitations

2011 LSC

Below is sample text of an email invitation to the Local Stakeholder Consultation meeting:

Dear Sir/Madam,

Please find attached an invitation to a Local stakeholder consultation for a regional Gold Standard/Clean Development Mechanism (CDM) domestic biogas Programme of Activities (PoA) and the first project (CPA), the Kenya National Domestic Biogas Programme (KENDBIP).

The PoA is being developed by Uganda Carbon Bureau in collaboration with the Humanist Institute for Development Corporation (Hivos), who are partners in the African Biogas Partnership Programme (ABPP). The PoA, which will cover the East African regional countries (Uganda, Kenya, Tanzania, Rwanda, Burundi) plus Ethiopia, will allow various programmes under the African Biogas Partnership Programme and others to generate carbon credits from their small domestic biogas installations.

The local stakeholder consultation for the PoA and the first project (CPA) under the PoA, the Kenya National Domestic Biogas Programme (KENDBIP), will be take place at the ***Panafric Hotel, Valley Road, Nairobi, on Wednesday 19th October 2011 from 09.00am to 13.00pm.***

The purpose of this email is to invite you or any representative you might have around Nairobi, to attend the consultation meeting. Subsequent local stakeholder consultations will be held in the host country of

the various projects (CPAs).

*Please confirm your participation (or that of your representative) at this important meeting, via e-mail to **biogas@kenfap.org** or **info@ugandacarbon.org** call **+254 (0)719635516**. If you cannot attend, comments can be sent by email up to 7 days after the consultation. Brief non-technical descriptions of the PoA and KENDBIP are available upon request by e-mail.*

Yours sincerely

George Nyamu

Programme Co-ordinator

The Kenya Domestic Biogas Programme (KENDBIP)

2015 LSC

Below is the text of the invitation to the Local Stakeholders Consultation Meeting for qualification of Gold Standard Agriculture.

KENAFF/KENDBIP/Vol OI/79

15th May 2015

Dear Sir,

Subject: Invitation to Local Stakeholders Consultation Meeting for qualification of Gold Standard Agriculture

Since 2009 the Kenya National Farmers Federation (KENAFF) has implemented the Kenya Biogas Programme (KENDBIP) as part of the Africa Biogas Partnership Programne (ABPP) managed by Hivos Foundation with technical assistance from the Netherlands Development Organisation SNV.

KENDBIP contributes to the achievement of the Sustainable Development Goals (SDGs) through the dissemination of domestic biogas systems as a local, sustainable energy source and the development of a commercially viable, market-oriented biogas sector.

KENDBIP aims to support the installation of 20,000 unit bio-digesters across Kenya until the end of 2016. As per 31st March 2015, 14,664 units of bio-digesters have been constructed.

In 2011 Hivos started to develop a carbon finance mechanism making use of the Clean Development Mechanism (CDM) and Gold Standard (GS) certification schemes. Uganda Carbon Bureau (UCB) successfully registered at CDM a Programme of Activities called Africa Clean Energy Switch (ACES Biogas) with KENDBIP as its first CDM Project Activity. In 2013, Hivos started to design a Programme of Activities called Africa Biogas Carbon Programme (ABC), again with KENDBIP as a first Project Activity, under the Voluntary Gold Standard which as validated early 2015 and is currently under Gold Standard Review with registration expected soon. In the biogas PoA, bio-slurry use is a positive indicator, and requires the Programme to show that a percentage of farmers are applying bioslurry on farming fields.

Hivos is advocating the development of a methodology to account for carbon reductions and soil carbon sequestration which will occur due to an increased use of bio slurry as a fertilizer in households that already participated in the biogas programmes in Indonesia and Kenya and registered at the Gold Standard.

If the methodology is approved, then the KENDBIP bioslurry emission reductions and soil carbon sequestration can be verified by the Gold Standard. Therefore, Hivos plans to conduct a Local Stakeholder Consultation with relevant stakeholders which will take place in Nairobi.

The Gold Standard certification is an international foundation that offers additional sponsorship to clean energy initiatives that reduce greenhouse gas emissions and promote sustainable development. Receiving this certification will enable the programme to offer support to households that are interested in utilizing the bioslurry as part of carbon reductions and soil carbon sequestration methods, anywhere across Kenya.

Considering the importance of this new dimension of the carbon component of the Kenya Domestic Biogas Programme and supplementary to the Local Stakeholder Consultation that has been conducted on 19 October 2011, the programme invites you to attend the stakeholder consultation meeting that KENDBIP will host on:

Date: Friday 29th May 2015

Time: 9.00 AM – 1.00 PM

Venue: Heron Portico Hotel, Milimani road, Nairobi

We welcome you to attend this meeting and give you the possibility to learn more about the programme and listen to any feedback you may have concerning the design of the programme and its impacts on sustainable development.

We welcome you to read an introduction of the programme in Annex 1. For more information on KENDBIP, please visit our website www.kenaffbiogas.org or the ABPP website www.africabiogas.org where you can find a report of the Local Stakeholder Consultation meeting on 19 October 2011. You can reach us at +254(020)2180608/ +254723903957 or by email at biogas@kenaffbiogas.org. The agenda for the meeting is attached (Annex 2).

Kindly fill in the form in Annex 3 and send it by email to biogas@kenaffbiogas.org, or through facsimile number +254(0)719635516 by the latest on Monday, 25th May 2015. If you cannot attend, comments can be send by email up to 7 days after the consultation. Brief non-technical descriptions of the PoA and KENDBIP are available upon request by e-mail.

For your information, the announcement of this meeting wil appear in Daily Nation newspaper of Tuesday 19th May 2015.

We look forward to hearing from you.

George Nyamu

Programme Coordinator,

Kenya National Domestic Biogas Programme.

Annex 1

Introduction to the programme.
Use of bio-slurry as fertilizer Kenya Domestic Biogas Programme. GS3978.
Voluntary Project under the scope of Gold Standard Agriculture.

In the context of
Kenya Domestic Biogas Programme (KENDBIP) Gold Standard Project Activity

The Kenya National Domestic Biogas Programme (KENDBIP)

KENDBIP started in November 2009 and aims to install 20,000 small-size biodigesters at rural households throughout Kenya before the end of 2016.

KENDBIP is implemented by the Kenya National Farmers Federation (KENAFF), working with various partners throughout Kenya. KENDBIP is part of the African Biogas Partnership Programme (ABPP), a partnership between Hivos and SNV and financially supported by the Ministry of Foreign Affairs of the Netherlands.

Background

Farmers represent 80% of the rural poor population of Kenya, and depend on agriculture, mainly mixed farming, by rearing livestock and cultivating land for their livelihoods. The majority of these farmers form the main component of the rural poor, and rely on biomass as the main source of energy for both cooking and lighting.

Wood fuel accounts for about 68% of the total primary energy sources in Kenya, with the national reliance on biomass being over 80%, with only 15% of Kenyans having access to the national electricity grid. This has resulted in the heavy depletion of the country's forest reserves and serious environmental degradation.

Biogas technology is an alternative energy source for cooking and lighting for rural farmers. The technology mainly uses the waste produced on farms to produce clean renewable energy. The biogas plants also produce slurry as a by-product that can be used to improve soil fertility. However, farmers in Kenya have not exploited the use of biogas technology for several reasons, including a poor awareness about the technology, and limited incomes from their farming activities. The overall goal of the Kenya National Domestic Biogas Programme (KENDBIP) is the promotion, dissemination and increased adoption of domestic biogas technology as a local sustainable energy source, through the development of a commercially viable, market-oriented biogas sector.

The Kenya National Domestic Biogas Programme

Under the Kenya National Farmers Federation (KENAFF) as the implementing agency, KENDBIP supported the construction of a total of 11,578 biogas plants between year 2009 and 2013 throughout the country. KENDBIP aims to reach the installation of 20,000 units before the end of 2016 and increase this number further in subsequent years.

The implementation period saw a significant expansion in the partnership network with over 160 institutions and organizations from both the private and public sectors collaborating with the programme in the implementation of the various programme components, enhancing the programme's outreach and service delivery to clients.

Quality management is a key pillar of the program. 40 supervisors have been engaged to back up the ten biogas technicians to enhance quality control services, alongside deliberate efforts to emphasize quality management in individual Biogas Construction Enterprises (BCEs) and biogas masons operations. To sustain growth of the market, the programme's marketing strategy is focused more on full biogas benefits with more value attached to the bio-slurry benefits. To further enhance outreach, the programme partners with several collaborating partners as a strategy to strengthen both the supply and demand sides of the sector in their respective areas of operation.

Since the programme is based on the development of a commercially viable and market-oriented biogas sector 82 of the 577 trained mason have registered business companies and now operate as business entities – BCEs 240 masons are still working as sole proprietors. The program is facilitating the formation, registration and growth relevant sector associations including then Association of Biogas Contractors of Kenya (ABC-K) and Association of Biogas Sector of Kenya (ABSK), whose membership is made up the biogas value chain sector actors to continue steering the biogas sector ahead in Kenya even beyond the programme closure. The program has initiated various credit partnerships with financial institutions, culminating in joint MOUs to finance biogas installation. These institutions include Kenya Women's Finance Trust (KWFT), Letshego formerly Micro Africa, Taifa Sacco, , among others. The program has also assisted local Sacco's to access cheap loans from The Rabobank Foundation for purposes of on lending to their members. This is to enable as many eligible clients take up biogas technology. KENDBIP has been involved in negotiations to ensure customers get the most favourable credit terms. During phase one. 21% of all installations were financed through credit facilities, Rural Micro-Finance Institutions MFIs and saving cooperatives accounted 97% of lending with only 3% of the credit being provided for by conventional banks.

Women are reported to account for 78% of borrowers and men 22%. Women lead in the uptake of biogas plants loans, in addition, the number of females trained in operation and maintenance and bioslurry utilization stood at 48%. Use of bioslurry for improved agricultural production has increased due to enhanced training and awareness among women users.

Gold Standard. Development of a carbon finance mechanism to support KENDBIP and improve access to biodigesters for rural households.

In 2011 Hivos started to develop a carbon finance mechanism making use of Clean Development Mechanism (CDM) and Gold Standard (GS) certification schemes. Uganda Carbon Bureau (UCB) successfully registered at CDM a Programme of Activities called Africa Clean Energy Switch (ACES Biogas) with KENDBIP as its first CDM Project Activity. In 2013, Hivos started to design a Programme of Activities called Africa Biogas Carbon Programme (ABC), again with KENDBIP as a first Project Activity, under the Voluntary Gold Standard which was validated early 2015 and is currently under Gold Standard Review with registration expected soon. In the biogas PoA, bio-slurry use is a positive indicator, and requires the Programme to show that a percentage of farmers are applying bioslurry on farming fields.

Hivos is advocating the development of a methodology to account for carbon reductions and soil

carbon sequestration, which will occur due to an increased use of bio slurry as a fertilizer in households that already participated in the biogas programmes in Indonesia and Kenya and registered at the Gold Standard. If the methodology is approved, then the KENDBIP bioslurry emission reductions and soil carbon sequestration can be verified by the Gold Standard.

Biogas is a clean energy source used for cooking and lighting. It reduces greenhouse gas emissions as it reduces carbon dioxide (CO2) emissions by replacing firewood and charcoal traditionally used for cooking, and avoids methane (CH4) emissions by diverting manure that would otherwise decompose in open pits, emitting methane. Both can be monitored and verified under existing methodologies of CDM and the Gold Standard Energy Programme and is counted for in the earlier mentioned CDM and Gold Standard project activities.

Bio-slurry is a second product from the bio-digesters installed by KENDBIP and used as a fertiliser. It replaces chemical fertiliser and sequesters carbon in the soil. Hivos advocates for the development of a methodology to account for carbon reductions and soil carbon sequestration, which will occur due to an increased use of bio-slurry as a fertilizer. At least 80% of the households with a biodigester will use bioslurry on farm plots, either as wet or dried bioslurry or composted with additional organic waste.

The use of bio-slurry is an example of 'Climate Smart Agriculture'. The concept 'Climate Smart Agriculture (CSA)' is used in different ways to describe all kinds of practices, interventions and mechanisms that either help farmers mitigate or adapt to Climate Change.

For the FAO, CSA 'contributes to the achievement of sustainable development goals'. It integrates the three dimensions of sustainable development (economic, social and environmental) by jointly addressing food security and climate challenges. It is composed of three main pillars:

1. Sustainably increasing agricultural productivity and incomes;
2. Adapting and building resilience to climate change;
3. Reducing and/or removing greenhouse gases emissions, where possible.'[1]

[1] Climate Smart Agriculture Sourcebook, FAO 2013, p. ix. See also http://www.climatesmartagriculture.org/en/

In Indonesia and Kenya, Soil & More Intl. (SMI) has been asked by Hivos to develop a methodology to account for carbon reductions and soil carbon sequestration, which will occur due to an increased use of bio slurry as a fertilizer in households that participate in the Hivos Biogas programs in both countries and are registered by the Gold Standard under the energy program.

In Kenya a survey was conducted early 2015 amongst 121 biogas users of the program and benchmarked it with the farming practices of 120 baselines totaling 241 household questioned. This survey was very detailed and covered everything from plot number and size, crops grown during the year and their respective yield, as well as farm maintenance, such as fertilization, growing techniques and soil characteristics.

The agricultural practices and inputs described above all have greenhouse gas emissions (C02, CH4 and N20). Three scenarios are calculated using the Cool Farm Tool. Average results will be presented in the Local Stakeholder Consultation meeting. The baseline scenario for households without a biogas plant, the 'project basic' scenario for biogas users – with most of them applying bio-slurry directly to the field – and a project plus scenario, in which biogas users apply certain agricultural practices and compost the slurry before application in the field.

Hivos and KENAFF will design a Voluntary Project under the scope of Gold Standard Agriculture to promote optimal use of bio-slurry that will improve soils, farm productivity and increase farmer income, and mitigate climate change by reducing greenhouse gas emissions and sequester carbon in the soil.

Annex 2

TIME	ACTIVITY
09.00	Registrations of participants
09.30	Welcome notes, process and introduction of participants and hosts
10.00	(1) Updates: KENDBIP implementation (2) Feedbacks from LSC in October 2011
10.30	Presentation & discussion: Introduction to Gold Standard Agriculture, Hivos' involvement & bioslurry carbon pilot project
10.45	Presentation & discussion: Bioslurry carbon study and Project Design
11.00	Health break
11.30	Discussion: Monitoring Sustainable Development
1.00	Closure

Annex 3

Attendance Confirmation Form

Name	:		
Sex	:	Male	Female
Organization	:		
Position	:		
E-mail	:		
Mobile number	:		
Will you participate in the LSC Meeting?	:	Yes	No

Kindly fill return this form biogas@kenaffbiogas.org , or through facsimile number: +254 (0)719635516 at the latest on Monday, 25th May 2015.

v. Text of public invitations

2011 LSC

Below is the newspaper invitation for the general public, which was published in the regional newspaper, the East African on 10th October 2011.

UGANDA CARBON BUREAU

Invitation to a Stakeholder Consultation for a Biogas Gold Standard / CDM Programme of Activities, and first project - the Kenya National Domestic Biogas Programme (KENDBIP)

All interested members of the public are invited to provide inputs into the design of a Gold Standard (GS) / Clean Development Mechanism (CDM) Programme of Activities (PoA) that will provide the opportunity to create GS/CDM carbon credits from small biogas digester installations.

Members of the public are also invited to provide their inputs to the first project to be included under the PoA, the Kenya National Domestic Biogas Programme (KENDBIP).

The PoA is being developed by the Uganda Carbon Bureau Ltd with the Netherlands-based Humanist Institute for Cooperation with Developing Countries (HIVOS). KENDBIP is being implemented by the Kenya National Federation of Agricultural Producers (KENFAP). The stakeholder consultation will be held at:

Panafric Hotel, Valley Road, Nairobi.
Wednesday 19 October 2011 - 09:00 - 13:00
ALL ARE WELCOME

If you cannot attend, comments can be sent via email up to 7 days after the consultation.

Brief non-technical descriptions of the PoA and KENDBIP are available upon request by e-mail. Please contact KENFAP if you have comments, or require more information: **biogas@kenfap.org**

2015 LSC

Below is the invitation for the general public put up in the Daily Nation newspaper on May 19th 2015.

For further inquiries, please call: 254 20 3872421/ 3872497/ 3874456
Cell: 254 722 200556 or 254 734 600994

INTERIM DIRECTOR GENERAL

KENAFF

INVITATION TO LOCAL STAKEHOLDERS CONSULTATIVE WORKSHOP FOR GOLD STANDARD REGISTRATION

Since 2009 the Kenya National Farmers Federation (KENAFF) has implemented the Kenya Biogas Programme (KENDBIP) as part of the Africa Biogas Partnership Programme (ABPP) managed by Hivos Foundation with technical assistance from the Netherlands Development Organisation (SNV).

KENDBIP contributes to the achievement of the Sustainable Development Goals (SDGs) through the dissemination of domestic biogas systems as a local, sustainable energy source and the development of a commercially viable, market-oriented biogas sector.

The programme with support from Hivos is advocating the development of a methodology to account for carbon reductions and soil carbon sequestration, which will occur due to an increased use of bio slurry as a fertilizer in households that already participated in the biogas Kenya and registered at the Gold Standard.

Considering the importance of this new dimension of the carbon component of Kenya Domestic Biogas Programme and supplementary to the Local Stakeholder Consultation that has been conducted on 19 October 2011 the programme invites you to attend the stakeholder consultation meeting that KENDBIP will host on:

Date:	**Friday, 29th May 2015**
Time:	**9:00AM – 1:00PM**
Venue:	**Heron Portico Hotel, Milimani Rd, Nairobi**

For more information on KENDBIP, please visit our website www.kenaffbiogas.org or the ABPP website www.africabiogas.org

Programme Coordinator,
Kenya National Domestic Biogas Programme.

B. 2. Description of other consultation methods used

2011 LSC

Other consultation methods were not employed

2015 LSC

Other consultation methods were not employed

SECTION C. CONSULTATION PROCESS

C. 1. Participants' in physical meeting(s)

i. List of participants

2011 LSC

Participants list					
Date and time: **19-Oct-2010, 9:00am to 1.00pm**					
Location: **Panafric Hotel, Nairobi, Kenya**					
Category Code	Name of participant, job/ position in the community	Male/ Female	Signature	Organisation (if relevant)	Contact details
D	Caroline Toroitich, Advisor	F	See Annex 1	SNV - Kenya	See Annex 1
D	Jean Mark Sika, Fund Manager	M	See Annex 1	Hivos - Kenya	See Annex 1
D	Felix Ter Hegde, Advisor	M	See Annex 1	SNV- Kenya	See Annex 1
D	Harry Clemens, Programme Officer	M	See Annex 1	Hivos-The Hague	See Annex 1
A	John Wanjiru Njoroge, Director	M	See Annex 1	Kenya Institute of Organic Farmers	See Annex 1
A	Felister M. Kimunya, Women Representative-NABUA	F	See Annex 1	KENFAP	See Annex 1
A	Sophia Gachoki, Farmer	F	See Annex 1	Kirima Umoja self-help group	See Annex 1
A	David Jesse, S-G	M	See Annex 1	Association of Biogas Contractors of	See Annex 1

A	Chandu Shah, Chairman	M	See Annex 1	Crestanks Ltd	See Annex 1
A	Joyce W. Njenga, Farmer	F	See Annex 1	KENDBIP	See Annex 1
A	Joyce W. Njoroge, Farmer	F	See Annex 1	KENDBIP	See Annex 1
B	John K. Maina,	M	See Annex 1	Ministry of Energy	See Annex 1
B	Luke Kessei, Ministry of Livestock Representative	M	See Annex 1	Ministry of Livestock	See Annex 1
F	Josephat Nyongesa, Natural Resource Economist	M	See Annex 1	WWF- Naivasha	See Annex 1
A	Bernard Mulanda, Finance Officer	M	See Annex 1	KENDBIP	See Annex 1
A	Suke Narasha, Intern (Researcher)	F	See Annex 1	KENDBIP	See Annex 1
A	Philips Minundi, Biogas Engineer	M	See Annex 1	KENDBIP	See Annex 1
A	George Nyamu, Programme Coordinator	M	See Annex 1	KENDBIP	See Annex 1
A	Paul Ndouga, Programme Assistant	M	See Annex 1	KENDBIP	See Annex 1
D	Maryanne Maina, Carbon Consultant	F	See Annex 1	Carbon Africa	See Annex 1
F	Salma Maznu-Watt, Partnership Director	F	See Annex 1	WWF	See Annex 1
D	David Odongo, Agri-business Manager	M	See Annex 1	Family Bank	See Annex 1
A	Joseph Kimani Mloge, Civilian	M	See Annex 1	N/A	See Annex 1
D	David Karanya, Project Developer	M	See Annex 1	Sustainable Energy Systems	See Annex 1
A	Jackson Mwangi, Farmer	M	See Annex 1	N/A	See Annex 1
B	Agnes Kyalo, Senior Asst Director	F	See Annex 1	Min of Agriculture	See Annex 1
A	Dorcas Wambia, ICT	F	See Annex 1	KENDBIP	See Annex 1
A	Lawrence Kinyire, NABUA secretary	M	See Annex 1	NABUA	See Annex 1
B	Bernard Osawa, Director Renewable Energy	M	See Annex 1	Electricity Regulatory Commission (ERC)	See Annex 1
A	Roda Kilonzi, Training and Extension Officer	F	See Annex 1	KENDBIP	See Annex 1
A	Racheal Macharia, P&M Officer	F	See Annex 1	KENDBIP	See Annex 1

D	Els Rijke	F	See Annex 1	ABPP/Hivos	See Annex 1
D	Anoudreh Khambaba, Consultant GIZ	F	See Annex 1	GIZ Nairobi	See Annex 1
D	Chanlir Mwangi, FoA - SCODE	M	See Annex 1	SCODE-Nakuru	See Annex 1
B	J. K. Waihenya, Snr. Asst Commissioner	M	See Annex 1	MOCDIM	See Annex 1
A	Sarah W. Mwaura, Farmer	F	See Annex 1	1135 Kikuyu	See Annex 1
D	Bernard Ndungu, Director-VEP	M	See Annex 1	VEP 6851	See Annex 1
A	Samuel K. Karungo, Farmer	M	See Annex 1	71812 NBI	See Annex 1
D	Jekonia Kitala, Advisor	M	See Annex 1	SNV- Kenya	See Annex 1

Comments accompanying Annex 1

None

2015 LSC

The original attendance list can be found in Annex 1.

Participants list					
Date and time: **29 May 2015, 9.00am-1.00pm**					
Location: **Heron Portico Hotel, Nairobi**					
Category Code	Name of participant, job/ position in the community	Male/ Female	Signature	Organisation (if relevant)	Contact details
D	Joseph Lwannia	M	See Annex I	BUCODEV-BUSIA	717730322 lwannia.joseph@yahoo.com
D	James Wanjohi	M	See Annex I	C.I.O.R.	770368107 jimwanjohi@gmail.com
D	Victoria Ndung'u	F	See Annex I	HIVOS	715993339 vndungu@hivos.org
D	Libaisi judith	F	See Annex I	SNV	722332886 jlibaisi@snvworld.org
D	Okoth max Okoth	M	See Annex I	K.B.P.	711795529 thepoetstouch@hotmail.com
A	Boniface katei	M	See Annex I	Dexter creations	700584170 the dextercreations@hotmail.com

B	Stephen G. Gikonyo	M	See Annex I	Kenvo. CDF Project	725635053 gikonyo2012@yahoo.com
B	Austin Omutto	M	See Annex I	NEMA	727377785 austinomutto@gmail.com
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B	Roda Kalonzi	F	See Annex I	KENAFF	721203344 roda@kenfapbiogas.org
A	Dr Jane G. Nyanga	F	See Annex I	Egerton university	721285186 jgnyaang@gmail.com
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D	Catherine Njambi	F	See Annex I	HIVOS-ABPP	733715516 cnjambi@hivos.org
A	Oliver eshitemi	M	See Annex I	Upendo Energy	772825222 eshitemioliver@yahoo.com
A	John Makori	M	See Annex I	ADLP	729877023 makorijohn2@gmail.com
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A	Kennedy Okole	M	See Annex I	TWINLAB E.A.	725599885 losameut@gmail.com
A	Simon Njunguna	M	See Annex I	Farmers-	72298798 karameri@rocketmail.com
D	James Ireri	M	See Annex I	Bio-Intensive A.T.C.	726687306 Biointeagri@yahoo.com
A	George Maina	M	See Annex I	Muganda Dairy Society	714683608 mainageorge40@yahoo.com
A	Chandu Shah	M	See Annex I	Kentainers Ltd	733800045 chandu_shah@kentainers.co.ke
D	Pius mwangi	M	See Annex I	Inter urban	720748523

					ssbg_laikipia@yahoo.com
D	Maina Christopher	M	See Annex I	Bunge la Mwanachi	722987198
D	Collins Odhiambo Ondiek	M	See Annex I	KENAFF	722761514 condiek@kenfapbiogas.org
D	Elizabeth wanja Mbugua	F	See Annex I	KCCWG	728923695 EWANJA53@YAHOO.COM
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A	Hudson Wereh Shiraku	M	See Annex I	Icipe-fcp	726395415 hshiraku@icipe.org
D	Harry Clemens	M	See Annex I	HIVOS	3170376550 hclemens@hivos.org
D	Audre Eituer	F	See Annex I	SUI	audreeituer@soidanduora.com
A	Raphael okoth	M	See Annex I	Milliard Brown	724917534 raphabeni@gmail.com
D	Walter Tinega	M	See Annex I	K-Rep Dev .Agency	728536750 wtinega@k-rep.co.ke
A	Francis O. Nyagaka	M	See Annex I	KISMA	720654329 fkanyaga@gmail.com
A	Pamela Omao	F	See Annex I	MEWNR Nairobi	726315371 pamnyasiziono@yahoo.com
B	Laban Okeyo	M	See Annex I	SCODE -Nakuru	725138950 labanokeyo@scode.co.ke
D	Ambrose otachi	M	See Annex I	Nyabolaise C.B.O.	710827762 otachi@yahoo.com
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D	Eliud L. Makokha	M	See Annex I	LENGO AGRICULTURE	721307577 lengocentre@gmail.com
A	Geoffrey Onyango	M	See Annex I	Cameo	720318051 onyangogeoffrey@yahoo.com
D	Faith Maithya	F	See Annex I	KENAFF	721654876 faith@kenaff.org
D	Daniel Wanjama	M	See Annex I	Seed Savers Network	721618569 seedsaversk@savers.org
A	Joseph Kuria	M	See Annex I	CIDES Ltd	722688564 joseph.cides@gmail.com
D	Charles Ngure mwangi	M	See Annex I	KENBI Enterprises	722443776 charlesdar45@yahoo.com
D	David Oyoo	M	See Annex I	ABC-K	723114094 damwe.org@gmail.com
A	Anderson Wambua	M	See Annex I	Amin Agriculture	725213325

				N+W	anderwambua@gmail.com
A	Munga Otero	M	See Annex I	Monto Farmers	728731171 mungancent@gmail.comJob
A	Job Maobe	M	See Annex I	Acb Farmer	752088908 job. Muobe
B	Susan Mutu Nuya	F	See Annex I	MACHA-Farmers	728567898 suziemuia@yahoo.co.uk
A	Elias Githae	M	See Annex I	KARA Kitale	72233109 elias.githae@gmail.com
A	Julius Olwero	M	See Annex I	Kwanza Jua-kali Assoc, Kitale	722215531 juliusmusoliza@yahoo.com
A	kenda mwenja	M	See Annex I	GIZ -ENDEV	721348993 andrew-kendaegiz.de
D	Clement Argwings Arua	M	See Annex I	UYOMA FARMERS ASSOC	708169158 KODHEK2001@YAHOO.COM
B	Tobias Mhando	M	See Annex I	Farm Strengthening Initiative	725407480 mhandot@yahoo.com
D	Gearald Kimeu	M	See Annex I	Rural Farmers Dev	727598393 geraldkiio@gmail.com
A	Donald W. Ojiambo	M	See Annex I	CRF-AFRICA	702771076 donaldojiambo@yahoo.com
D	Jeremiah Nyanganyi	M	See Annex I	Carewell Society. Kisii	722952824 nyajeremiabos@gmail.com
D	kennedy Jwango	M	See Annex I	KISII CFC	750637028 jere.ombaone@yahoo.com
D	Gitonga J.J.	M	See Annex I	MOE P	734574821 jj.gitonga@yahoo.com
D	Raphael Allo	M	See Annex I	Royal Magazine	722403815 royalmagazine14@gmail.com
D	Martin G Agingo	M	See Annex I	Royal Magazine	718810998 royalmagazine14@gmail.com
B	Fred Relwd	M	See Annex I	C.R.V.D.	724432215 fazelwa@yahoo.com
A	Fredalli olanga	M	See Annex I	MSCA	729832131 mediastandcon@gmail.com
A	John Kahuthu Kamau	M	See Annex I	KAYVO	721802137

Comments accompanying Annex 1
None

ii. Evaluation forms

2011 LSC

Below is a summary of all responses received in the evaluation forms. All participants were comfortable to use English for communication. The original evaluation forms (scanned) are attached in the VPA1 Local Stakeholder Consultation Report Annex.

Name	**Joyce W. Njoroge**
What is your impression of the meeting?	The meeting was very healthy and educative
What do you like about the programme?	The project has educated dairy farmers on other uses their cows can offer to them apart from milk and manure and also how to contribute to reducing deforestation and increasing carbon sequestration.
What do you not like about the programme?	The project is perfect and has no negatives
Signature	See Annex 2

Name	**Joyce W. Njenga**
What is your impression of the meeting?	Well organised in a suitable venue
What do you like about the programme?	Has created awareness about weather changes and their effect globally. Brought us together as stakeholders with different views.
What do you not like about the programme?	Not applicable, keep it up.
Signature	See Annex 2

Name	**Roda Kilonzi**
What is your impression of the meeting?	Very good. This is a very important introduction to carbon credits and how to benefit from them
What do you like about the programme?	The way all biogas programmes are fitting under one umbrella, thus reducing time and money

	spent on registration.
What do you not like about the programme?	Not applicable
Signature	See Annex 2

Name	**Sophia Gachoki**
What is your impression of the meeting?	Well organised and the objectives were laid out clearly. We hope that, if the idea is well sold to the people, the world will reduced the risk of global warming by reducing greenhouse gases and ensuring efficient use of energy instead of wasting it.
What do you like about the programme?	Taking care of the average Kenyan Poor in a positive way. The programme will contribute to Kenya's economic growth.
What do you not like about the programme?	Not yet a proper way of commercialising the carbon credits
Signature	See Annex 2

Name	**Maryanne Maina**
What is your impression of the meeting?	The presentations were very thorough and easily understandable.
What do you like about the programme?	The project has quite a lot of sustainable benefits It is a clean energy source
What do you not like about the programme?	The initial investment costs. Immobility of the biogas systems.
Signature	See Annex 2

Comments accompanying Annex 2
No additional comments

2015 LSC

Below is a summary of the main comments. The individual evaluation forms can be found in Annex 2.

Questions	**Main comments**
What is your impression of the meeting?	The meeting provided attendants with useful information about the program, bioslurry and agriculture practices. "Good. Very timely. Good mix of participants, majority of the sectors represented." (Eliud L. Makokha, Lengo Agriculture). They said the event was well organized, interactive and

	interesting. “It was very enlightening especially on the methodology and assumption for carrying out the carbon sequestration of the Biogas projects” (Doreen Wanjiry Irungu). Attendants would have wanted a full day meeting, though, to cover topics more in depths. “Next time please make it a full day meeting.” (Stephen Gikonyo)
What do you like about the project?	Participants like the project’s sustainable approach, food security, green agriculture, renewable energy and improving farmers’ livelihoods. “I think it contributes to efforts in mitigating to climate change effects and also brings in a component of value added to small holder farmers in the proposed GSA & CDM” (George Maina, Mugana Dairy Soc). “Direct impact on rural people therefore most likely pro-poor and gender sensitive” (Geoffrey Onyango, Camco). “The project is awesome, wonderful and better link with emerging markets/ corporates for 100% success. Am sensitized with the whole thing.“ (Stephen Gikonyo)
What do you not like about the programme?	Most participants had no complaints. Many of them said the program should cover the whole country. “Should spread to all parts of the country“ (Geoffrey Onyango, Camco). There were also single comments about financial issues and direct benefits to farmers. “Not their doing but they have a shortage of funding kendbip is capable of doing more with funding.“ (Paul Madoc, KENTAINERS).“Direct benefits to farmers not precise, Qualifications of indicators not clear or not clarified.“ (Kenda, GIZ) “That it doesn’t carry a direct pecuniary interest to the small holder farmers practising subsistence farming (subsistence).“ (George Maina, Mugana Dairy Soc)

Comments accompanying Annex 2

No additional comments

C. 2. Pictures from physical meeting(s)

2011 LSC

The following are photos from the physical LSC meeting held in Nairobi, Kenya on 19-10-2011

Project Description –ACES-Biogas

Questions and Comments

Project Description- KENDBIP CPA

Questions and Comments

Blind Sustainable Development Matrix Assessment and discussions.

2015 LSC

The following are pictures from the physical meeting in May 2015



C. 3. Outcome of consultation process

i. Minutes of physical meeting(s)

2011 LSC

Local Stakeholder Consultation Meeting
Panafric Hotel, 19 October 2011

Moderators:
Stuart Leckie (Uganda Carbon Bureau)
George Nyamu (Kenya National Domestic Biogas Programme)

TRANSCRIPT:
The meeting started at 09:30
A) Presentation of the agenda and objectives for the consultation particularly "getting feedback and suggestions for improvement of the project from all the people gathered"

B) Background
Background information was given on global climate change and the carbon markets.
Questions that were asked at this stage:
Q: Can you clarify why donor funds cannot be used for trading carbon?
A: You can use the donor funds to create programmes and projects, but you are not allowed to use donor funds directly to buy carbon credits because this would be like making an investment for profit rather than being donated.

C) Presentation on ACES-Biogas
A presentation was made on the PoA of ACES-Biogas describing how it would function and operate.
After the presentation the participants asked questions:
Q: What kinds of assistance/guidance does ACES offer?
A: ACES offers the following:

a) Enables organisations /individuals earn carbon credits.
b) Guides projects through the processes of inclusion, monitoring and verification.
c) Provides funding connections to individuals interested in such kind of projects and expertise.
d) Access to a wide network of people

Q: Do you have an outreach programme for awareness and sensitisation of people on biogas and carbon finance?
A: ACES-Biogas mainly conducts its awareness raising at a higher level with policymakers and specific stakeholders. It is organisations like KENDBIP that create awareness at the grassroots level since they are directly in contact with the farmers i.e. they can reach up to the village level. The parent company of ACES-Biogas the Uganda Carbon Bureau has been involved with a few public awareness raising publications and talks regarding climate change and the carbon market.

Q: How does ACES-Biogas / UCB carry out its activities in policy work?
A: In Uganda we help to brief Ministers, MPs and civil servants on climate change and carbon finance related issues. This has included helping to create the Parliamentary Forum on Climate Change. Most of the policy work is limited to Uganda but we hope to expand as more opportunities present themselves.

Q: Are there any beneficiaries of your carbon credit projects?
A: At the moment no one is earning the carbon credits as all our projects are still in development, the direct beneficiaries of each of our umbrellas will vary depending on the nature of the project. Regarding ACES-Biogas and focusing on KENDBIP each household digester could earn approximately $20 - $30 each year. This is however without cost being taken out. A small percentage will go to the PoA umbrella company to keep it operational and then in the case of KENDBIP the rest of the money will go on programme costs and continuing to provide a subsidy for new clients and maintenance services to households with biogas plants.

Q: During the baseline study, what do you take account of?
A: For the baseline study, we will look first at traditional household cooking habits measuring their consumption of wood fuel and compare that to households, which already have biogas systems, installed and gain a replacement rate.

Q. What is the additionality of the programme?
A: There are a number of reasons why this programme is additional. Biogas is relatively new to the market and the only programmes that have succeeded are largely donor funded. The extra revenue of carbon finance is needed to overcome lack of awareness or misconceptions about biogas, train masons, ensure quality control and help subsidise the cost for households as it is still a major investment for them compared with the up-front cost of a traditional stove, even if they will save money over the medium and long term.

Q: Considering the high cost of registration, how many organisations are we talking about for feasibility purposes?
A: As was mentioned in the presentation the umbrella structure of the PoA reduces the costs of earning carbon credits significantly for projects. Organisations coming under the umbrella will need to pay an inclusion fee that may be around $10,000 followed by annual fees for monitoring and verification. This is likely to be a very small percentage of the carbon credits. In terms of the scale of operation required to make this viable organisations would probably require to install at least a couple of thousand biogas systems a year.
It is required that there should be a maximum of 30,000-35,000 biogas digesters per coat-hanger (CPA) and the profitability will depend on how you sell them in the markets i.e. It will depend in which market you are going to sell it. Fortunately African small-scale projects usually command a premium.

Q: At what stage is the PoA currently?
A: The documents for validation are almost complete and will be uploaded to the UNFCCC website shortly for Global Stakeholder Consolation. If you wish to comment on these documents you can do through the website.

Q: What is the role of ACES-Biogas in the CDM project?
A: It is a service provider i.e. provides the “umbrella” as a service for biogas projects in East Africa and also provide service to any new biogas project so as it can come in to the umbrella too.

Q: Why are fossil fuels such as kerosene not included in this project?
A: This is due to the CDM methodologies. To include these fossil fuels that are only a small percentage of household usage would in the end not produce any value. Additionally the use of kerosene is complicated as it is used for lighting, which is not strictly a thermal application.

D) Coffee Break

E) Presentation on KENDBIP
A presentation was made to give the background to KENDBIP. This was followed by another questions and answer session:

Q: Can carbon credits be earned from the manure?
A: Yes carbon credits can be earned from capturing the manure but methane emissions are only really significant if the manure is stored in a wet environment. This is generally not practiced in East Africa and therefore the available credits would not cover the costs of using the extra methodology.

Q: Does the use of compost pit contribute to carbon credits?
A: Theoretically, the bio-slurry could earn credits as it is reducing the use of chemical fertilisers that are created by fossil fuels. ACES-Biogas is not considering this though at the present time.

Q: How many carbon credits does a biogas digester earn?
A: At the moment we are estimating there is about 70% replacement through biogas that means around three carbon credits will be earned for each biogas system per year.

Q: How much ownership does KENDBIP have on carbon credits since a project needs some kind of ownership?
A: As part of ABPP, we are part and parcel of the whole programme therefore when the subsidy is offered by KENDBIP, after that ownership is passed on to the client. Ownership of the credits is transferred through the sale agreement to KENDBIP.

Q: Can I use a $10m^3$ to run a machine?
A: We advise that you use it for basic activities like cooking, heating and lighting and in case of any excess, you can diversify or share with a neighbour because a machine requires more energy to run it than is typically available.

Q: $12m^3$ seems the most preferred capacity, why?
A: Farmers look at the socio-economic capacity for the future e.g. in case of increase in energy needs.

F) Do No Harm Assessment
The Do No Harm Assessment was presented to participants allowing them time to consider each criterion. All comments received are presented in section (iii) Assessment of all comments.

G) Blind Sustainable Development Matrix
The "blind" exercise was done via a slide presentation of each of the indicators and after an explanation the participants were invited to give their opinions on the impact of the project on this indicator and any suggestions of how this could be monitored.

1) Environment

Air Quality: Participants thought the project would have an overwhelming positive contribution to air quality by reduce the consumption of traditional wood fuels. Participants suggested to monitor the incidence of diseases caused by Indoor Air Pollution.

Water quality and quantity: Participants thought in general that there would be little impact on water quantity and quality. It was mentioned that the extra water required by the biogas system might put added pressure on household's water resources but also that a decreased rate of deforestation would help to improve watersheds. It was also mentioned that if the biogas digesters were poorly constructed there could be some leakage into the ground water.

Soil condition: Participants thought that in general by decreasing the rate of deforestation and promoting the use of bio-slurry that the project would have a positive impact on soil condition.

Other pollutants: Participants did not think that the project would result in any other pollutants.

Biodiversity: Participants suggested that the project would have a positive impact on biodiversity by reducing deforestation. They suggested monitoring biodiversity through surveys or estimates of the area of forest saved by the project.

2) Social Development

Quality of employment: It was generally thought that the quality of employment would be improved by the project and this could be monitored by the number of people employed.

Livelihood of the poor: The project will improve the livelihood of those that install the biogas systems through fuel savings, however the poorest people will still not be able to afford the subsidised biogas system.

Access to affordable and clean energy services: The project will result in increased access to clean energy services however biogas systems even subsidised will not be affordable to the poorest.

Human and institutional capacity: Participants thought the project would increase the capacity particularly of those employed and trained by the project. This could be monitored by the number of people trained.

3) Economic and technical development

Quantitative employment and income generation: Participants thought that the project would increase employment and this could be monitored by the number of people employed by the programme. Participants also thought the households that install biogas systems will save significantly as such resulting in income generation; this could be monitored through household surveys.

Balance of payments and investment: Participants decided that the project would have no impact on this indicator.

Technology transfer and technological self-reliance: There is likely to be little technology transfer as a result of this project but the project will increase household's self-reliance and energy independence.

H) Closure 13:10
The participants were thanked for coming, they were informed that there would be a further feedback round to ensure that all their views were captured and could then be fed into the project.

2015 LSC

WELCOME NOTE
The meeting started with a word of prayer after which Prof. David Nyaanga, a lecturer and researcher from Egerton University in Njoro, Kenya was introduced as the facilitator for the day. He invited all to a round of self introduction. Participants constituted an impressive representation from government institutions, private investors, environmental policy makers, universities researchers, farmers and biogas associations. Prof. Nyaanga reminded participants that their participation during the workshop would be important as it will represent the interests of the country, and would be key in making decisions on the biogas programme and determining the way forward on carbon credits issuance for the Kenyan biogas programme. He encouraged participants to share and learn from each other in order to implement a better biogas programme in Kenya.

2. KENYA NATIONAL DOMESTIC BIOGAS PROGRAMME (KENDBIP) UPDATES
Mr. George Nyamu, Programme Coordinator - KENDBIP, made a presentation providing a background of the Kenyan biogas sector. KENDBIP is a programme sponsored by the Africa Biogas Partnership Programme - a public private partnership with SNV, HIVOS, KENAFF and recently the Government of Kenya as the key partners in the programme ABPP runs in five African countries i.e. Ethiopia, Tanzania, Kenya, Burkina Faso and Uganda. The Kenyan programme is the most successful in terms of numerical production, private sector development and gender inclusion in the programme. Mr. Nyamu started off by appreciating the immense support provided by partners invited to the meeting. He attributed the success of the programme to commitment and joint efforts of programme partners represented in the carbon bio slurry workshop. Mr. Nyamu further updated the participants that the programme is currently in the second phase of implementation. The first phase that ran between 2009-2013 focused on stimulating demand of the biogas technology,

and was faced with low uptake of the technology due to initial investment costs. The main activities during this phase included training of stakeholders, targeted promotions, standardization and ensuring functionality of plants. Having invested in an enabling structural and operational environment, the present phase 2 of the programme running between 2014-2017 is focused on commercialisation and up-scaling of the biogas technology. This is possible by embedding programme roles on private sector partners. This means installing good quality plants and engaging with partners who are providing good quality services.

Access to user trainings and after sales service is a necessary condition for carbon finance mechanisms. Initially, the value of the biogas technology was pegged to provision of reliable energy for cooking and lighting. Over time the role of slurry, a by-product of biogas plant, has provided immense value to farmers due to its utilisation and application on various crops. Promotion of the technology has thus been driven by satisfied users i.e. referrals from satisfied customers and new clients looking to cash in on the biogas revolution. This has been made possible through collaboration with several financing partners. To aid the exchange of ideas and sharing of knowledge, the programme is developing capacities of biogas associations i.e. contractors and users. The Kenyan programme had constructed 14,109 plants by December 2014 running across phase I that began in 2009. A Biogas User Survey conducted in 2014 revealed a high (87%) satisfaction rate of the biogas technology by households; the variance accounted for by user-related technicalities, at a 95% confidence level. Operations and Maintenance Training is therefore a key success factor to ensuring that investor confidence is maintained. Despite a revelation that some homes still preferred use of firewood to prepare traditional dishes, adoption of biogas technology had resulted in a reduction of firewood use by 66% households, reduction in use of chemical fertilizer by households was noted at by 84% and improved living conditions were reported by 89.7% households among the sampled biogas adopters.

Good numerical production has encouraged the participation of private investors in the sector with emergence of alternative digesters providing options to fixed dome. Cost reduction initiatives have resulted in cheaper and better quality of digesters. This has caught the attention of the Kenyan Government which recently committed to supporting the programme in bringing down the cost of production. The Government's contribution would be channeled through curriculum development i.e. working with training organisations and development of standards and regulations. These benefits are expected to trickle down to the farmers' right through the 2014 and 2015 financial years. Currently, the programme is setting up a Customer Service Centre which will manage issues related to quality and client management.

In 2011, the 1st Local Stakeholders' Consultation (LSC) Workshop was held in Nairobi, Kenya. This developed a Programme of Activities (POA) for energy, and tasked the programme to constantly update partners on progress and maintain records pertaining to all biogas technology challenges issues raised by farmers. To this end, the programme has maintained a hotline for clients, an active website and social media platforms with interactive discussions. This has enabled the programme engage with clients as per POA regulations. This current 2nd LSC (2015) Workshop is intended to develop an additional PoA for agriculture i.e. recognition that bio slurry contributes to climate smart agriculture and hence earn carbon credits.

3. INTRODUCTION TO GOLD STANDARD AGRICULTURE

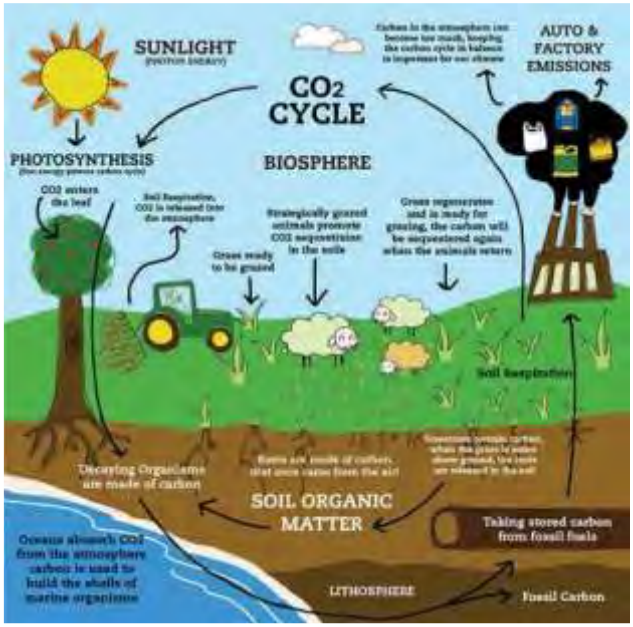
Harry Clemens – a Senior Carbon Advisor at Hivos Netherlands, made a presentation on carbon credit and financing where he shared information on the history of carbon credit registration. The 2011 LSC was in partnership with ACES Biogas, Uganda Carbon Bureau and Hivos. This resulted in a CDM Energy Switch and subsequent registration by CDM in May 2013; credited for reduction of 3.8 tonnes of CO2 per household per year. The 2015 LSC is led by Africa Biogas Carbon (ABC) PoA and Hivos. It is intended to add the agriculture POA to Voluntary Gold Standard on energy and currently under design (2013-2015). Gold Standard Review is ongoing with public consultation /stakeholder discussions ongoing worldwide on the ABPP website. Registration date is scheduled for 11 June 2015. The carbon market has experienced drastic changes in market prices for carbon credits. New programmes would be registered under voluntary track where prices are better. The First monitoring and verification cycle is 11 June 2013 – 10 June 2015. Issuance of carbon credits in the Kenyan programme is expected in Quarter 4 of 2015 (6.3 tonnes of CO_2 per household per year i.e. 122,000 GS VER in 24 months). This allows for a retroactive calculation from the date of registration to two years backwards (plants constructed from June 2013 – June 2015) Gold Standard Climate Smart Agriculture is a new Carbon Standard founded in 2004 by Civil Society in partnership with FSC and Fair-trade International, with support from Hivos and others. It is a Standard for emission reductions and sustainable development under voluntary carbon markets. It has four tenets; Water, City Program, Land Use Change & Forestry and Agriculture. The standard seeks to provide benefits for using bioslurry for climate change mitigation i.e. reduction in use of chemical fertilizers. Carbon reduction would arise from use of bioslurry for carbon sequestration in soil; bioslurry application in liquid, dried or composted form. Hivos is running four pilot projects under the gold standard for agriculture. 1) Peru: diversification of smallholder rice production by converting part

of area into agro-forestry: banana/ cocoa & (high value) shade trees 2) Nicaragua: farm restoration from degraded land (coffee coop) - soil improvement (compost facility) 3 and 4) Indonesia and Kenya: usage of bio-slurry from biogas digester as supreme fertiliser. The Kenya POA would be the first in Africa to be registered under agriculture. A group of consultants from the Netherlands (Soil and More International), is providing support in developing the methodology, and is currently preparing a Methodological White Paper based on 2014/2015 Bio-slurry user survey and Feasibility study of the Kenya Domestic Biogas Programme.

4. POTENTIAL GENERATION OF CARBON CREDITS

Mr. Andre Eitner, Business Development Officer - Soil and More International (SMI), made a presentation on potential generation of carbon credits for the Kenyan biogas programme. SMI is collaborating with Hivos on ways to integrate bioslurry in agriculture to provide more funds for advancement of programme.

2015 is the UN year of the soil focusing on sustainable prevention of soil degradation. 1990 research by World Resources Institute classified Kenya under areas of serious concern and the situation has worsened due to unsustainable farming practices and deforestation. Even though Kenya has booming ICT and finance sectors, agriculture remains the backbone of the economy. It's imperative to have healthy soils because this translates to good life for Kenya and East Africa.



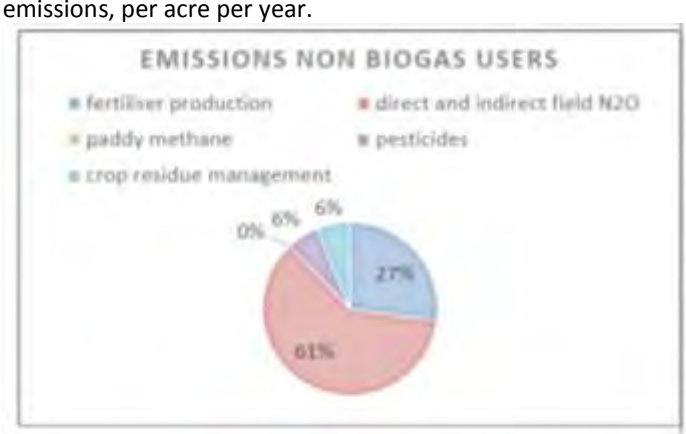
Mr. Eitner used the illustration of the global carbon cycle to connect the loop from energy, farming and household levels. Fact is we have CO2 stored as fossil fuels in the ground and arguably there can be no life without carbon. The challenge arises from liquefied carbon stored underground, which could be sent back to the atmosphere resulting in the greenhouse effect. Good news is soils are the second biggest pool where carbon is stored. Through adoption of smart agriculture we could achieve two purposes; store the carbon from atmosphere and improve livelihoods.

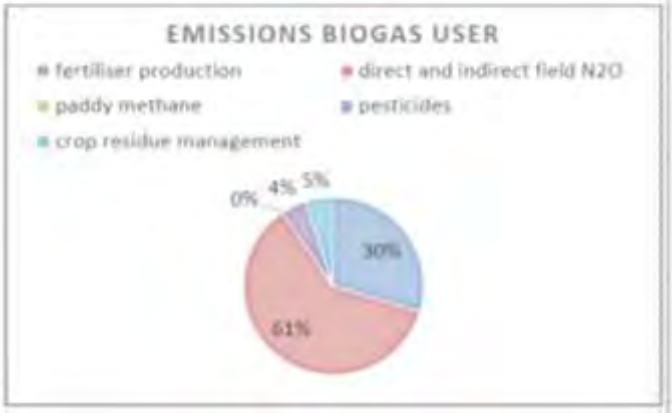
Edith Kirumba, Programme Manager – Green Society - Sustainable Production at Hivos East Africa made a presentation highlighting the benefits of bio slurry use from a review of literature / publications available, which she indicated was limited since documentation on bio slurry utilisation studies in Kenya was not available. A large part of both the scientific and grey literature focused on the production of energy alone, but did not venture into the multiple uses and intricacies of bioslurry use, according to FAO 2013. Findings also varied between countries and regions depending on the treatments used, the quality of the original substrate and the management regimes applied. Researches concurred that bio slurry was an effective fertiliser, Baral 2010; improved soil structure, Islam 2011; improved production, Gurung, 1997; Jeptoo et al., 2012; Hivos, 2014. Additionally, an average family in Kenya saves US $14 per month on energy, Hivos 2014; and Surplus bio slurry can be sold to generate extra income for households, Wachera 2009. Lessons learnt from ABPP, most Kenyans desist from composting, claiming that it is labour intensive. From the ABPP findings, Ethiopians are keen to compost and have had success stories on retaining soil cover and sale of bioslurry to generate income for households.

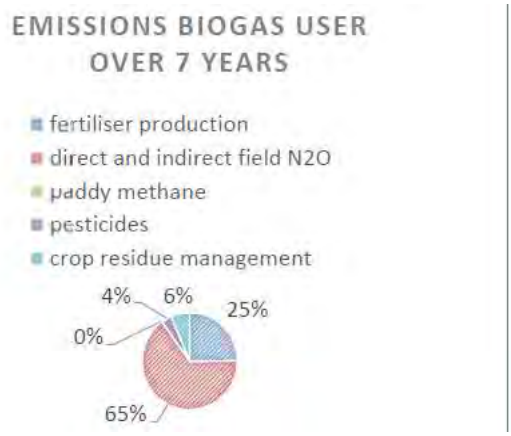
5. Project development in Kenya

A Biogas User Survey was conducted in 2014 among 240 farmers. Data on land size, productivity of land under farming, farm management systems and soil management was collected from users and non-users of bio slurry, and used to calculate carbon emission and compared to the bioslurry nursery in Indonesia.

SMI used the www.coolfarmtool.org developed by various universities to understand the greenhouse gas emissions. They presented three scenarios, Non-Biogas User Scenario (no biogas adopted by the household), Project Basic Scenario (current farming practices by biogas users) and Project Plus Scenario (in 7 years assuming 30% of biogas users apply certain conservation agriculture practices tailor-made to their needs). These would be monitored annually with the farmers. Based on these findings, SMI calculated the carbon emissions i.e. Emissions/ sinks users per kilo of carbon emissions, per acre per year.







Preliminary findings:
Scenario 1: no record of changes on carbon emissions.
Scenario 2: lowered carbon emissions to 225.76, relative distribution on mineral
Scenario 3: Higher yields were estimated at 25-30% and corroborated findings from BUS 2014 on higher yields per season. Carbon stock changes reduced to 1,435.29; indicating a negative carbon footprint

Comparison of the three scenarios illustrated an increase in other farm emissions but overcompensating on the carbon reduction. Extrapolation of the findings by 21 years, assuming that 40% of farmers will adopt the biogas technology, showed an increased carbon reduction over the life of the biogas plants. This also ensures increased soil fertility for more than 15,000 farmers in Kenya

The study showed that bio slurry is a supreme fertiliser that can help to reduce dependency on chemical fertiliser. This would mean savings for the households considering the high cost of chemical fertilizers.

Project design

- Integrating soil carbon sequestration into existing GS project by the end of 2015 / beginning of 2016
- Methodology expected in June 2015 by Gold Standard
- Conduct a baseline soil sampling on around 190 sample farms
- Then model soil carbon stock developments over time with the Cool Farm Tool
- Control modelling by taking Soil Samples again 5 – 10 years from now

Sampling approach:

- Visit all implementing regions

	Amount 2015 survey interviewees and soil sampling (biogas users and control group)							
	Digester age group classification and distribution from all biogas users of BUS 2014 (modified for the year 2015 → adding the most recent digester age group and shifting the other groups until start in 2009); new total interviewee numbers							
Province	Year 0 to 1 (since Jan 2014)	Year 1 to 2 (since Jan 2013)	Year 2 - 3 (since Jan 2012)	Year 3 - 4 (since Jan 2011)	Year 4 - 5 (since Jan 2010)	Year 5 - 6 (since Jan 2009)	Total Trial group	Total Control group
Nakuru	3	3	3	3	3	1	16	16
Kericho	3	3	3	3	3	1	16	16
Kiambu	3	3	3	3	3	1	16	16
Murang'a	3	3	3	3	3	1	16	16
Machakos	3	3	3	3	3	1	16	16
Kajiado	3	3	3	3	3	1	16	16
SUB-TOTAL	18	18	18	18	18	6	96	96
TOTAL							192	

Field Measurements will include:

- General Information (GPS coordiantes so they can locate the same farmer five years later, etc.)
- Bioslurry application (control of survey values)
- Soil data (fertility indicators, soil organic carbon & matter)
- Bulk density of soil (required to model soil carbon content)

6. QUESTIONS AND ANSWERS SESSION

A question and answer session was conducted after the presentations where the following questions were raised and answered.

Q. Based on the project plan that has been presented, the project is scheduled to commence in June 2015, which is one week from now. Does this imply that much of the preliminaries have already been done (prior to this presentation for approval by stakeholders)?
A. Developing the methodology is a process. A draft of the methodology has been done but is yet to be refined before publishing it in June 2015.

Q. How was the project sites selected (where the study will be conducted)?
A. A sampling approach similar to that used during the Biogas User Survey by KENDBIP in 2014 was used.

Q. Have you considered use of innovative ICT technologies for data collection in this project? This would ensure more accurate data e.g. when a farmer takes slurry to the filed he sends the data from the mobile phone to a central database rather than subjecting the farmer to a recall method later.

Q: Bioslurry user application manual: There is lack of documentation especially on application of bioslurry on different food, cash and fodder crops. Information is scattered all over and varies depending on regions and applications. It would help the small farmers if such information was made available in a tabular easily legible form.
A: Hivos would share its publication titled 'Bioslurry a supreme fertilizer'.

Q: Since the project design includes annual audits, will these have a cost implication for the farmers (since previous audits have had cost implications for farmers)?
A: Costs arising from the annual audits during the study period will be borne by Hivos

Q: Is there a target for carbon credits to be achieved? How will the carbon credits benefit farmers?
A: Funds raised from sale of credits will be ploughed back to the programme to enhance biogas uptake and ensure continuous support to users through quality assurance, operation and maintenance and extension on bio slurry use.

Q. Since tea farming is dependent on intensive fertilizer use, have you considered working in partnership with Kenya Tea Development Authority (KTDA) in this project?
A. This collaboration has not been explored yet but is worth noting.

Q: How can excess biogas be aggregated and packaged for commercialization? Are there success stories / scientific ways of selling excess gas?
A: The current design of plants is 4-12 cubic meters, producing enough gas for one household. Technology required to commercialise the gas is very elaborate and needs lots of investment and cannot be done at a household level. However, some farmers in Nakuru District have extended the supply pipes to neighbouring households which they charge them for its use. An effort towards packaging is also on-going.

Q: Food security is a pertinent issue among the Pastoralist communities; how does the programme intend to encourage adoption of biogas for agriculture?
A: Studies on soil rehabilitation using bioslurry are ongoing in Tanzania. A solid state digester is being tested in Kenya, Tanzania and Burkina Faso. Successful pilot will pave way for full implementation among the pastoralist communities.

Q: Please comment on the cultural and ethical barriers for use of bio slurry, especially with respect to connecting toilets to bio digesters.
A: There is a lot of resistance in this with an estimated 3% of biogas plants constructed in Kenya attached to a toilet, attributed to cultural issues attached to human waste. In addition, sanitation is not an issue in the biogas high potential regions.

Q: Training curriculum:
A: The programme is working with industrial training authority, KIE, to develop a curriculum for vocational training institutions. This is a multi-sectoral approach involving universities, government, policy makers, etc

7. MONITORING SUSTAINABLE DEVELOPMENT ASPECTS
Gold Standard on Agriculture monitoring systems consists of three components, i.e. environment, social development and Economic and Technological development. Each has specific indicators as illustrated below.

No.	Gold Standard	Component	Indicator(s)
1.	GS-01	Environment	Air quality
2.	GS-02		Water quality
3.	GS-03		Soil condition
4.	GS-04		Other pollutants
5.	GS-05		Biodiversity
6.	GS-06	Social Development	Quality of Employement
7.	GS-07		Livelihood of the poor
8.	GS-08		Access to affordable and clean energy services
9.	GS-09		Human and institutional capacity
10.	GS-10	Economic and Technological Development	Quantitative employement and income generation
11.	GS-11		Balance of payments and investment
12.	GS-12		Technology transfer and technical self-reliance

The purpose of this session, moderated by Harry Clemens, was to assess the participants' perceptions on whether the Kenya biogas programme fulfils the requirements for inclusion based on the three components. 2011 LSC agreed that the programme was relevant for 7 of these indicators and the rest were difficult to monitor. Environmental Adaptation: This includes mitigating negative effects of climate change by reducing carbon emissions.

A farmer groups' representative said that the benefits of bio slurry utilisation based on resilience was obvious. Bioslurry has no smell and no side effects on the user and on crops. Bio slurry application results in immediate increase in crop yields. Bio slurry can be applied on an array of crops hence reducing/eliminating the use of chemical fertilisers. However, it would be important to identify the economic factors because farmers would be interested in quantified benefits e.g. What are the opportunity costs of adopting biogas technology? What are the financial costs and benefits of using bio slurry compared to use of inorganic fertilizers.

A university researcher informed participants that a study on reduction of pest infestation while using bio slurry was in progress, and preliminary results were impressive. However, further investigation to establish the mechanism of reduction (whether the pests die or are repelled) was in the pipeline. However, she mentioned that they had noted an increase in weed population with use of bio slurry. Based on the discussions, participants unanimously made an affirmative vote that bio slurry reduces pest infestation hence reducing pest control expenses.

Social development:
Employment: A youth representative confirmed that youth now prefer to engage in agri-business due to quick returns on investment. However, there's a risk in increased adoption of plastic digesters since that would render masons jobless.

Food security: A lady farmer confirmed that women now have enough food to feed their families since bio slurry is readily available and the excess is sold to provide a livelihood for the family. This provides the opportunity to engage in other small enterprises. Children can now spend more time on their studies since less time is spent looking for food and firewood.

Gender: focus was on the end user of the biogas plant. A university researcher confirmed that the plant presents more benefits to women by providing easy management of their farms, clean cooking, reduced cooking time, bioslurry produces more food, budget for food reduced. When women benefit men also benefit; men take lots of interest in innovative businesses arising from the technology. However it turns out that the gender roles have to complement each other for the plant to work; the man pays to construct the plant and ensures its well operated and maintained. The woman and children use the gas to cook family meals, use bioslurry on kitchen gardens; providing readily available

nutritious food for the family. The woman tills the land thus applying the bioslurry in the farm but depends on the man to carry the slurry to the farm. In all these roles, the man and woman of the home must play their part; together they stand to gain more. The gender aspect of bio slurry was endorsed by majority of the participants.

Ecological and Technological Development:
A university researcher confirmed that bioslurry has anti-pests qualities, reducing topical application of pesticides. Chemical fertilizers attract more pests necessitating increased application of pesticides. Researcher opinion; Studies in china show bioslurry reduces maize and blankenhurst; Protection of slurry e.g. terracing and fodder is part of conservation agriculture and supportive of low tillage. It encourages adoption of simple technologies to control the composition of weeds. During composting using bioslurry, there is heat development which kills weeds, pathogens and pesticides. A private investor wondered whether there was literature to support this anti-pesticide quality of bioslurry to avoid embargo from EU horticulture markets.
Vote: unanimous agreement that this indicator is relevant

8 CONCLUSION
The 2015 LSC was a great success, based on the excellent attendance from partners from all works of life. The general findings from the workshop indicated that there are a lot of opportunities available in the bio slurry sphere with regard to the carbon credits assessment and realization, and there was also a lot of enthusiasm expressed by the participants with regard to the upcoming bio slurry PoA. As a parting shot, Mr. Nyamu remarked that he was overwhelmed and encouraged by the support and participation of partners represented at this forum. He welcomed all to engage with the programme through personal visits or social media platforms for betterment of biogas sector. Judith from SNV, on behalf of the participants, thanked Hivos and KENDBIP for a well organised and highly effective workshop. She also thanked representatives from government agencies, civil society organizations, private companies and the workshop moderator for making the day a great success. The facilitator gave a vote of thanks to all participants for their openness and willingness to share.

ii. Minutes of other consultations

2011 LSC

Not applicable

2015 LSC

Not applicable

iii. Assessment of all comments

2011 LSC

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
Poor construction could lead to effluent seepage into the groundwater	Yes	It was agreed that for KENDBIP project this was a relatively low risk considering the quality control procedures required and training provided to all masons

It was mentioned that the extra water required by the biogas system might put added pressure on household's water resources	Yes	Agreed this can be considered a minor risk as these systems would be installed in areas where there is a ready supply of water. The demands of water from each biogas system are also not extremely high, and a decreased rate of deforestation would help to improve watersheds.
The project will result in increased access to clean energy services however biogas systems even subsidised will not be affordable to the poorest.	No	The project already offers biogas digesters at a reduced cost and works with microfinance institutions to allow farmers the ability to access capital for the purchase of a digester.
Do you have a standard for quality control?	Yes	There are a number of different quality controls built into the programme. On the carbon credits side of the project it will be registered with Gold Standard. KENDBIP also have a number of quality control checks to ensure quality of construction. When new digesters are included for other CPAs they will need to go through a quality check to ensure they will have a long lifetime.
Where does carbon credit go?	No – only a clarification was required	The households own the carbon credits initially, but in providing a subsidy the ownership of the credit is transferred to KENDBIP. Currently, we are working on tools to explain the process of the carbon credit transfer to households, it is intended this will be done in a pictogram in English and local languages. ACES-Biogas is working on ways to ensure that benefits will be passed on to households.
Why does the programme only cover small domestic installations would it not be more effective at a larger scale on community or industrial level?	No – only a clarification was needed.	The programme has been initially designed and funded for domestic installations and therefore we are limited in scope. In the future we would be keen to promote these larger scale digesters.

iv. **Revisit sustainability assessment**

2011 LSC

Are you going to revisit the sustainable development assessment? Please note that this is necessary when there are indicators scored 'negative' or if there are stakeholder comments that can't be mitigated.	**Yes**	**No**
	☐	**X**

Give reasoning behind the decision The sustainable development assessment was revised based on the comments recorded

in the minutes. There were no potential harmful effects mentioned concerning the project.

2015 LSC

Are you going to revisit the sustainable development assessment? Please note that this is necessary when there are indicators scored 'negative' or if there are stakeholder comments that can't be mitigated.	**Yes**	**No**
	☐	**X**

v. Summary of alterations based on comments

2011 LSC

No changes to the project design were necessary

2015 LSC

No changes to the project design were necessary

SECTION D. SUSTAINABLE DEVELOPMENT ASSESSMENT

D. 1. Own sustainable development assessment

i. 'Do no harm' assessment

[See Toolkit 2.4.1 and Annex H]

2011 LSC

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low, medium, high)	Mitigation measure
Human Rights			

1. Human rights abuses	The project respects human rights, including dignity, cultural property and uniqueness of indigenous people. Participation is completely voluntary and the project respects personal freedom and liberty. The project is not complicit in Human Rights abuses. The project respects internationally proclaimed human rights. **Host country commitment to UN conventions on Human Rights:** International Covenant on Economic, Social and Cultural Rights New York, 16 December 1966 Kenya Accession (a), 1 May 1972 an International Covenant on Civil and Political Rights	Low	N/A
2. Involuntary resettlement	The project does not involve and is not complicit in involuntary resettlement. The domestic biogas units of KENDBIP will be small in size and are voluntarily constructed within people's homesteads. The project will therefore not involve any resettlement.	Low	N/A
3. Damage to cultural heritage	The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage. Cultural heritage will not be altered by the project since the biogas units will be constructed within the household compounds on a voluntary basis and no damage to cultural or religious heritage is expected.	Low	N/A
Labour Standards			
4. Freedom of association etc.	The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights. **Host country commitment to international conventions on labour standards and child Rights:** Convention on the Rights of the Child, New York, 20 November 1989. Date of signature 26 Jan 1990. Kenya is member of the International Labour Organisation.	Low	N/A
5. Absence of compulsory labour	The project does not involve and is not complicit in any form of forced or compulsory labour. The VPA implementer is not be complicit in any form of forced labour. All employees offering services do so on a	Low	N/A

	voluntary basis and are free to quit at anytime. **Host country commitment to international conventions on labour standards and child Rights:** Convention on the Rights of the Child, New York, 20 November 1989. Date of signature 26 Jan 1990. Kenya is member of the International Labour Organisation.		
6. Child labour	The project does not employ and is not complicit in any form of child labour. The KBP does not employ children. **Host country commitment to international conventions on labour standards and child Rights:** Convention on the Rights of the Child, New York, 20 November 1989. Date of signature 26 Jan 1990. Kenya is member of the International Labour Organisation.	Low	N/A
7. Discrimination	The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis. Provided they meet the basic requirements, any biogas implementer can join the programme irrespective of their gender, race, religion or sexual orientation. **Host country commitment to international conventions on labour standards and child Rights:** Convention on the Rights of the Child, New York, 20 November 1989. Date of signature 26 Jan 1990. Kenya is member of the International Labour Organisation.	Low	N/A
8. Healthy work environment	The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments. VPA006 involves installation of small domestic biogas units. The biogas systems require relatively simple construction and tools, with no need for scaffolding, the risk of accidents is minimised. During training courses for masons and supervisors, safe construction of biogas units are demonstrated. In order to ensure that a safe working environment is maintained properly fitting covers for the mixing tank and the slurry tank are ensured at all times. The risk of exposure to unsafe environment during the operation of the biogas units is also minimal.	Low	N/A

Environmental Protection			
9. Environment	The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle. The project does not involve any invasive species, chemicals dangerous to the environment or hazardous waste. The biogas units will utilise animal/ human excreta and food wastes. The resulting slurry can be used as a fertiliser and has no negative impact on the environment but rather enhances it.	Low	N/A
10. Degradation of natural habitats	The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high conservation value, or (d) recognized as protected by traditional local communities. In fact, the project reduces deforestation and contributes to the protection of forests, water and soil resources. The biogas will be a renewable and clean energy source.	Low	N/A
Anti-corruption			
11. Corruption	The project does not involve and is not complicit in corruption. To reduce the risk of corruption occurring, the programme has the following mechanisms in place: • A Code of Conduct for all biogas masons promoting fair competition practices is in place - all Masons/BCEs must sign and comply with the conditions stipulated in the Code of Conduct. This emphasizes integrity among personnel and business conduct while working with the programme. • A BCE/Mason grading system is in place for all participating masons/BCES. This enforces blacklisting and removal from the programme all rogue masons/BCEs based on several parameters including integrity. • An annually renewed contract/letter of signed by BCEs/Masons - based on an individual's manner of business conduct, Including integrity. • Client call centre, information sharing platforms and stakeholder sensitization meetings help to ensure transparency.	Low	N/A

	In addition, the process of acquiring a digester is transparently documented and recorded as outlined in Section C of the PoA-DD. The Sales Agreements signed with customers document all payments made for the materials of the digester and time paid to the mason/BCE to construct the digester.		
Additional relevant critical issues for my project type	**Description of relevance to my project**	**Assessment of relevance to my project**	**Mitigation measure**
No additional critical issues were identified	Not applicable	Not applicable	Not applicable

2015 LSC

There was no 'no harm' assessment conducted as part of the 2015 LSC.

ii. Sustainable development matrix

2011 LSC

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Air quality	N/A	The project will lead to the reduction in indoor air pollution caused by the combustion of fuelwood and charcoal, through their substitution with biogas. The health situation especially for women and children will therefore be improved significantly (MDG 5&7).	Parameter: Perceived improvement in health by the user. Explanation: Less indoor smoke will reduce incidence of respiratory health problems, especially in women and children who spend more time near the hearth.	+
Water quality and quantity	N/A	Whilst the operation of a biogas unit requires a certain amount of water, which will be fed into the digester together with cow dung (ratio 1:1), the project will contribute to the protection of water resources through reduced deforestation (MDG 7).	N/A – neutral score	0
Soil condition	N/A	The substitution of fuel wood with biogas will indirectly contribute to a reduction in soil erosion by reducing deforestation. The slurry generated from biogas units can be used as high value fertiliser (MDG 7).	Parameter: Percentage of biogas users who use slurry as a fertilizer. Explanation: Application of slurry to soil increases the quality of soil.	+
Other pollutants	N/A	N/A	N/A – neutral score	0

Biodiversity	N/A	The project will indirectly contribute to enhancement of biodiversity and nature conservation through reduction of pressure on natural habitats in Kenya resulting from deforestation by substitution of wood fuels with biogas (MDG 7). However, the impact on biodiversity is indirect and will therefore not be monitored	N/A – neutral score	0
Quality of employment	N/A	The project will provide vocational training programs to employees, helping them to acquire new technical skills and knowledge which can help to reduce poverty. (MDG 1).	Parameter: number of masons attending training programmes Explanation: Those attending the trainings will acquire new technical skills and knowledge.	+
Livelihood of the poor	N/A	Households will have a lower annual expenditure due to a reduced need to purchase non-renewable biomass and fossil fuels used for cooking and artificial fertilisers. (MDG 1).	Parameter: Percentage of users reporting changes in expenditure on fuel for cooking Explanation: the biogas produced from the digesters is used as a source of cooking fuel and will reduce the need to purchase alternative fuels.	+
Access to affordable and clean energy services	N/A	With the construction of biogas units, an affordable and clean energy source will be available to farmers from a cost-effective technology subsidised by carbon finance. Reduced dependency on non-renewable biomass and fossil fuels (MDG 1).	Parameter: Number of biogas units installed. Explanation: The number of biogas units installed will indicate that the project has successfully promoted access to affordable and clean energy services.	+
Human and institutional capacity	N/A	Biogas raises awareness on clean energy and the harms of deforestation and environmental pollution (MDG 7). However, the project is not otherwise considered to have a significant impact on human and institutional capacity	N/A – neutral score	0
Quantitative employment and income generation	N/A	The project will provide employment for local masons and supervisors with KENDBIP Implementing Partners and within supplier organisations. Installers will get paid per commissioned biogas unit, which enables them to gain permanent and independent salaries. The increasing demand for biogas in	Parameter: Number of employees in the project Explanation: indicates income generation benefits of the project	+

		Kenya creates job security for the masons. (MDG 1).		
Balance of payments and investment	N/A	Micro credit and upfront financing with assistance of local banks and saving credit co-operations is possible (MDG 1).	N/A – neutral score	0
Technology transfer and technological self-reliance	N/A	The wide range of biogas units to be included under the domestic biogas PoA have all been adapted to Kenya. The project therefore promotes technology transfer, which contributes to and enhances the local knowledge base. With sufficient training through BCEs, local masons are able to construct a biogas unit themselves and train more independent masons on construction and maintenance. (MDG 9).	Parameter: Number of attendees at vocational trainings. Explanation: the Programme will build vocational knowledge in the domestic biogas sector, which was previously absent.	+

Comments accompanying own sustainable development matrix

No additional comments

2015 LSC

No additional relevant indicators were identified as part of the 2015 LSC.

D. 2. Stakeholders Blind sustainable development matrix

2011 LSC

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Air quality	N/A		Number of systems installed. Reduction in diseases caused by indoor air pollution.	+: Improves air quality in houses reducing the rates of disease.
Water quality and quantity	N/A		N/A – neutral score	0: Some water is required to mix with the feedstock, but decreased deforestation will improve watersheds. If improperly constructed effluent could leak into

				ground water
Soil condition	N/A		N/A – neutral score	0: If biogas digesters are of poor quality then there could be leakage of effluent into the soil, but Trees prevent soil erosion and preserve the topsoil, keeping it fertile. Bio-slurry will increase soil fertility.
Other pollutants	N/A		N/A – neutral score	0: No other pollutants were identified
Biodiversity	N/A		N/A – neutral score	0: By reducing wood fuel consumption it helps preserve the natural habitat and cycles of plants, insects, birds and in general of the local biosphere. The relative scale of the project however means there will be little overall impact.
Quality of employment	N/A		N/A – neutral score	0: Biogas should create better high paying jobs for masons. However these jobs will be self-employed so there is no guarantee of the permanence.
Livelihood of the poor	N/A		None suggested	+: The cost of a biogas system is inaccessible to the very poor, but those who can afford a biogas system they will save significantly on their fuel expenditure
Access to affordable and clean energy services	N/A		Number of households having biogas systems	+: The cost of a biogas system is still too high for many farmers; but the biogas system can provide energy independence for farmers and households. Especially as the price of charcoal is increasing.
Human and institutional capacity	N/A		N/A – neutral score	0: Training people to construct digesters will increase their capacity
Quantitative employment and income generation	N/A		N/A – neutral score	0: If the project is very successful it could be negative for charcoal vendors and suppliers of traditional wood fuels. However, Employment of masons and profitable business. Employment for the producers of the biogas appliances.
Balance of payments and investment	N/A		N/A – neutral score	0
Technology transfer and technological self-reliance	N/A		Number of households with biogas systems	0: No real technology transfer, but enables households to be self-reliant for fuel.

Comments resulting from the stakeholders blind sustainable development matrix

Comments from stakeholders are provided both in the minutes and in section (iii) Assessment of all comments above.

Give analysis of difference between own sustainable development matrix and the one resulting from the blind exercise with stakeholders. Explain how both were consolidated.

The preliminary scoring of the SD assessment parameters was almost exactly the same for both our own SD assessment and the blind assessment. Our own assessment, however, had scored more positively on some impacts, as detailed below.

Soil condition: Stakeholders identified both positive and negative impacts on soil erosion, finally scoring this neutral as a result. They identified that if the biogas digesters were of poor quality they could leak effluent into the soil, but that trees prevent soil erosion and preserve the topsoil, keeping it fertile. They also identified that bioslurry will increase soil fertility. Since more positive impacts than negative were identified, the final score was positive. In addition, whilst leakage of effluent is a risk, we strive to produce good-quality biogas digesters that function well, thereby minimizing this risk.

Quality of employment: during the stakeholder consultations, stakeholders identified that masons are self-employed and that whilst the programme will provide work for masons, it was not guaranteeing permanence for them. The impact was therefore scored neutral. However, the quality of employment parameter is about how well qualified the work is, with any training provided given as a suggested monitored parameter in Annex I (v2.2). Since masons are provided with training programmes to help them to acquire new skills, this parameter was scored positive.

Quantitative employment and income generation: stakeholder scored this neutral since the project could result in reduced business for charcoal vendors and suppliers of traditional wood fuels. However, since the project is aiming to promote sustainable development through a shift to cheaper, cleaner fuels this was scored positive in the final assessment.

Technology transfer and technological self-reliance: stakeholder scored this neutral by concluding that there was no real technology transfer. However, the programme will build vocational knowledge in the domestic biogas sector which was previously absent. It was therefore scored positive in the final assessment

The suggested monitoring parameters put forward by the blind SD matrix were used as the monitored parameters in the consolidated sustainable development matrix.

2015 LSC

No additional relevant indicators were identified as part of the 2015 LSC.

D. 3. Consolidated sustainable development matrix

2011 LSC

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
Air quality	N/A	The project will lead to the reduction in indoor air pollution caused by the combustion of fuelwood and charcoal, through their substitution with biogas. The health situation especially for women and children will therefore be improved significantly (MDG 5&7).	Parameter: Perceived improvement in health by the user (incidence of eye problems and respiratory illness) Explanation: Less indoor smoke will reduce incidence of respiratory health problems, especially for women and children who spend more time near the hearth.	+
Water quality and quantity	N/A	Whilst the operation of a biogas unit requires a certain amount of water, which will be fed into the digester together with cow dung (ratio 1:1), the project will contribute to the protection of water resources through reduced deforestation (MDG 7).	N/A – neutral score	0
Soil condition	N/A	The substitution of fuel wood with biogas will indirectly contribute to a reduction in soil erosion by reducing deforestation. The slurry generated from biogas units can be used as high value fertiliser (MDG 7).	Parameter: Percentage of biogas users who use slurry as a fertilizer. Explanation: Application of slurry to soil increases the quality of soil.	+
Other pollutants	N/A	N/A	N/A – neutral score	0
Biodiversity	N/A	The project will indirectly contribute to the enhancement of biodiversity and nature conservation through reduction of pressure on natural habitats in Kenya resulting from deforestation by substitution of wood fuels with biogas (MDG 7). However, the impact on biodiversity is indirect and will therefore not be monitored	N/A – neutral score	0
Quality of employment	N/A	The project will provide vocational training programs to employees, helping them to acquire new technical skills and knowledge which can help to reduce	Parameter: number of masons attending training programmes	+

		poverty (MDG 1).	Explanation: Those attending the trainings will acquire new technical skills and knowledge.	
Livelihood of the poor	N/A	Households will have a lower annual expenditure due to a reduced need to purchase non-renewable biomass and fossil fuels used for cooking and artificial fertilisers (MDG 1).	Parameter: Percentage of users reporting changes in expenditure on fuel for cooking Explanation: the biogas produced from the digesters is used as a source of cooking fuel and will reduce the need to purchase alternative fuels.	+
Access to affordable and clean energy services	N/A	With the construction of biogas units, an affordable and clean energy source will be available to farmers from a cost-effective technology subsidised by carbon finance. Reduced dependency on non-renewable biomass and fossil fuels (MDG 1).	Parameter: Number of biogas units installed. Explanation: The number of biogas units installed will indicate that the project has successfully promoted access to affordable and clean energy services.	+
Human and institutional capacity	N/A	Biogas raises awareness on clean energy and the harms of deforestation and environmental pollution (MDG 7). However, the project is not otherwise considered to have a significant impact on human and institutional capacity	N/A – neutral score	0
Quantitative employment and income generation	N/A	Due to the high number of biogas units, the impact on local employment will be significant. The employment will contribute improved livelihoods (MDG 1).	Parameter: Number of employees in the project Explanation: indicates income generation benefits of the project	+
Balance of payments and investment	N/A	Micro credit and upfront financing with assistance of local banks and saving credit co-operations is possible (MDG 1).	N/A – neutral score	0
Technology transfer and technological self-reliance	N/A	The wide range of biogas units to be included under the domestic biogas PoA have all been adapted to Kenya. The project therefore promotes technology transfer, which contributes to and enhances the local knowledge base. With sufficient training through BCEs, local masons are able to construct a biogas unit themselves and train more independent masons on construction and maintenance. (MDG 9).	Parameter: Number of masons attending training programmes Explanation: the Programme will build vocational knowledge in the domestic biogas sector, which was previously absent.	+

Justification choices, data source and provision of references

A justification paragraph and reference source is required for each indicator, regardless of score

Air quality	In 2004, indoor air pollution caused as a result of the combustion of solid and fossil fuels was responsible for an estimated 2 million deaths[3]. The installation of biodigesters allows the use of biogas as a fuel, thereby providing clean, renewable energy to households. The combustion of biogas will significantly reduce the presence of harmful indoor air pollution[4,5], thereby benefitting the health of residents, especially women and children who spend the most time indoors.
Water quality and quantity	There is no release of pollutants into any kind of water as part of the manufacturing and operation of biogas systems. While a small amount of water is required to be mixed with manure this is a relatively insignificant amount. The project will contribute to the protection of water resources through reduced deforestation
Soil condition	The biogas digesters will produce slurry as part of the anaerobic digestion of waste. This slurry has a considerably higher fertility than direct application of manure to the field[6,7] and is provided free of charge to farmers as a by-product of biogas production. In many cases across East Africa soils can become degraded due to continued harvests. The application of slurry to agricultural soils can therefore help to improve soil condition through increasing organic content. Alternatively, any farmers who have an excess of slurry, or who opt not to apply it to their soils, could sell their slurry to other farmers locally; thereby further helping to offset biogas digester installation costs.
Other pollutants	No other pollutants are anticipated from the project.
Biodiversity	Reducing the pressure on forests for wood fuel production has a positive effect on the rate of deforestation and therefore the loss of biodiversity. However, the impact on biodiversity is indirect and has therefore been scored neutral.
Quality of employment	The project will provide vocational training programs[8] to employees, helping them to acquire new technical skills and knowledge. Training will ensure that the construction/installation of the biogas system is done by competent persons. Employees will receive a training certificate and records will be kept of all persons attending trainings.
Livelihood of the poor	Dependence on polluting and inefficient household fuels and appliances is both a cause and a result of poverty. In Kenya, the cost of charcoal has increased by 60% over the past decades, while the price of firewood has gone up from 9 to 61 KSh (Kenya Shillings) [9]. This is supported

[3] WHO (2010) Health in the green economy: Co-benefits to health of climate change mitigation [online] available at: http://www.who.int/hia/hgebrief_henergy.pdf

[4] WHO (2010) Health in the green economy: Co-benefits to health of climate change mitigation [online] available at: http://www.who.int/hia/hgebrief_henergy.pdf

[5] Dohoo, C.; Guernsey, J. R.; Gibson, M. D. and VanLeeuwen, J. (2013) Impact of biogas digesters on cookhouse volatile organic compound exposure for rural Kenyan farmwomen, *Journal of Exposure Science and Environmental Epidemiology*, 1 – 8.

[6] See for example: Islam et al. (2010) The effects of biogas slurry on the production and quality of maize fodder, *Turk J Agric For*, 34, pp 91 -99; Kurchania, A.K. and Panwar, N.L. (2011) Experimental investigation of an applicator of liquid slurry, from biogas production, for crop production, *Environmental Technology,* 32 (8), pp. 873 – 878.

[7] De Groot, L. and Bogdanski, A. (2013) Bioslurry = Brown Gold? A review of scientific literature on the co-product of biogas production. Food and Agriculture Organizaion of the United Nations.

[8] As specified in the PoA-DD, section A.4.2.2

[9] Page 95, Ministry of Energy, Study on Kenya's Energy Demand, Supply and Policy Strategy for Households, Small Scale Industries and Service Establishments, 2002

	more recently, 2004 -2012, by the Kenya Bureau of Statistics Consumer Price Index (CPI) Monthly Reports[10]. The use of biogas as a renewable source of fuel will lower annual expenditure due to a reduced need to purchase fuelwood and charcoal.
Access to affordable and clean energy services	Compared to the baseline scenario householder's access to safe and affordable energy will be considerably improved. Biogas fuel will be available at the simple turn of a knob, requiring no laborious and time-consuming collection of fuelwood and no costs beyond initial setup other than for maintenance. As long as the biogas digester is used and maintained properly, a secure supply of biogas will be provided.
Human and institutional capacity	Education is not addressed by the project. Other impacts on capacity building like training on the job are mentioned under other indicators.
Quantitative employment and income generation	The construction and maintenance of digesters will result in the creation of important employment opportunities in rural and urban areas. The overall development objective of the Programme is to promote and disseminate domestic biogas systems as a local, sustainable energy source through the development of a commercial, market oriented sector that focuses its implementation through a multi-stakeholder sectoral development approach that involves locally trained contractors and masons who are supported by vocational training institutions. The program aims to create new jobs and a new business sector, therefore also creating opportunities for entrepreneurs to enter the market.
Balance of payments and investment	Investment in the projects will be on the local level and are important in the context of specific rural economies. However at the national level the project investments are not significant.
Technology transfer and technological self-reliance	The open market approach offers opportunities for locals to train in biogas system installation and maintenance. Households can also be energy independent following the installation of a biogas system.

2015 LSC

No new consolidated sustainable development matrix was developed as part of the 2015 LSC

SECTION E. SUSTAINABILITY MONITORING PLAN

E. 1. Discussion on Sustainability monitoring Plan

2011 LSC

Discuss stakeholders' ideas on monitoring sustainable development indicators. Do people have ideas on how this could be done in a cost-effective way? Are there ways in which stakeholders can participate in monitoring?

Stakeholders had some ideas on how to monitor the effect of the project on some sustainable development indicators (such as using the number of systems installed to determine an improvement in air quality). However, discussions on how this could be done in a cost-effective manner were not elaborated.

[10] The Kenya Bureau of Statistics has made publically available CPI reports from January 2004 – July 2012, of the 28 reports that specifically mention the price of charcoal, 27 indicate the price is increasing significantly.

2015 LSC

The sustainability monitoring plan was not discussed as part of the 2015 LSC.

E. 2. Discussion on continuous input / grievance mechanism

Discuss the Continuous input / grievance mechanism expression method and details, as discussed with local stakeholders.

	Method Chosen (include all known details e.g. location of book, phone, number, identity of mediator)	**Justification**
Continuous Input / Grievance Expression Process Book	A Process Book in the form of an excel spreadsheet where all customer comments are logged is available and actively used. This includes details of the comments received, from who, who is responsible for following up and whether the issue is addressed or not.	Since it is expected that most feedback will come via telephone, and customers are located across Kenya it does not make sense to have a physical log book. An online excel sheet will be used instead, and allows KBP staff to better track issues that are still open and customer complaints.
Telephone access	Stakeholders will be able to call to provide input on the project's performance at any time. The numbers available to call include: Landline:+254 020 218 0608 /218 0648 Mobile phone: 0719 635 516; 0723 903 957	The provided number includes a mobile phone number to enable users to either call or text their comments to ABPP. Mobile phone use is the primary means of communication nationwide, especially since landlines are expensive. Since almost everyone in Kenya has a mobile phone, or access to one, it is expected that the majority of feedback will come via telephone.
Internet/email access	Stakeholders will be able to provide continuous input/feedback via the following email address: Email: info@kbp.co.ke or info@goldstandard.org; Website: http://kenyabiogas.com	For users with access to the internet, direct contact with the ABPP through the programme's website is important.
Nominated Independent Mediator (optional)	Not included	Given that all three other methods of providing feedback are provided, it was not deemed necessary to also include a Nominated Independent Mediator.

SECTION F.	DESCRPTION OF THE DESIGN OF THE STAKEHOLDER FEEDBACK ROUND

2011 LSC

A Stakeholder Feedback Round was organized from 9th January to 9th March 2015. Stakeholders were invited to review the LSC Report, PDDs and Passports for the PoA and VPA . All stakeholders that were invited to the original LSC meeting were sent the invitation letter shown in the figure below (Figure 1). A screenshot of the email sent to stakeholders (Figure 2) is also provided.

Figure 1: Copy of the letter sent to stakeholders soliciting their feedback as part of the Stakeholder Feedback Round.

Hivos
people unlimited

9th January 2015

Dear Sir/ Madam,

Hivos takes this opportunity to invite you to participate in the **Stakeholder Feedback Round of the African Biogas Carbon Programme**, which is currently being developed as an emission reduction project, also known as '**Programme of Activities**'. The first project activity to be included under this 'Programme of Activities' is the Kenya National Domestic Biogas Programme (KENDBIP) implemented by the Kenya National Farmers' Federation (KENAFF) – formerly known as KENFAP.

As part of the carbon certification process overseen by the Gold Standard Foundation, relevant stakeholders are presented with the opportunity to provide feedback on the general programme design through two separate rounds of stakeholder consultations. The first round was the Local Stakeholder Consultation, which was organized by the Ugandan Carbon Bureau on 19th October 2011 in Nairobi. Please note that back then the programme was called the African Clean Energy Switch – Biogas (ACES-Biogas). The name has since been changed to the African Biogas Carbon Programme as the programme is now managed by the African Biogas Partnership Programme (ABPP), but otherwise remains identical in terms of design and impact to what was presented during the aforementioned meeting.

The second consultation is this Stakeholder Feedback Round, which is not a physical meeting but happens through outreach by email or phone. The purpose of this Stakeholder Feedback Round is to share with you the final documentation and project design of the African Biogas Carbon Programme.

Hivos would hereby like to share with you the following documentation for your perusal:
a) The Local Stakeholder Consultation report;
b) The revised Project Design Documentation for the overall Programme and the first Project Activity;
c) The respective Gold Standard Passports

The documents can be accessed online here: https://east-africa.hivos.org/african-biogas-carbon-programme-stakeholder-feedback-round

Kindly provide us with any comments that you may have from the deliberations received during the Local Stakeholder Consultation meeting held on 19th October 2011, on how the same have been incorporated by the programme to date. Any outstanding concerns or suggestions that you may have about the programme will also be welcome. This feedback can be sent back to us to Absolom Wanjala via email address awanjala@hivos.or.ke or through telephone numbers +254725451729 and +254789451729.

You are encouraged to take a look at the *'Minutes of physical meeting'* and *'Assessment of all comments'* sections in the Local Stakeholder Consultation report, as well as the sections pertaining to the Local Stakeholder Consultation in the Project Design Documents. Furthermore, please take a look at the *'Discussion on continuous input / grievance mechanism'* section (E.2) that describes ways future comments about the programme will be handled. This was not previously discussed during the Local Stakeholder Consultation meeting held in October 2011. Your feedback on the suggested measures will be welcomed.

If you prefer to receive electronic copies of these files through email as an attachment, please do let us know. Furthermore, hardcopies of these files are also available at Hivos Regional Office East Africa, ACS Plaza, 3rd Floor, Lenana Road, P.O. Box 19875 00202 Nairobi, Kenya. This consultation round is open for a period of two months, meaning that we await your feedback **before 9th March 2015.**

Please do call us on +254725451729 or +254789451729 or contact us via email awanjala@hivos.or.ke in case you have any further questions on this Feedback Round.

We thank you for your valued contribution.

Yours faithfully,

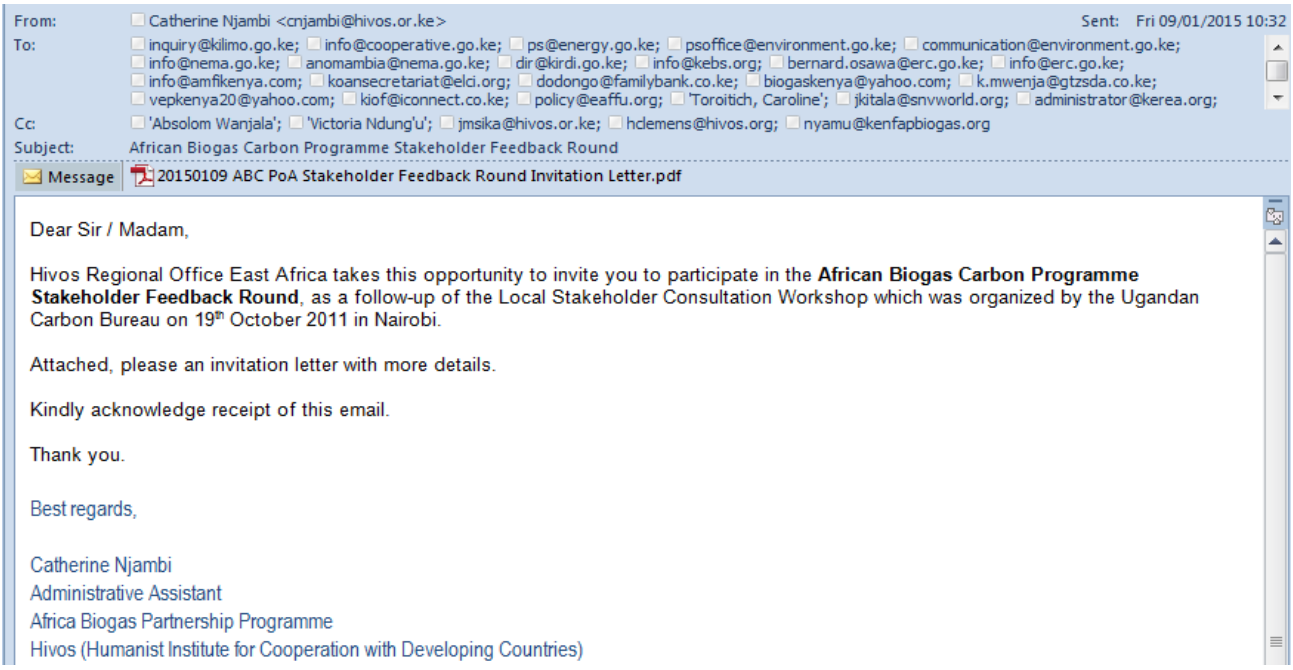
Jean Marc Sika
ABPP Fund Manager

cc/

Humanist Institute for Co-operation with Developing Countries

Hivos Foundation
| ACS Plaza| 3rd Floor | Lenana Road| Nairobi |
P.O. Box 19875| 00202 Nairobi | Kenya
T +254 789 451 729, +254 725 451 729
| www.hivos.org | https://east-africa.hivos.org

Figure 2: Screenshot of email sent to stakeholders soliciting their feedback



From: Catherine Njambi <cnjambi@hivos.or.ke> Sent: Fri 09/01/2015 10:32

To: inquiry@kilimo.go.ke; info@cooperative.go.ke; ps@energy.go.ke; psoffice@environment.go.ke; communication@environment.go.ke; info@nema.go.ke; anomambia@nema.go.ke; dir@kirdi.go.ke; info@kebs.org; bernard.osawa@erc.go.ke; info@erc.go.ke; info@amfikenya.com; koansecretariat@elci.org; dodongo@familybank.co.ke; biogaskenya@yahoo.com; k.mwenja@gtzsda.co.ke; vepkenya20@yahoo.com; kiof@iconnect.co.ke; policy@eaffu.org; 'Toroitich, Caroline'; jkitala@snvworld.org; administrator@kerea.org;

Cc: 'Absolom Wanjala'; 'Victoria Ndung'u'; jmsika@hivos.or.ke; hclemens@hivos.org; nyamu@kenfapbiogas.org

Subject: African Biogas Carbon Programme Stakeholder Feedback Round

Message 20150109 ABC PoA Stakeholder Feedback Round Invitation Letter.pdf

Dear Sir / Madam,

Hivos Regional Office East Africa takes this opportunity to invite you to participate in the **African Biogas Carbon Programme Stakeholder Feedback Round**, as a follow-up of the Local Stakeholder Consultation Workshop which was organized by the Ugandan Carbon Bureau on 19th October 2011 in Nairobi.

Attached, please an invitation letter with more details.

Kindly acknowledge receipt of this email.

Thank you.

Best regards,

Catherine Njambi
Administrative Assistant
Africa Biogas Partnership Programme
Hivos (Humanist Institute for Cooperation with Developing Countries)

Feedback was received from the Rwandan DNA on 09 January 2015. This was regarding the change in the name of the programme from the African Clean Energy Switch-Biogas Carbon Programme to the African Biogas Carbon PoA (ABC). We clarified that this was not infact a change in the name of the PoA, but instead the registration of a new PoA entitled 'African Biogas Carbon Progamme (ABC)'. We clarified that the ACES Biogas PoA remains registered under the CDM.

No further feedback on the programme was received, so no further changes to the programme have been made.

2015 LSC

Hivos will carry out a Stakeholder Feedback Round for the Kenya VPA006, seeking feedback from stakeholders through electronic communication.

ANNEX 1. ORIGINAL PARTICIPANTS LIST

2011 LSC

Please see the VPA 1 Local Stakeholder Consultation Report.

2015 LSC

BIOSLURRY LSC WORKSHOP

Attendance List.

SN	Name	Organization	Mobile No.	Email	Sign
1	Joseph Lwannia	BUCODEV-BUSIA	0717730322	lwannia.joseph@yahoo	
2	JAMES WANJOHI	P.I.O.R	0770368107	jimwanjohi@gmail.com	
3	Victoria Ndungu	HIVOS	0715 99 33 39	Vndungu@hivos.org	
4	LIBAISI JUMA	SNV	0729332666	jlibaisi@snvworld.org	
5	OKOTH MAX OKOTH	K.B.P	0711745529	Jthepoetstouch@hotmail.com	
6	BONIFACE KATEI	Doctor Creations	0700584170	thedoctorcreations@hotmail.com	
7	Stephen G. Gikonyo	Kenvo-CBIF Project	0725 635 053	gikonyo 2012 @yahoo.com	
8	Austin Omutto	NEMA	0727377735	austinomutto@gmail.com	
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11	Roda Blows	KENAFF	0721203446	[illegible]	
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17	Peter Gathu	KENAFF	0726930328	[illegible]@kenafforg	
18	Tabby Karanja-Lumumba	HIVOS	0722490978	tkaranja@hivos.org	
19	Prof Daudi M. Nyaanga	EGERTON	0721 285 231	dunyaanga@gmail.com	
20	Paul Madoc	KENTAINERS LTD	0733206372	paul_[illegible]@kentainers.co.ke	
21	Catherine Njambi	HIVOS-ABPP	254733715716	CNjambi@hivos.org	Catherine
22	OLIVER ESHIEMI	UPENDO ENERGY	0772825727	[illegible]@yahoo.com	
23	John Makori	ADLP	0729577023	makorijohn2@gmail.com	
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25	KENNEDY OYOLE	TWINLAB E.A.	0722579855	[illegible]@gmail.com	
26	Simon NJUGUNA	Farmer-[illegible]	0722977993	[illegible]	
27	Jones IRERI	BIO-INTENSIVE A.T.C	0726687306	Biomeag@yahoo.com	

28	George Maina	MUGANA DAIRY SOCIETY	0714683608	mainageorge@yahoo.com	[illegible]
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30	Paul Mwaniki	[illegible]	0720248523	[illegible]	[illegible]
31	Maina Christopher	[illegible]	0722987198	[illegible]	[illegible]
32	Collins Odhiambo [illegible]	KENAFF	[illegible]	[illegible]	[illegible]
33	Elizabeth Wanjiru Mbugua	KCCWG	0720423695	[illegible]	[illegible]
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35	Willem Warjala	Hivos	0731166076	[illegible]@hivos.org	[illegible]
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37	HARRY CLEMENS	HIVOS	0031703765500	hclemens@hivos.org	[illegible]
38	Andre Etuw	SAI		[illegible]	[illegible]
39	Raphael OKOTH	Millward Brown	0724917534	raphaberi@gmail.com	RL
40	Walter Tinega	K-Rep Dev. Agency	0728536750	[illegible]	[illegible]
41	Francis D. [illegible]	Kisumu	0720654329	[illegible]@gmail.com	[illegible]
42	Pamela Omao	MEWNR [illegible]	0728455571	[illegible]	[illegible]
43	LABAN OKEYO	SCODE – NAKURU	0725138950	[illegible]	[illegible]
44	Ambrose Otieno	[illegible]	0710827762	[illegible]	[illegible]
45	DOREEN IRUMBU	TKUAT	0726354697	[illegible]	[illegible]
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49	Daniel Wanjohe	Seed. [illegible]	0721165668	[illegible]	[illegible]
50	JOSEPH KURIA	CIDES Ltd	0722689564	josephcides@gmail.com	[illegible]
51	CHARLES NGURE MWANGI	KENBE ENTERPRISES	[illegible]	[illegible]	[illegible]
52	DAVID OTOO	ABC-K	0723114094	damwe.org@gmail.com	[illegible]
53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
54	Murage Otero	Muranga Farmers	0712873171	[illegible]@gmail.com	[illegible]
55	Job J. Maube	[illegible]	0753208908	[illegible]	[illegible]
56	SUSAN MUTU NUUA	[illegible] – Farmers	0728567598	[illegible]	[illegible]
57	Elias Githae	KAPA Kitale	0722235109	elias.githae@[illegible]	[illegible]
58	JULIUS OLWENO	Kwamza [illegible]	[illegible]	[illegible]	[illegible]
59	Kanda Mwenja	GIZ – EnDev	0721348999	[illegible]@giz.de	[illegible]

BIOSLURRY LSC WORKSHOP

Attendance List.

SN	Name	Organization	Mobile No.	Email	Sign
1	CLEMENT ARGWINGS AKUA	UYOMA FARMERS SOC-	0708169158	kodhek2001@yahoo.com	[signature]
2	TOBIAS MHANDO	FARM STRENGTHENING INIT	0785-407480	mhandot@yahoo.com	[signature]
3	GEORGE KIMGU	RURAL FARMERS [illegible]	07[illegible]578353	[illegible]	[signature]
4	DONALD W. OTIAMBO	CDF-AFRICA	0722 771 078	[illegible]	[signature]
5	Jeremiah Nyangonyi	[illegible] Social Hall	0722 952834	[illegible]	[signature]
6	Kennedy [illegible]	KGN CFC	0751[illegible]7038	[illegible]	[signature]
7	GITONGA J. T	MoEP	0734574821	[illegible]@yahoo.com	[signature]
8	RAPHAEL ALLOO	Royal Magazine	0722 403 515	royalmagazine14@gmail.com	[signature]
9	MARTIN GUMBA ALUINGU	Royal Magazine	0718 510 995	royalmagazine14@[illegible]	[signature]
10	FRED MELWA	C.R.U.D	0724432215	[illegible]@yahoo.com	[signature]
11	Fredrick Olango	MSCA	0719832131	mediastandard[illegible]@gmail.com	[signature]
12	Leonard Mbithi	ERP	0720317403	envirrangers@gmail.com	[signature]
13	[illegible] Nyang[illegible]	Dibizec	0722 [illegible]901	[illegible]	[signature]
14	JAMES M. KAKWAMI	FARMER	0726900276	jkagwami@yahoo.com	[signature]
15	SIMON KARENI FR.	FARMER	0722987153	[illegible]	[signature]
16	DAVID KIPKOECH KITUR	[illegible] FARMERS ASS.	0720382209	Kipkemoi[illegible]@yahoo.com	[signature]
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ANNEX 2. ORIGINAL EVALUATION FORMS

2011 LSC

Please see the VPA 1 Local Stakeholder Consultation Report

2015 LSC