

# INTEGRATED SAFEGUARDS DATA SHEET CONCEPT STAGE

**Report No.:** ISDSC14862

**Date ISDS Prepared/Updated:** 24-Mar-2015

**Date ISDS Approved/Disclosed:** 03-Sep-2015

## I. BASIC INFORMATION

### A. Basic Project Data

<b>Country:</b>	Kenya	<b>Project ID:</b>	P153493
<b>Project Name:</b>	Promoting Biogas as Sustainable Clean Cooking Fuel for Rural Households in Kenya (P153493)		
<b>Task Team Leader(s):</b>	Edward Felix Dwumfour, Juha Antti Kalevi Seppala		
<b>Estimated Board Date:</b>	09-Nov-2015		
<b>Managing Unit:</b>	GEN07		
<b>Sector(s):</b>	Other Renewable Energy (100%)		
<b>Theme(s):</b>	Climate change (100%)		
<b>Financing (In USD Million)</b>			
<b>Total Project Cost:</b>	7.00	<b>Total Bank Financing:</b>	0.00
<b>Financing Gap:</b>	0.00		
<b>Financing Source</b>		<b>Amount</b>	
Borrower		0.00	
Carbon Fund		7.00	
Total		7.00	
<b>Environmental Category:</b>	B - Partial Assessment		
<b>Is this a Repeater project?</b>	No		

### B. Project Objectives

Reduction of GHG emissions from improved access to biogas energy as a clean cooking fuel in livestock-owning rural households in Kenya.

### C. Project Description

The project's objective would be to promote the use of biogas as clean cooking fuel in livestock-owning rural households in Kenya. The program has set up hub offices in Nakuru, Eldoret and

Karatina to be possibly followed by Central, North and South Rift areas. Hub offices serve an area with a radius of 50 km. These distribution points are selected close to dairy farmers, which are a main target group. Thus, the biodigesters will be made available to households in a coordinated fashion to ensure there is access to maintenance hubs within 50 km of the installation location.

With a funding amount of US\$7.0 million, the project proposes to reach out to about 6,000-8,000 HHs every year between 2015 and 2024. The project would have multiple development benefits resulting from substitution of firewood for cooking by clean biogas. These multiple benefits would include reduced forest degradation and desertification, improved indoor air quality (from reduced indoor smoke exposure), improved health and reduced hardship for women and children who are primarily engaged in the collection of firewood in rural areas, increased income and social welfare improvement for rural HHs, creation of small scale business enterprises, along with contribution to climate change mitigation.

The proposed project is part of the National Biogas Promotion Program KENDBIP (Kenyan Domestic Biogas Programme), which in turn is part of the larger Africa Biogas Partnership Programme (ABPP). ABPP has a target of 100,000 systems installed in Ethiopia, Kenya, Tanzania, Uganda, and Burkina Faso and providing half a million people access to a sustainable source of energy by the year 2017. The KENDBIP program was initiated in Kenya in 2009 with an overall goal of developing a commercially viable biogas sector in Kenya. Since 2009 to 2013 the program has managed to install over 11,000 biogas plants of the traditional brick-laid design. The second phase of the program runs from 2014 to 2017 with a target of installing 27,500 digesters of both traditional and advanced innovative designs, such as the one promoted by this proposed program.

Biogas systems convert manure and/or organic household waste into methane gas. This gas can be directly used for cooking. The technology is well-known in Sub-Saharan Africa and Asia, but traditional brick-laid designs are challenging for large scale implementation. Initially, two types of biogas systems—the float-drum type and the fixed dome type have been promoted. Although these systems have been successful elsewhere, adoption in Kenya has been minimal because of expensive installation costs. SimGas, a private company, has pioneered a new and innovative design for a biogas system unlike the traditional designs implemented elsewhere in Africa and the developing world. Unlike traditional biogas systems targeting households, the SimGas system is an innovative in design, is easy to install and can be mass produced to meet the consumer demand quickly. Also, the system is made of recycled molded plastic that makes it affordable to users which should also allow for a longer operating life than traditional brick laid designs. SimGas has developed two proprietary designs of biogas systems: GesiShamba and GesiSafi. GesiShamba is for rural households and GesiSafi for urban users. The rural Gesi Shamba system is modular and scalable in 1m<sup>3</sup> segments from the minimum size of 2m<sup>3</sup> even after installation, should the need or opportunity to produce more biogas arise in a household.

SimGas is the Coordinating/Managing Entity (C/ME), which has developed the Clean Development Mechanism (CDM) Program of Activities (PoA) “SimGas Biogas Programme of Activities”, registered under the UNFCCC on December 21, 2012. The first CDM Project Activity (CPA) covering 4,000 rural digesters and 6,000 urban digesters is already being implemented. Additional CPAs would be included in the PoA once all digesters under the first CPA have been installed. The project is already generating emission reductions from the biodigesters installed after the registration of the PoA

Through a carbon finance transaction, the World Bank as Trustee of the Carbon Initiative for

Development (Ci-Dev) intends to purchase carbon credits (Certified Emission Reductions, CERs) from the CME which are generated by individual households' biogas units under the CDM-PoA. Carbon payments allow SimGas to sell biogas systems at a discount to consumers and offer a warranty during the lifetime of the CDM PoA, supporting the expansion of access to biogas energy in rural Kenya.

**D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)**

The households throughout Kenya have an opportunity to participate in the program.

**E. Borrowers Institutional Capacity for Safeguard Policies**

Minor negative environmental or social impacts are anticipated during project implementation. The training materials produced for the household level will include safety and waste management information. The training on use of the technology will be conducted in Swahili and English with an emphasis to women to ensure their full participation in the project.

**F. Environmental and Social Safeguards Specialists on the Team**

Svetlana Khvostova (GENDR)

**II. SAFEGUARD POLICIES THAT MIGHT APPLY**

<b>Safeguard Policies</b>	<b>Triggered?</b>	<b>Explanation (Optional)</b>
Environmental Assessment OP/BP 4.01	Yes	The project will have small scale, site specific environmental impacts related to safety of the biodigesters operation and sludge management. SimGas will produce an EMF/EMP checklist to ensure that appropriate mitigation measures are incorporated into the training materials to be used at the household level.
Natural Habitats OP/BP 4.04	No	
Forests OP/BP 4.36	No	
Pest Management OP 4.09	No	
Physical Cultural Resources OP/BP 4.11	No	
Indigenous Peoples OP/BP 4.10	No	The participation of the households is demand driven, however, SimGas will ensure that the biodigester use materials are available to all ethnic groups that express interest in participating in the program (e.g. means and language of delivering the project information).
Involuntary Resettlement OP/BP 4.12	No	
Safety of Dams OP/BP 4.37	No	

Projects on International Waterways OP/BP 7.50	No	
Projects in Disputed Areas OP/BP 7.60	No	

### III. SAFEGUARD PREPARATION PLAN

**A. Tentative target date for preparing the PAD Stage ISDS:** 20-Apr-2015

**B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing<sup>1</sup> should be specified in the PAD-stage ISDS:**

SimGas will produce an EMF/EMP checklist to ensure that appropriate mitigation measures are incorporated into the training materials to be used at the household level. The EMF/EMP checklist will include a set of public consultations and will be disclosed in Kenya and in the World Bank InfoShop.

### IV. APPROVALS

Task Team Leader(s):	Name: Edward Felix Dwumfour, Juha Antti Kalevi Seppala	
<b><i>Approved By:</i></b>		
Safeguards Advisor:	Name: Johanna van Tilburg (SA)	Date: 13-Aug-2015
Practice Manager/ Manager:	Name: Magda Lovei (PMGR)	Date: 03-Sep-2015

<sup>1</sup> Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.