



## **NON-TECHNICAL SUMMARY**

### **PROJECT GAIA COOK STOVE PROGRAMME OF ACTIVITIES (POA)**

#### **Introduction**

In many developing countries the dependency on firewood and charcoal as a source of energy is very high<sup>1</sup>, with around 3 billion people combusting solid fuels in open fires to meet their cooking and heating needs<sup>2</sup>. As a result, indoor air pollution is one of the ten major threats to health globally, causing almost 2 million deaths annually due to solid fuel use<sup>3</sup>. In most cases, the collection of firewood and the production of charcoal is done illegally, thus, contributing to deforestation and forest degradation and also resulting in the emission of greenhouse gases.

#### **Description of the PoA**

Project Gaia Incorporation, a multinational non-governmental organization, is establishing a Cook stove Programme of Activities that will cover Ethiopia, Djibouti and Haiti, and will seek registration under the Gold Standard and the Clean Development Mechanism (CDM). The company has years of experience in assisting communities to become energy independent by creating the demand for ethanol for cooking. This is achieved through the provision of support for the establishment of locally owned micro-distilleries and the distribution of energy efficient ethanol stoves. Through the extensive experience in alcohol powered cook stoves, Project Gaia will act as the Coordinating/Managing Entity of the programme.

#### **Objective of the Programme of Activities (PoA)**

The programme will work towards the distribution of clean, safe and energy efficient cooking stoves powered by ethanol to households/communities in select African and South American countries. The stoves will replace traditional cooking stoves, which utilize firewood and charcoal and fossil fuel based stoves, which use kerosene for heat generation. The first component project activity (CPA) under the PoA will be implemented in Ethiopia while the second in Djibouti. Plans are underway to include the programme in Haiti and considerations also in place to expand the programme to other countries. For more information, visit the project website <https://projectgaia.com/about/>

Under the programme, Project Gaia Inc. will act as the Coordinating/Managing Entity (CME) or the owner of the programme and will be responsible for:

- Preparation of all the Gold Standard and CDM documentation
- Liaise with the Designated National Authorities and other government entities on matters related to the implementation of the PoA and inclusion of future CPAs
- Collection and compilation of data from each component project activity required for monitoring carbon reductions achieved e.g the number of stoves distributed under each CPA
- Coordination of monitoring activities and data management for each CPA
- Contracting an independent auditor to verify compliance with CDM and GS rules
- Preparation and submission of monitoring reports to determine the amount of carbon credits and facilitate the auditing of the same;
- Communication with the CDM and the GS on matters related to the PoA.

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<sup>1</sup> Food and Agriculture Organization: *Forests and Energy*, Rome: FAO. (2008)

<sup>2</sup> World Health Organization: *Indoor air pollution and health*, Fact sheet No. 292: WHO (2011)

<sup>3</sup> World Health Organization: *Indoor air pollution and health*, Fact sheet No. 292: WHO (2011)

### **Technology implemented**

The technology involves stoves that use ethanol to generate heat for cooking. The ethanol used by the stoves will be produced from sugar factories in Ethiopia. The stoves come in four model types; aluminum single burner stove, aluminum double burner stove, stainless steel single burner stove and stainless double burner stove as shown in Figure 1 and Figure 2 below respectively.

The stoves have a variable lifespan; with the Aluminum model having a lifespan of 6 years while the stainless steel model having 10 years. The canister capacity of the stoves is 1.2 liters with a burning duration of 4-5 hours at maximum heat and 9-10 hours at low heat.



**Figure 1: Double Burner Stove**

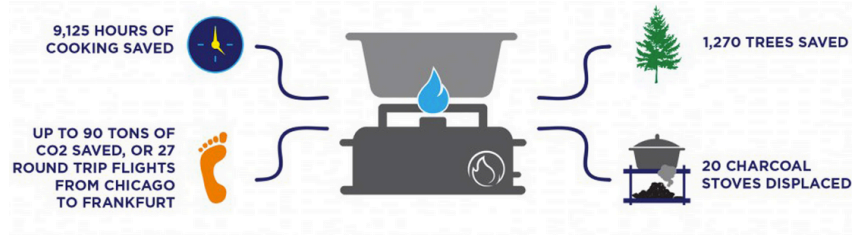


**Figure 2: Single Burner Stove**

### **Carbon credits**

Emissions reductions will be generated through replacing the use of wood and fossil fuels with ethanol, which is a renewable energy source of energy. The revenue from sale of these credits will be used to expand the programme to reach many end-users benefiting from the programme through the purchase of more stoves to be distributed under the programme.

The diagram below provides a simplified illustration of how emission reductions are achieved.



### **Contribution to Sustainable Development**

Besides generating carbon credits the project will have the following co-benefits:

- Provide clean and reliable source of energy for cooking purposes.
- Raise awareness of the safety, health, economic, and environmental benefits of alcohol fuels.
- Displace traditional polluting fuels by implementing community-based alcohol stove and fuel projects.
- Spur job creation by encouraging local production and commercialization of alcohol fuels and appliances.
- Replicate successful projects and increase energy access by sharing knowledge and resources with governments, the private sector, nonprofits, and other stakeholders.

### **Joining the PoA**

Individual projects (CPA) to be included under this PoA will be developed by Project Gaia Inc. Other projects interested in joining this PoA may also be considered. Contractual agreements between the CME and the CPA implementing entities will cover all the requirements for joining the PoA. These agreements will clearly define, among other things, the need for a CPA implementing entity to pay a joining fee.

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