



Sustainable Development Verified Impact Standard

KENYA JIKO KISASA IMPROVED COOKSTOVE PROGRAM I



冰川环境

Document Prepared by Guangzhou Iceberg Environmental Consulting
Services Co., Ltd.

Project Title	Kenya Jiko Kisasa Improved Cookstove Program I
Version	01
Date of Issue	24/08/2022
Project Location	The Republic of Kenya
Project Proponent(s)	Guangzhou Iceberg Environmental Consulting Services Co., Ltd.
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Project Lifetime	22/06/2022 – 21/06/2032; 10-year lifetime
History of SD VISTA Status	No previous attempts at SD VISTA certification made to date

Other Certification Programs	Verified Carbon Standard
Expected Future Assessment Schedule	

CONTENTS

1	SUMMARY OF SDG CONTRIBUTIONS	1
2	PROJECT DESIGN.....	4
2.1	Project Objectives, Context and Long-term Viability	4
2.2	Stakeholder Engagement	11
2.3	Project Management	17
3	BENEFITS FOR PEOPLE AND PROSPERITY	19
3.1	Condition of Stakeholders at Project Start	19
3.2	Expected Impacts on Stakeholders	20
3.3	Stakeholder Monitoring Plan	21
3.4	Net Positive Stakeholder Well-being Impacts.....	23
4	BENEFITS FOR THE PLANET	25
4.1	Condition of Natural Capital and Ecosystem Services at Project Start	25
4.2	Expected Impacts on Natural Capital and Ecosystem Services	26
4.3	Natural Capital and Ecosystem Services Monitoring Plan	26
4.4	Net Positive Natural Capital and Ecosystem Services Impacts.....	27
	APPENDIX	28

1 SUMMARY OF SDG CONTRIBUTIONS

Table 1: Summary of Project SDG Contributions

Row number	Estimated Project Contribution by the End of Project Lifetime	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Section Reference	Claim, Asset or Label
1)	Improved cookstove is a basic service necessary to lead a healthy and productive life, including saving time and money for wood fuel at the household level. The project proponent will distribute 100,000 improved cookstoves (hereinafter referred to as "ICSs"), and the ICSs are produced in local factory. So the implementation of the project will result in more job opportunity and more income.	1.1	1.1.1 Proportion of population below the international poverty line, by sex, age, employment status, and geographical location (urban/rural).	Implement activities to decrease	3.2, #4	Claim
2)	The project will improve food security and nutrition status, particularly for children and women by reducing inadequate cooking, the burden of firewood collection, the time to prepare food, the cost to buy firewood.	2.1	2.1.1 Prevalence of undernourishment.	Implement activities to decrease	3.2, #1	Claim
3)	By using ICS, it will reduce people's exposure to high PM2.5 and high CO due to higher efficiency of combustion leading to faster cooking and more complete combustion. It will also reduce the burn	3.2 3.9	3.2.1 Under-five mortality rate.	Implemented activities to decrease	3.2, #2	Claim

	risk, significant to children and toddlers due to enclosure of the fire in the combustion chamber.		3.9.1 Mortality rate attributed to household and ambient air pollution.			
4)	The project will reduce the time spend on firewood collection for children, especially for girls, which will increase their time for education. The implementation of project needs plenty of local people to participate in production, distribution or use steps, who will get relevant skills and sustainable development and global citizenship education through training by project proponent and its local partners.	4.3 4.7	4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex 4.7.1 Number of persons who receive education for sustainable development and global citizenship	Implement activities to increase	3.2, #3	Claim
5)	The project will reduce women and children's drudgery through time savings in reducing time spent on cutting, collecting, and carrying firewood from trees far away from households as well as cooking over toxic smoky open fires.	5.4	5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age, and location.	Implemented activities to decrease	3.2, #3	Claim
6)	The project will protect an important water related ecosystem-forest	6.6	6.6.1 Change in the extent of water-related ecosystems over time	Increase	4.2, #2	Claim
7)	The ICS distributed to Household is a clean cooking technology. The project will increase the proportion of population with primary reliance on clean fuels and technology in project area.	7.1	7.1.2 Proportion of population with primary reliance on clean fuels and technology in the project area.	Implement activities to increase	3.2, #1	Claim
8)	The manufacturer which produces ICS is a local enterprise. It will hire more workers to produce ICSs for the project. During the project crediting period, the project proponent will be in charge of	8.3 8.5	8.3.1 Proportion of informal employment in total employment, by sector and sex.	Implement activities to increase	3.2, #4	Claim

	maintenance and monitoring plan, which also needs to hire local people, including persons with disabilities and minority.		8.5.1 Average hourly earnings of employees, by sex, age, occupation and persons with disabilities			
9)	The local factories which produce ICS for the project are small-scale industries, which will expand production capacity to satisfy the needs. Thus, the upstream and downstream supply chain will benefit from the project.	9.3	9.3.1 Proportion of small-scale industries in total industry value added	Implement activities to increase	3.2, #5	Claim
10)	The project provides ICSs with high thermal efficiency to reduce the consumption of firewood. It helps achieve efficient use of an important type of nature resources, non-renewable biomass.	12.2	12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	Implement activities to decrease	4.2, #2	Claim
11)	The average annual GHG emission reduction from the project is expected to be 196,346 tCO ₂ e due to less firewood combustion for cooking in the households.	13.0	Tonnes of greenhouse gas emissions avoided or removed	Decrease	VCS project description	SD VISTA-labeled VCU
12)	The project will help local people consume less firewood as the ICS has higher thermal efficiency and it will result in a reduction of deforestation.	15.1 15.2	15.1.1 Forest area as a proportion of total land area 15.2.1 Progress towards sustainable forest management	Implemented activities to increase	4.2, #2	Claim

2 PROJECT DESIGN

2.1 Project Objectives, Context and Long-term Viability

2.1.1 Summary of Project Sustainable Development Objective(s)

Before the implementation of the project, most of the local people in the project location use non-renewable biomass for cooking with open fire or three-stone fire. The project will distribute fuel-efficient ICS to replace the baseline cookstoves in households. The project will enable and enhance households to achieve several sustainable development objectives:

Improved cookstove is a basic service necessary to lead a healthy and productive life, including saving time and money for wood fuel at the household level. The project proponent will distribute 100,000 ICSs, and the ICSs are produced in local factories. So the implementation of the project will result in more job opportunity and income. (SDI 1.1.1)

The project will improve food security and nutrition status, particularly for children and women by reducing inadequate cooking, the burden of firewood collection, the time to prepare food, the cost for buying firewood. (SDI 2.1.1)

Most of non-renewable biomass local people used for cooking is firewood, which will generate high PM2.5 and high CO biomass smoke when inefficiently burnt. By using ICS, it will reduce people's exposure to high PM2.5 and high CO due to higher efficiency of combustion leading to faster cooking and more complete combustion. (SDI 3.9.1). And it will also reduce the burn risk, significant to children and toddlers due to enclosure of the fire in the combustion chamber. (SDI 3.2.1).

The project will reduce the time spend on firewood collection for children, especially for girls. It will increase their time for education. The implementation of project needs plenty of local people to participate in production, distribution or use steps. They will get relevant skills and sustainable development and global citizenship education through training by project proponent. (SDI 4.3.1, 4.7.1).

The project will reduce women and children's drudgery through the time savings in cutting, collecting, and carrying firewood from trees far away from households as well as cooking over toxic smoky open fires. These tasks, if being undertaken without relief, are a major cause of gender inequality. (SDI 5.4.1).

The project will protect an important water related ecosystem-forest through reducing deforestation by firewood collecting. (SDI 6.6.1). The project will increase the proportion of population with primary reliance on clean fuels and technology in project area. (SDI 7.1.2).

The factory which produces ICS is a local enterprise. It will hire more workers to produce ICSs for the project. During the project crediting period, the project proponent and its local partners will be in charge of maintenance and monitoring plan, which also needs to hire local people, including persons with disabilities and minority. (SDI 8.3.1, 8.5.1). The local factories are small-scale industries. They will expand production capacity to satisfy the needs of the project. Thus, the upstream and downstream supply chain will benefit from the project. (SDI 9.3.1).

The project provides ICSs with high thermal efficiency to reduce the consumption of firewood. It helps achieve efficient use of an important type of natural resources, non-renewable biomass. (SDG 12.2).

The average annual GHG emission reduction from the project is expected to be 196,346 tCO₂e due to less firewood combustion for cooking in the households. (SDG 13).

The project will help local people consume less firewood as the ICS has higher thermal efficiency and it will result in a reduction deforestation compared to the baseline scenario. (SDI 15.1.1, 15.2.1).

2.1.2 Description of the Project Activity

The project involves distribution of fuel-efficient portable ICSs in Kenya. The ICSs disseminated through this project will replace the old low efficient baseline cookstoves. The ICSs will be produced by local factories.

Through this project, Guangzhou Iceberg Environmental Consulting Services Co., Ltd. (hereinafter referred to as “Iceberg”) will distribute approximately 100,000 ICSs free of charge to households in project area. The Iceberg also dedicates to enhance the community’s awareness of health, well-being, climate change and sustainable development. When they realise the importance of forest to environment, Iceberg will help them organize community forestry models to protect the forest. Local employees will be trained on production skills, sampling and conducting survey of the ICS users.

Before the implementation of the project, local people mostly use traditional solid-fuel cooking solutions such as open fire or three-stone fires. They spend plenty of time to collect firewood every day due to low combustion efficient. The ICSs will burn wood more efficiently thereby improve thermal transfer to pots, hence saving firewood. The project will reduce the GHG emission by less firewood combustion, which will also reduce the rapidly progressing deforestation in project area.

The scenario existing prior to the implementation is widely used traditional solid-fuel cooking solutions such as open fire or three-stone fires. Due to low income, people will continue to use them to meet thermal energy needs without project activity.

2.1.3 Implementation Schedule

Date	Milestone(s) in the Project's Development and Implementation
16/05/2022	Stakeholder meeting in Kiambu County
19/05/2022	Stakeholder meeting in Muranga County
21/06/2022	Start distributing ICS
22/06/2022	Project start date: The next day of commissioning of the first batch of ICS
12/2024	Planned time of finishing distribution of 100,000 ICSs

2.1.4 Project Proponent

Organization Name	Guangzhou Iceberg Environmental Consulting Services Co., Ltd.
Role in the Project	Project proponent
Contact Person	Ji BAO
Title	General Manager
Address	No.106 Fengze East Road, Nansha District, Guangzhou, China
Telephone	+8613560420840
Email	baoji@icebergchina.com ; hanjin@icebergchina.com

2.1.5 Other Entities Involved in the Project

No other entities involved.

2.1.6 Project Type

The project is categorised under type/category as below:

- a) Sectoral scope: 03 - Energy demand
- b) Type: II – Energy efficiency improvement projects

The project is not a grouped project.

2.1.7 Project Location

The project location will be the geographic boundary of the Republic of Kenya.

Table 1: Geographical coordinates of Kenya

Orientation	Latitude/Longitude
East	41° 53' 59" E
West	33° 55' 46" E
South	4° 40' 33" S
North	4° 15' 41" N



Figure 1: Map of Kenya

2.1.8 Baseline Scenario

Kenya is a Located in eastern Africa, the equator crosses the central part, and the Great Rift Valley runs north and south. The whole territory is located in the tropical monsoon zone, but

influenced by its higher terrain, it has a savanna climate with large seasonal differences in precipitation.

Over the past few decades, Kenya's macroeconomic has steadily posted strong growth mostly from road, rail, air and water transport infrastructure projects. However, its key development challenges still include poverty, inequality, transparency and accountability, climate change, continued weak private sector investment and the vulnerability of the economy to internal and external shocks. Kenya ranks poorly on the Fragile States Index at number 33 out of 179 countries in 2021, which placed in the high warning category¹.

Kenya is famed for its scenic landscapes and vast wildlife preserves, including lions, elephants, cheetahs, rhinoceroses, and hippopotamuses. Kenya's western provinces, marked by lakes and rivers, are forested, while a small portion of the north is desert and semidesert. The country's diverse wildlife and panoramic geography draw large numbers of European and North American visitors, and tourism is the second-largest source of foreign exchange revenue following agriculture². Agriculture is the largest sector: tea and coffee are traditional cash crops, while fresh flowers are a fast-growing export.

A significant population of other wild animals, reptiles, and birds can be found in the national parks and game reserves in the country. The annual animal migration occurs between June and September, with millions of animals taking part, attracting valuable foreign tourism. Two million wildebeest migrate a distance of 2,900 kilometres from the Serengeti in neighbouring Tanzania to the Masai Mara³ in Kenya, in a constant clockwise fashion, searching for food and water supplies. This Serengeti Migration of the wildebeest is listed among the Seven Natural Wonders of Africa⁴.

Kenya is very vulnerable to climate change with current projections suggesting that its temperature will rise up to 2.5°C between 2000 and 2050, while rainfall will become more intense and less predictable. Even the slightest increase in frequency of droughts will present major challenges for food security and water availability, especially in Kenya's Arid and Semi-Arid Lands⁵.

2.1.9 Causal Chain(s)

See appendix A for the Causal Chain image.

¹ <https://fragilestatesindex.org/country-data/>

² de Blij, Harm. *The World Today: Concepts and Regions in Geography* 4th edition. Wiley Publishing: Hoboken, NJ

³ Bashir, Hanif. "Masai Mara Safari - The Migration | Tour Packages".

⁴ Pflanz, Mike (13 June 2010). "New road threatens Africa's 'wonder of the world' wildebeest migration". *Daily Telegraph*. ISSN 0307-1235.

⁵ <https://reliefweb.int/report/kenya/climate-change-profile-kenya>

2.1.10 Threats to the Project

Natural-induced threats

Threat: More and more difficult to collect firewood for stove due to deforestation and degradation

Solution: Due to low income of end-users, they tend to use free firewood for stove instead of other fuel. Iceberg will continue to participate discussion and action around the design of sustainable forest management programs within project boundary. We not only distribute ICSs to households but also support local efforts to organize community forestry models.

Threat: The COVID-19 pandemic might affect the process of the project

Solution: Iceberg has found reliable local partners to overcome the difficulty from international travel limit between China and other countries. They are experienced in operating ICS donation project, including conducting stakeholder' consultation and field visits. Iceberg and local partners are communicating smoothly by telephone and internet. If the new waves of COVID come to Kenya in the future, Iceberg will cooperate with its local partners to dispense personal protective equipment and disinfectants.

Human-induced threats

Threat: The households may not want to accept the ICS

Solution: Iceberg and its local partners will do research on the reason why some local households do not want to use the ICSs if it happens. First of all, the end-user households should be chosen carefully to avoid this problem. Only the poor households who do not have similar cookstoves will be chosen to receive our donation. Through the training, they can easily understand the benefits of the ICS, such as the reduction of air pollution and cost on wood fuel. The households accepting the ICS will share their experiences in the training to encourage higher usage rate. Iceberg and its local partners will continuously improve the training as well as other measures to increase the acceptance of the ICS.

2.1.11 Benefit Permanence

The project will distribute approximately 100,000 to households, which are produced in local factories. Hence the implementation of the project needs plenty of local people to participate in production, distribution or use steps, which will result in more job opportunity and income. It will train skilled workers for Kenya industry, which will benefit both themselves and the country even after the project activities have ceased. The project will have long-term positive influences on the health of end-users, especially the women and girls who mainly undertake the cooking in the households through the improvement of air condition. The time saved for education from cooking and firewood collection will have permanent positive influences on the children, especially the girls who are mainly in charge of these two tasks. The forest saved by the project through the reduction of non-renewable biomass consumption will protect the environment and

biodiversity for a long time. The training about the proper usage of the ICS will be provided to the end-users, which will benefit them in the future. In addition, the project proponent plans to distribute new ICSs to replace the old ones from the sixth year of the crediting period. Since the lifetime of the ICSs is seven years, they can be still used for 2-3 years after the end of the crediting period. If the operation of the project can achieve the expectation of the project proponent, it plans to implement more ICS projects in Kenya.

2.2 Stakeholder Engagement

2.2.1 Stakeholder Identification

Local people, communities and or representatives who are directly or indirectly affected by the project, such as end-users, stove manufacturer are identified as stakeholders. Iceberg also identifies and encourages anyone who are interested in the project. Iceberg invites local authorities participate in the decision of the project. Local non-governmental organisations (NGOs) including Iceberg's partner who working on topics relevant to the project are stakeholders too.

2.2.2 Stakeholder Description

Relevant stakeholders have been identified as:

(a) The ICS end-users

The ICS end-users are directly affected by the project. It will reduce the drudgery of the local people through time savings in cutting, collecting, and carrying firewood from trees far away from households as well as cooking over toxic smoky open fires.

(b) Stove manufacturer

The manufacturer which produces ICS is a local enterprise. It will hire more workers to produce ICSs for the project. The manufacturer and employees are directly influenced by the project.

(c) Local authorities

The support from local government is very crucial for the implementation of the project. It will provide indispensable information and authorization for the project. It will also help the project implementers to collect feedback from end-users.

(d) NGOs

Iceberg will cooperate with local NGOs to make sure that the project will be implemented efficiently. Their feedback is very important for the improvement of the project implementation.

2.2.3 Stakeholder Consultation

Stakeholder consultation meeting was held separately on 16/05/2022 in Kiambu County and on 19/05/2022 in Muranga County. For introduce the project and collect opinions from all the types of stakeholders identified above, various inviting methods were applied for the stakeholder consultation meeting. For the convenience of stakeholders, the invitations were in both English and Swahili. The invitation was sent to villagers through broadcast in villages to make sure everyone can understand. Some local people were invited by phone call. For local officers and entrepreneurs, invitation letters were sent to them as formal invitation. National government officials, local and international NGOs were invited by email.

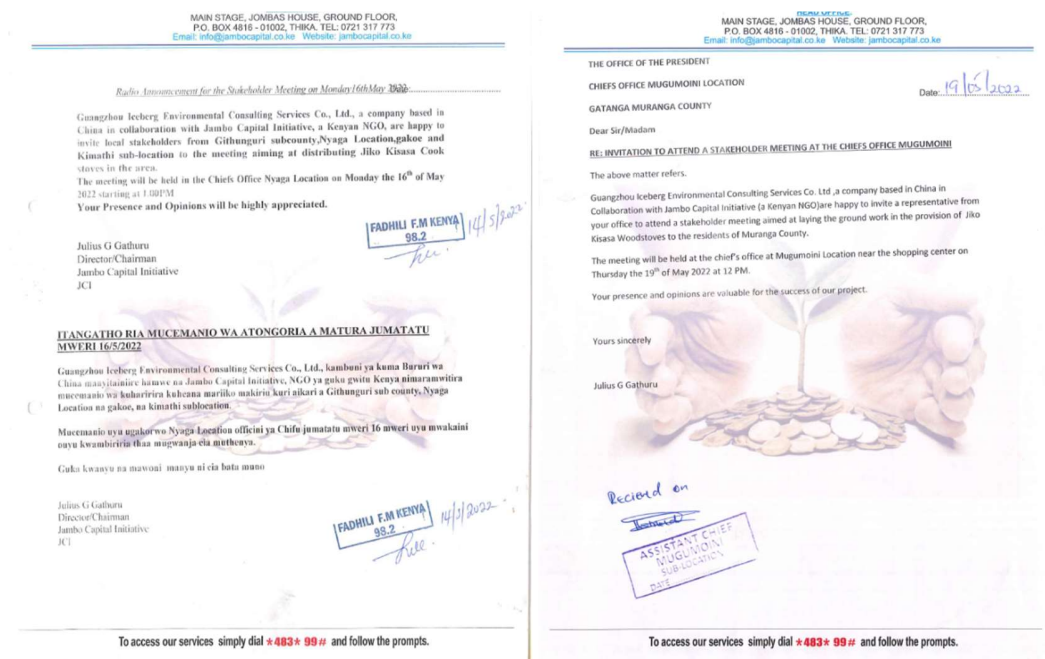


Figure 2: The invitations

The agendas of two stakeholder meetings were almost same. First, the chief of the area introduced himself and welcomed all the stakeholders. He welcomed Iceberg's local partner JCI to address the stakeholders what he did and the team which would manage the project.

Then the representative of Iceberg briefly described the relationship with Iceberg and why they had decided to provide the cook stoves for free. The stakeholders asked him a few questions and he handled all the issues effectively.

The chief told the attendees that the objective of the meeting was to receive feedback about the project from all stakeholders involved and therefore everybody was free to present his/her opinions concerning the project, which would be considered during the implementation of the project.

After that, the representative of local partner explained the full scope of the project using Kikuyu language which is the native language of the stakeholders. He described the features of the Jiko Kisasa ICS and he made the stakeholders understand that it has passed the boiling water test which was done by KIRDI meaning that it is proven that it will without a doubt help them save on firewood and time taken to prepare meals.

He also explained to them that a survey was done about the people who have the cook stove already. Their response confirmed the fact that it will actually save a large extent on the amount of firewood used and the time spent to cook mainly because the heat is well concentrated within the jiko Kisasa ICS.



Figure 3: The photos of the stakeholder meeting

Question and answer session about the project

The presentation was followed by a Q&A session about the project. The Q&A are shown as follows:

Question 1: Will we be trained on how to install the cook stove?

Answer: The stakeholders were assured that a person who will demonstrate how the Stoves are installed effectively to ensure that they survive for a much longer period will be availed at no cost.

Question 2: Can I get a cook stove if I already have another one?

Answer: The cook stoves will only be distributed to those who do not have one at the moment since we want to capitalize on maximizing the results.

Question 3: Will the leaders be compensated for their time.

Answer: This is a community based program and the stakeholders were requested to volunteer their services to ensure that their village members are assisted. They were reminded that leadership is about service to the people we are leading.

Question 4: Is it possible to have Bio Gas installed in our homes also.

Answer: This is not part of what has been approved for now but we will try to negotiate with Iceberg to see whether they can have this as their next project.

In the end, continuous input and grievance mechanism was discussed.

2.2.4 Continued Consultation and Adaptive Management

In this session the participants discussed how to keep contact between the users of the cook stoves and JCI as well as the representative of Iceberg in Kenya. We agreed on the following

1. Avail a hotline that would be used to complain any problems concerning the project by phone.
2. Have a hard cover book to record any incidences or occurrences with the village elders.
3. Ensure that a close collaboration is groomed and maintained between the representatives of JCI and Iceberg with the users and the village elders.

The following phone number of JCI was available to the stakeholders 0721420243.

The following email addresses will be also used for inquiry or comment on the project.

Iceberg: Mr. Ji BAO baoji@icebergchina.com

JCI: Mr. Julius G Gathuru info@jambocapital.co.ke

The village leaders are in charge of reporting the problems stated in the books. The representative of JCI will check the opinion books occasionally to see the problems reported and find solutions with users. They could also report problems to their village leaders, who will transfer these opinions to Iceberg and JCI. .

2.2.5 Anti-Discrimination

Iceberg will distribute ICSs to local people who uses traditional low efficiency cooking solutions without distinction in genders, races, religions, educational backgrounds or any other aspects. The local factories and NGOs cooperated with Iceberg also dedicate to the elimination of discrimination. They need more employees to implement the project. Iceberg and they will

make sure that women, persons with disabilities, and minority will have equal chance to get the jobs.

2.2.6 Worker Training

The implementation of project needs plenty of local people to participate in production, distribution or use steps. They will get relevant skills and sustainable development and global citizenship education through training by project proponent. Besides technical skills, the workers will be trained about the management structure, regulations and worker rights.

Training about monitoring plan will be provided to local partners, including survey method, data record and analysis. The monitoring plan will be carried out by qualified personnel trained for quality assurance and quality control.

2.2.7 Equal Work Opportunities

Iceberg is dedicated to make sure that all stakeholders, no matter their genders, races, religions, educational backgrounds or any other aspects, will be given an equal opportunity to fill all work positions. Recruitment advertising for the local villages will be given before the hiring of the full-time and part-time staff for the project. The recruitment advertisement will be provided in Swahili for them to understand.

The project will also encourage women, persons with disabilities, and minority to apply the jobs.

All the workers will be treated equally in Iceberg and its local partners. The workers having outstanding achievements will be promoted to management positions as per the related company management regulations.

2.2.8 Workers' Rights

Iceberg and its local partners have a labour contract with each worker. Before the workers sign it, the contracts will be explained explicitly to make sure that they could understand their rights and obligations. The contract terms conform with, and uphold the principles and rights of, work addressed in the Core Labour Conventions of the International Labour Organization (ILO). And it also complies with national and local labour laws⁶. The workers will also be trained about the related regulations and laws.

2.2.9 Occupational Safety Assessment

The project activity involves producing and distributing ICSs. And monitoring plan also needs workers to implement. The occupational safety hazards may be production accident, transport-related accidents, stealing of parts. Iceberg has taken the above risks into consideration. To reduce the risks, Iceberg cooperates with local experienced NGO and hire local workers. They

⁶ https://www.ilo.org/ifpdial/information-resources/national-labour-law-profiles/WCMS_158910/lang-en/index.htm

are very familiar with the communities, language and local culture. This understanding of traditional values, respect, and working environment in the communities helps Iceberg a lot.

The ICS uses firewood only. It is assumed will not cause any extraordinary risks. Fire burn (especially for kids), road accidents, or minor social disputes during delivery and demonstration activities may be main risks. Risks will be minimized by informing the end-users and workers about them, and by properly training.

2.2.10 Feedback and Grievance Redress Procedure

Iceberg and its local partners have already established grievance mechanism in the project area, which has been explained to the stakeholders during stakeholder meeting and the project implementation progress. The stakeholders or anyone who had not previously been identified but affected by the project can express any complaint.

The complaint is received by JCI first. They record the complaint and try to solve it immediately. If the problem can't be solved by JCI, JCI will inform Iceberg to work together. All feedback and grievances are recorded in summary. Iceberg will identify if the complaint is a project-wide issue that makes a system change in implementation necessary.

People can complaint to local leaders or JCI directly by calling, cell phone message, email and opinion books. They can contact Iceberg by calling and email too. JCI will report the feedbacks to Iceberg periodically.

2.2.11 Feedback and Grievance Redress Procedure Accessibility

The details on procedure for feedback and grievance have been made public on website of Iceberg as the following, which is accessible to all stakeholders of the project: [icebergChina Official website](#)

Additionally, it will be socialized and publicized to communities throughout the project location on local notice boards in Swahili.

2.2.12 Stakeholder Access to Project Documentation

The project details were explained to stakeholders in the stakeholder consultation meeting before it was implemented. The full project documentation will be uploaded on VERRA website and the same ones will be publicized on the Iceberg website during the whole crediting period of the project as the following linkage:

<http://www.icebergchina.com/en/contents/128/90.html>

2.2.13 Information to Stakeholders on Assessment Process

Iceberg and its local partners inform end-users that they are participating in a project that distributes the ICS free of charge to improve their respiratory health, the family economy, and the environment. They are informed in advance that the use of ICS generates carbon credits which in turn are used to cover the cost of ICS production and distribution through donation and carbon transfer agreement. To make sure that all the stakeholders know the process of SD VISTa project assessment, including the site visits of assessors, Iceberg and its local partners will inform them through the website linkage, phone, email or in person.

2.3 Project Management

2.3.1 Avoidance of Corruption

Iceberg has rules and regulations about the avoidance of corruption, code of conduct, and business ethics. All the staff of Iceberg should abide by them. These rules and regulations will also be provided to Iceberg's local partners, who should promise to comply with them for cooperation with Iceberg. Any person or organization which violates the anti-corruption rules and regulations of Iceberg cannot continue to work for or cooperate with Iceberg. Iceberg will ensure that the implementation of project in accordance with all legal requirements and is held to the highest standard of operation.

2.3.2 Statutory and Customary Rights

The project activity involves distribution of ICSs to individual households only and it will not involve any land use or acquisition.

2.3.3 Recognition of Property Rights

Iceberg distributes ICSs to individual households free of charge. The property right of ICS belongs to end-users while that of carbon credits generated from the project belongs to Iceberg. The end-users will sign donation and carbon transfer agreements with Iceberg when they receive ICSs to confirm the property rights of ICSs and carbon credits.

2.3.4 Free, Prior and Informed Consent

The project is voluntarily implemented by Iceberg and its local partners, and end-users are free to choose whether they take part in the project or not. Free, prior, and informed consent takes place before distribution through signing of the donation and carbon transfer agreements when the end-users receive the ICSs, which clarify the property rights of the ICSs and the carbon credits generated from the project.

2.3.5 Restitution and/or Compensation for Affected Resources

The project activity involves distribution of ICSs to individual households only and it will not affect any resources.

2.3.6 Property Rights Removal/Relocation of Property Rights Holders

The project activity involves distribution of ICSs to individual households only and it will not lead to any removal of property rights or relocation of property rights holders.

2.3.7 Identification of Illegal Activities

Theft and corruption may be identified during the implementation of the project. Iceberg and its local partner will avoid any corruption as per Section 2.3.1 of this document. End-users will be reminded to keep their ICSs in safe places to reduce theft when they receive the ICSs.

2.3.8 Ongoing Conflicts or Disputes

The project activity involves distribution of ICSs to individual households only. There is no ongoing or unresolved conflicts or disputes over rights to lands, territories and resources and any disputes that were resolved during the last twenty years.

2.3.9 National and Local Laws and Regulations

After searching, there are no laws, statutes and regulatory frameworks about the application of improved cook stoves in Kenya households. Iceberg and its local partners obey all relevant Kenyan and local laws and regulations.

2.3.10 Project Ownership

Iceberg will purchase ICSs and distribute them to end-users free of charge. Before the distribution, end-users and Iceberg will sign an agreement to confirm that the property right of ICS belongs to end-users while that of the carbon credits generated from the project belong to Iceberg.

2.3.11 Grouped Projects

The project is not a grouped project.

3 BENEFITS FOR PEOPLE AND PROSPERITY

3.1 Condition of Stakeholders at Project Start

(a) The ICS end-users

The important agricultural sector of Kenya is one of the least developed and largely inefficient, employing more than 40 percent of the total population and 70 percent of the rural population⁷. However, only 29% of Kenyans have access to improved sanitation⁸. The under-five mortality rate is 43 per 1000 live birth⁹. The life level of the local residents was low. Most of them still use low efficiency traditional three-shone open fire at project start. They spend plenty of time on cutting, collecting, and carrying firewood from trees far away from households and exposed to toxic smoke during cooking, especially for women and children.



Figure 4: The photo of a woman who is cooking

(b) Stove manufacturer

All the factories participating in the project are small scale enterprises. They do not have many manufacturing equipment and employees. The investment for the implementation of the

⁷ <https://www.usaid.gov/kenya/agriculture-and-food-security>

⁸ <https://www.unicef.org/kenya/water-sanitation-and-hygiene>

⁹ <https://www.unicef.org/kenya/health>

project will help them obtain enough investment to purchase more equipment and hire more employees, which will contribute to the development of stove industry in Kenya.

(c) Local authorities

Local officers welcome the project because the implementation of project will improve the living standard and economic situation within project boundary.

(d) NGOs

There are various NGOs dedicated to help local people in different ways in Kenya. They are very experienced in operating different types of donation projects. Local NGOs cooperate with Iceberg to make sure that the project goes well.

3.2 Expected Impacts on Stakeholders

Impact #1	Access to ICS
Type of Impact	Positive, actual, direct
Affected Stakeholder Group(s)	ICS end-users
Resulting Change in Well-being	Reduce inadequate cooking, the burden of firewood collection, the time to prepare food, the cost to buy firewood. Especially for women and children.

Impact #2	Improved Health Status
Type of Impact	Positive, predicted, direct
Affected Stakeholder Group(s)	ICS end-users
Resulting Change in Well-being	Reduce people's exposure to high PM2.5 and high CO due to higher efficiency of combustion. It will also reduce the burn risk, significant to children and toddlers due to enclosure of the fire in the combustion chamber.

Impact #3	Less time spent on unpaid domestic and care work
Type of Impact	Positive, predicted, direct
Affected Stakeholder Group(s)	ICS end-users
Resulting Change in Well-being	Reduce the time spent on firewood collection and cooking for people, especially for women and children.

Impact #4	More income
Type of Impact	Positive, actual, direct
Affected Stakeholder Group(s)	Stove manufacturer and employees
Resulting Change in Well-being	It will hire more workers to produce ICSs for the project. During the project crediting period, the project proponent and its local partners will be in charge of maintenance and monitoring plan, which also needs to hire local people.

Impact #5	Expand production capacity
Type of Impact	Positive, actual, direct
Affected Stakeholder Group(s)	Stove manufacturer
Resulting Change in Well-being	The manufacturer will expand production capacity to satisfy the needs of the project. Thus, the upstream and downstream supply chain will benefit from the project.

3.3 Stakeholder Monitoring Plan

The project activity is distributing ICSs to households, which will have a net positive impact on overall well-being of the people in the project site. A monitoring plan is needed to identify the monitored stakeholder groups, the types of measurements, the sampling methods and the frequency of monitoring and reporting.

Iceberg and its local partners will collect data through interviews, surveys, direct observations and group discussions about stakeholders' financial, health and employment records. Local partners are experienced in operating donation projects, and Iceberg also trained them to make sure they follow closely to the monitoring plan. They will collect primary information through regular visits and interviews with the end-users and other stakeholders. Direct observations and group discussions will be held at times. The data from these interactions will be compiled into reports and submit to the Iceberg. To make sure the data is credible, the data may be cross checked by a third-party or Iceberg.

Considering the heavy workload of collecting data, Iceberg and local partners may use an app and storage cloud to collect data. Surveys are designed to monitor stakeholders' improvements and benefits by implementation of the project.

Identification and sensitization visit

Before the implementation of the project, local partners of Iceberg should conduct a one-time identification and sensitization visit to local villages. Local partners identify and visit villages which are suitable for the project activity. They have discussions with the leaders of villages and villagers. They also communicate with other stakeholder such as local officers and NGOs, and search for their support and cooperation. In discussion with stakeholders, they explain the project and its benefits on health, nutrition and climate change. Any questions raised are recorded and responded. After the project plan is accepted, a community-wide training session is held to introduce the project to all interested households. The training includes information on the multiple benefits and how they can participate in the project.

Distribution visit

The project ICSs are produced by a local manufacturer, which are portable and easy to use. When distributing ICSs to end-users, technicians explain how to use and maintain the ICSs. Local partners will respond to any doubts or questions and leave a telephone number so end-users can contact Iceberg or local partners when needed. Before completing the visit, local partners ensure that the end-users are capable to prepare meals on their new ICSs.



Figure 5: The photo of distribution

Checking visit

Iceberg and/or local partners will conduct one-time follow-up visits with households after the distribution. This is the most critical visit because during this time that frustration with the ICS may arise. Villages where the project has been implemented will be chosen randomly. The staff will help end-users facilitate the adaptation, provide support to the women who cook, and solve emerging problems. Feedbacks from end-users will be collected. Iceberg and local partners will analyse these feedbacks and improve the project activity accordingly when applicable, increasing the adaptation of the community to the project.

Verification visit

During each time of the project verification, Iceberg and/or local partners will conduct a random sampling survey on the implementation of the project, including all the effects identified in the project's causal chain related to stakeholder well-being. End-users' using experience and stove condition will be monitored and recorded in the questionnaires. Other stakeholders' opinion and suggestion will also be recorded.

3.4 Net Positive Stakeholder Well-being Impacts

(a) The ICS end-users

Improved cookstove is a basic service necessary to lead to a healthy and productive life, including saving time and money for wood fuel at the household level. The project will reduce the drudgery undertaken by them especially for women and children through time savings in cutting, collecting, and carrying firewood from trees. The project will also improve food security and nutrition status by reducing inadequate cooking. By using ICS, it will reduce people's

exposure to high PM2.5 and high CO due to higher efficiency of combustion, which leads to faster cooking and more complete combustion. It will also reduce the burn risk, significant to children and toddlers due to enclosure of the fire in the combustion chamber.

(b) Stove manufacturer

The manufacturer which produces ICS is a local enterprise. It will hire more workers to produce ICSs for the project. The project will contribute to the scale-up of local business and organizations with the potential to create jobs in cookstove industry, such as productions, assembly, marketing and distribution of related devices.

(c) Local authorities

The living standard and economic income will be improved by the implementation of the project, which will have positive impacts to local governments on governance and tax revenue.

(d) NGOs

There are various NGOs dedicated to help local people in different ways in Kenya, which are very experienced in operating donation projects. Local NGO cooperates with Iceberg to make sure the project goes well. It will also earn more experiences, especially for ICS project, from the project.

4 BENEFITS FOR THE PLANET

4.1 Condition of Natural Capital and Ecosystem Services at Project Start

Kenya is renowned for its remarkable diversity of landscapes, animals and cultures. Its colourful landscapes range from the north Chalbi Desert to the snowy peaks of Mount Kenya, from the white beaches of the Indian Ocean to the shores of Lake Victoria, from the rolling plains of the Masai Mara to the valley floor of the Great Rift Valley, which is a UNESCO World Heritage Site¹⁰. The topography, soils, hydrology, plants, animals work with people of each eco-climatic zone create unique local ecosystems, lowland and mountain forests, wooded and open grasslands, semi-arid scrubland, dry woodlands, inland aquatic, as well as coastal and marine ecosystems. Kenya, ranks among the world's richest biodiversity nations and hosts over 35 000 species, including more than 7000 plant species and many endemic, rare, endangered and threatened species¹¹. The 'big five' – elephant, rhino, buffalo, lion and leopard, can all be found in Kenya along with a huge variety of other species.

Kenyans from all walks of life rely on ecosystem services to sustain their daily lives and well-being. These services include wild and cultivated foods, medicinal plants used by 80% of Kenyans, soil erosion control, crop pollination and cultural services such as spiritual kayas in coastal Mjikenda, outdoor recreation and access to nature. Beyond the service sector, agriculture, forestry, and fishing account for over a quarter of Kenya's gross domestic product¹².

Forests play an important role in supporting the livelihoods of many communities in both rural and urban areas. As in other parts of the world, Kenya's forests are considered a valuable asset because of their role in providing a variety of ecosystem services. However, the continued demand for forest resources has led to substantial changes such as deforestation, conversion of formerly forested areas to cropland and pasture, illegal water extraction sites, introduction of exotic trees and grasses on native vegetation, and expansion of urban and peri-urban areas¹³.

In rural areas of Kenya, over 95% of the population uses solid fuels for cooking¹⁴. The project activity will reduce wood collection and deforestation within the local area through higher fuel efficiency.

¹⁰ <https://whc.unesco.org/en/statesparties/ke>

¹¹ https://www.york.ac.uk/media/environment/images/kite/colincm/Natural-Capital-Kenya_PBNo.3_Business-Community.pdf

¹² <https://www.awf.org/country/kenya>

¹³ <https://doi.org/10.1080/21513732.2018.1529708>

¹⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7446120/>

4.2 Expected Impacts on Natural Capital and Ecosystem Services

Impact #1	Tonnes of greenhouse gas emissions avoided or removed
Type of Impact	Positive, predicted, direct
Affected Natural Capital and/or Ecosystem Service(s)	GHG concentration of atmosphere, climate change
Resulting Change in Condition	The average annual GHG emission reduction from the project is expected to be 196,346 tCO ₂ e due to less firewood combustion for cooking and heating in the households.

Impact #2	Avoided deforestation due to consume less firewood of ICS
Type of Impact	Positive, predicted, direct
Affected Natural Capital and/or Ecosystem Service(s)	Forest area, biodiversity, and water and soil, etc.
Resulting Change in Condition	The project will help local people consume less firewood as the ICS has higher thermal efficiency. It will save 103,404t non-renewable biomass every year and it will result in a significant reduction of deforestation.

4.3 Natural Capital and Ecosystem Services Monitoring Plan

To monitor the impact on natural capital and ecosystem services, Iceberg and local partners will track:

- (a) The amount of non-renewable biomass used to meet thermal energy needs for cooking using ICS.
- (b) Survey the difficulty in collecting firewood, including distance and time.
- (c) Official data about forest resource, including local, national and international.

The above data will be collected through survey and fuel consumption test, which is the responsibility of the local partners. Iceberg will train its local partners about the monitoring plan

and supervise their work. The data may be cross checked by a third-party. The end-user households where the survey and test are conducted will be chosen through random sampling. The data from test and survey will be recorded, analyzed and reported by Iceberg and its local partners. The monitoring and reporting will be conducted each time when verification of SD-VISTA is conducted.

4.4 Net Positive Natural Capital and Ecosystem Services Impacts

By replacing traditional low efficient three-stone fires with high efficiency improved cookstove in households, the project will increase energy efficiency resulting in less fire wood combustion, thus generate net GHG reductions. The average annual GHG emission reduction from the project is expected to be 196,346 tCO₂e. The crediting period is expected to be 10 years. Hence the total GHG emission reduction is 1,963,464 tCO₂e. The project will save 103,404t non-renewable biomass every year and it will result in a significant reduction of deforestation.

APPENDIX

Appendix A: Causal chain.

