Sustainable Development Verified Impact Standard

KENYA JIKO KISASA IMPROVED COOKSTOVE PROGRAM I

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

Project Title	Kenya Jiko Kisasa Improved Cookstove Program I
Version	03
Date of Issue	15/10/2024
Project Location	The Republic of Kenya
Project Proponent(s)	Guangzhou Iceberg Environmental Consulting Services Co., Ltd. Address: No.106 Fengze East Road, Nansha District, Guangzhou, China Telephone: +8613560420840 Email: baoji@icebergchina.com ; hanjin@icebergchina.com
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Project Lifetime	21/06/2022 –20/06/2032; 10-year lifetime
History of SD VISta Status	No previous attempts at SD VISta certification made to date
Other Certification Programs	Verified Carbon Standard, Project ID: 3197
Expected Future Assessment Schedule	Validation is expected in 2025

CONTENTS

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. According to the baseline survey, about 2/3 of the households spent 100-2000KES (127KES≈1USD) per month to buy firewood. This cost is reduced after the implementation of the project. 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 results 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 improves 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 reduces 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 also reduce the burn risk, significant to children and toddlers due to enclosure of the fire in the combustion chamber.	3.2 3.9	3.2.1 Under-five mortality rate. 3.9.1 Mortality rate attributed to household and ambient air pollution.	Implemented activities to decrease	3.2, #2	Claim
4)	The project reduces the time spend on firewood collection for children, especially for girls, which increases their time for education. The implementation of project needs plenty of local people to participate in production, distribution or use steps, who get relevant skills and sustainable development and global citizenship education through training by project proponent and its local partners. In addition, End users are informally educated about how to use cookstoves and protect the environment when receiving ICSs.	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 reduces 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 protects an important water related ecosystem-forest because the ICS reduces the consumption of	6.6	6.6.1 Change in the extent of water-related ecosystems over time	Increase	4.2, #2	Claim

	firewood, which reduces deforestation due to firewood collection in the area of Jubba-Shabeelle River and Tana River.					
7)	The ICS distributed to Household is a clean cooking technology. The project increases 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 ICS manufacturer which produces ICS is a local enterprise. It hires more workers to produce ICSs for the project. During the project crediting period, the project proponent is in charge of maintenance and monitoring plan, which also needs to hire local people, including persons with disabilities and minority.	8.3 8.5	8.3.1 Proportion of informal employment in total employment, by sector and sex. 8.5.1 Average hourly earnings of employees, by sex, age, occupation and persons with disabilities	Implement activities to increase	3.2, #4	Claim
9)	The local factories which produce ICS for the project are small-scale industries, which expands production capacity to satisfy the needs. Thus, the upstream and downstream supply chain benefits 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 average annual GHG emission reduction from the project is expected to be 235,215 tCO_2e 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
11)	The project helps local people consume less firewood as the ICS has higher	15.1 15.2	15.1.1 Forest area as a proportion of total land area 15.2.1 Progress towards	Implemented activities to increase	4.2, #2	Claim

	thermal efficiency and it results in a reduction of deforestation.		sustainable forest management			

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 distributes fuel-efficient ICS to replace the baseline cookstoves in households. The project enables 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. The project has distributed 24,696 ICSs to households from 06/08/2022 to 05/08/2024, and 24,232 are still operating. So the implementation of the project results in more job opportunity and income. (SDI 1.1.1)

The project improves 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 generates high PM2.5 and high CO biomass smoke when inefficiently burnt. By using ICS, it reduces 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 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 reduces the time spent on firewood collection for children, especially for girls. It increases their time for education. The implementation of project needs plenty of local people to participate in production, distribution or use steps. They get relevant skills and sustainable development and global citizenship education through training by project proponent. (SDI 4.3.1, 4.7.1).

The project reduces 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 protects an important water related ecosystem-forest through reducing deforestation by firewood collecting. (SDI 6.6.1). The project increases 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 hires more workers to produce ICSs for the project. During the project crediting period, the project proponent and its local partners are 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 expands production capacity to satisfy the needs of the project. Thus, the upstream and downstream supply chain benefits from the project. (SDI 9.3.1).

The average annual GHG emission reduction from the project is expected to be 235,215 tCO_2e due to less firewood combustion for cooking in the households. (SDG 13).

The project helps local people consume less firewood as the ICS has higher thermal efficiency and it results 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 replaces the old low efficient baseline cookstoves. The ICSs are 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. Local employees are 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 burn wood more efficiently thereby improve thermal transfer to pots, hence saving firewood. The project reduces the GHG emission by less firewood combustion, which 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 would have continued 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

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 is 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 category[1].

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 agriculture[2]. 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 Mara[3] 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 Africa[4].

Kenya is very vulnerable to climate change with current projections suggesting that its temperature will rise up to 2.5ºC 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 Lands[5].

2.1.9 Causal Chain(s)

See appendix A for the Causal Chain image.

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

[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

Solution: Due to low income of end-users, they tend to use free firewood for stove instead of other fuel. The project ICSs distributed to them have reduced the consumption of the firewood.

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. And now the COVID is over, the representatives of Iceberg have met with local partners in Kenya.

Human-induced threats

Threat: The households may not want to accept the ICS

Solution: Iceberg and its local partners 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 are 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 share their experiences in the training to encourage higher usage rate. Iceberg and its local partners 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 results in more job opportunity and income. It trains skilled workers for Kenya industry, which benefits 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 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 protects the environment and biodiversity for a long time. 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

The process used to identify stakeholders likely impacted by the project shows below:

1. Initial Scoping and Community Engagement:

Conduct preliminary research to identify target communities and hold initial meetings with local leaders for preliminary feedback.

2. Stakeholder Mapping:

Identify key groups including households, community organizations, local businesses, government agencies, and NGOs, ensuring vulnerable groups are considered.

3. Detailed Stakeholder Analysis:

Perform social and economic impact assessments to evaluate how different groups will be affected.

4. Documentation and Communication:

Document all findings and clearly communicate project objectives and potential impacts using various channels.

Local people, communities and or representatives who are directly or indirectly affected by the project, such as Thus, the ICS end-users, stove manufacturer and distributor 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. And the local people employed under this project who are directly impacted by 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 reduces 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 and distributor

The manufacturer and distributor is a local enterprise. It hires more workers to produce and distribute ICSs for the project. The company and its 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 provides indispensable information and authorization for the project. It also help the project implementers to collect feedback from end-users.

2.2.3 Stakeholder Consultation

Stakeholder consultation process:

- For ICS end-users:

The project proponent has conducted a baseline survey in several villages to gather feedback, and understand local needs and concerns. According to the results of the survey, it is clear that women and girls spend more time in household chores. Specific demographic groups (e.g., women, youth, elders) were encouraged to participate the meeting. Utilize local community leaders and representatives to facilitate the consultation process and build trust.

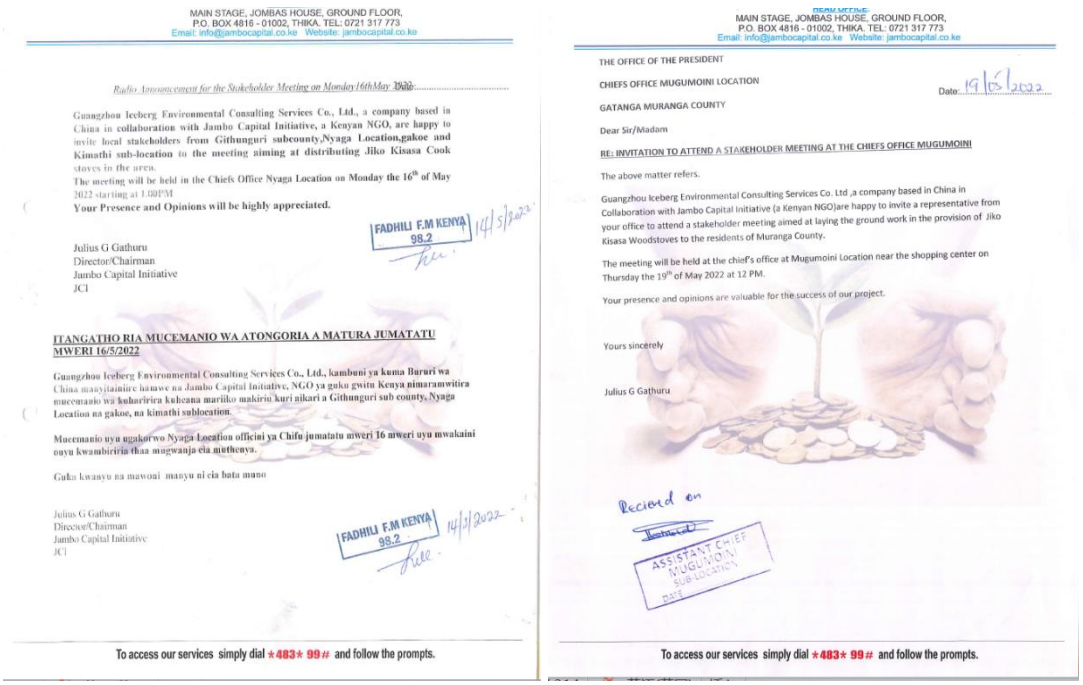
- For stove manufacturer and distributor:

The producing, transportation and distribution of the project ICSs need more workers. The project proponent has conducted targeted outreach and consultations with women and low-income households to encourage to apply for the jobs created by the project.

- For local authorities:

The project proponent met with regional and municipal authorities to align the project objectives with local development plans and policies.

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.



MAIN STAGE, JOMBAS HOUSE, GROUND FLOOR,
P.O. BOX 4816 - 01002, THIKA. TEL: 0721 317 773
Email: info@jambocapital.co.ke Website: jambocapital.co.ke

Radio Announcement for the Stakeholder Meeting on Monday16thMay 2022

Guangzhou Iceberg Environmental Consulting Services Co., Ltd., a company based in China in collaboration with Jambo Capital Initiative, a Kenyan NGO, are happy to invite local stakeholders from Githunguri subcounty,Nyaga Location,gakoe and Kimathi sub-location to the meeting aiming at distributing Jiko Kisasa Cook stoves in the area.
The meeting will be held in the Chiefs Office Nyaga Location on Monday the 16th of May 2022 starting at 1.00PM
Your Presence and Opinions will be highly appreciated.

FADHILI F.M KENYA 98.2 14/5/2022

Julius G Gathuru
Director/Chairman
Jambo Capital Initiative
JCI

ITANGATHO RIA MUCEMANIO WA ATONGORIA A MATURA JUMATATU MWERI 16/5/2022

Guangzhou Iceberg Environmental Consulting Services Co., Ltd., kambuni ya kuma Bururi wa China masyitainire hatuwe na Jambo Capital Initiative, NGO ya gaku gwitu Kenya nimaramwitira mucemanio wa kuharirira kuheana mariiko makiriu kuri aikari a Githunguri sub county, Nyaga Locatiou na gakoe, na kimathi sublocation.

Mucemanio uyu ugakorwo Nyaga Locatiou officini ya Chifu jumatatu mweri 16 mweri uyu mwakaini ouyu kwambiriria thaa mugwanja cia muthenya.

Guka kwanyu na mawoni manyu ni cia bata mano

Julius G Gathuru
Director/Chairman
Jambo Capital Initiative
JCI

FADHILI F.M KENYA 98.2 14/5/2022

To access our services simply dial *483* 99# and follow the prompts.

MAIN STAGE, JOMBAS HOUSE, GROUND FLOOR,
P.O. BOX 4816 - 01002, THIKA. TEL: 0721 317 773
Email: info@jambocapital.co.ke Website: jambocapital.co.ke

THE OFFICE OF THE PRESIDENT
CHIEFS OFFICE MUGUMOINI LOCATION
GATANGA MURANGA COUNTY

Date: 19/5/2022

Dear Sir/Madam

RE: INVITATION TO ATTEND A STAKEHOLDER MEETING AT THE CHIEFS OFFICE MUGUMOINI

The above matter refers.

Guangzhou Iceberg Environmental Consulting Services Co. Ltd ,a company based in China in Collaboration with Jambo Capital Initiative (a Kenyan NGO)are happy to invite a representative from your office to attend a stakeholder meeting aimed at laying the ground work in the provision of Jiko Kisasa Woodstoves to the residents of Muranga County.

The meeting will be held at the chief's office at Mugumoini Location near the shopping center on Thursday the 19th of May 2022 at 12 PM.

Your presence and opinions are valuable for the success of our project.

Yours sincerely

Julius G Gathuru

Recived on

ASSISTANT CHIEF MUGUMOINI SUB LOCATION DATE

To access our services simply dial *483* 99# and follow the prompts.

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, the stove manufacturer and distributor, 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

Information about potential cost, risks and benefits was shared with each stakeholder group:

- For ICS end-users:

The project enables rural people of Madagascar to have access to clean cookstove, reducing time on collecting firewood and cooling, as well as save money on buying firewood. Project is financed by the project proponent, with no cost or risk to ICS end-users.

- For stove manufacturer and distributor:

The project needs plenty ICS produced locally, which enables stove manufacturer to expand its production capacity. It hires more workers, and the employees have a stable income and improved standard of living. There is no cost or risk to them.

- For local authorities:

The ICS is a basic livelihood service. There is no cost or risk to local authorities.

Since there is no negative opinion received from stakeholders during stakeholder consultation, no project design has been changed accordingly.

During the baseline survey and awareness-raising visits, we have paid special attention to optimizing benefits for any marginalized and vulnerable groups. Women, the elderly and low-income groups were the focus of attention, and their demands and opinions were carefully listened to. And those who had the ability to work were encouraged to actively apply for job opportunities.

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 cookstoves 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 are 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 checks the opinion books occasionally to see the problems reported and find solutions with users. They could also report problems to their village leaders, who transfer these opinions to Iceberg and JCI.

The above mechanisms for stakeholder consultation at the project's inception maintain during the project's operation for ongoing communications. The project proponent and local partner seek input from stakeholders and consider their feedback in project design and implementation. Any significant input that necessitates updates to the project design will be reported as a project description deviation. This procedure expected to address disputes and concerns raised by stakeholders throughout the project's lifecycle.

2.2.5 Anti-Discrimination

Iceberg distributes 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 make sure that women, persons with disabilities, and minority 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 get relevant skills and sustainable development and global citizenship education through training by project proponent. Besides technical skills, the workers have been trained about the management structure, regulations and worker rights.

Training about monitoring plan has been provided to local partners, including survey method, data record and analysis. The monitoring plan has been carried out by qualified personnel trained for quality assurance and quality control. The workers have been trained for sexual harassment prevention and reporting, which is specialized for vulnerable female.

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, have been given an equal opportunity to fill all work positions. Recruitment advertising for the local villages have been given before the hiring of the full-time and part-time staff for the project. The recruitment advertisement have been provided in Swahili for them to understand.

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

Equal opportunities are provided in the context of gender for employment and participation in consultation and project activities. This ensures that both men and women have the same opportunities to contribute to and benefit from the project. The project also mandates equal pay for equal work, ensuring that compensation is fair and non-discriminatory.

2.2.8 Workers' Rights

Iceberg and its local partners have a labour contract with each worker. Before the workers sign it, the contracts have been 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 laws[6]. The workers have also been 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 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 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 are 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.

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

They have put opinion books in villages so that stakeholders can write down their grievances.

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:

http://www.icebergchina.com/ensnew/contents/304/95.html

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 reports 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: *http://www.icebergchina.com/ensnew/contents/304/95.html*

Additionally, it has been 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 has been uploaded on VERRA website and the same ones have been publicized on the Iceberg website during the whole crediting period of the project as the following linkage:
http://www.icebergchina.com/ensnew/contents/304/95.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 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 also have been provided to Iceberg's local partners, who should promise to comply with them for cooperation with Iceberg and avoid any form of corruption, including bribery, embezzlement, fraud, favouritism, cronyism, nepotism, extortion and collusion. Any person or organization which violates the anti-corruption rules and regulations of Iceberg cannot continue to work for or cooperate with Iceberg. Iceberg ensures 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 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 have signed 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 has not affected 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 has not led 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 have avoided any corruption as per Section 2.3.1 of this document. The project proponent has rules and regulations about the avoidance of corruption, code of conduct, and business ethics. All the staff should abide by them. These rules and regulations have also been provided to its local partners, who should promise to comply with them and avoid any form of corruption, including bribery, embezzlement, fraud, favouritism, cronyism, nepotism, extortion and collusion, for cooperation. End-users have been 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

Relevant local, regional and national laws, statutes and regulatory frameworks in Kenya:

- Kenya Vision 2030[7]

The Vision 2030 is Kenya's long-term development blueprint, which is implemented through a series of five-year medium-term development plans. It provides a policy framework for "cost-effective, affordable, and adequate quality energy services" on a sustainable basis over the period 2004-2023. The promotion of clean cookstove development in Kenya is seen as an important intervention to fulfilling Vision 2030's goal of increasing national forest cover to 10%

[7] https://www.planning.go.ke/kenya-vision-2030/

by 2030 as well as creating wealth by building a reliable business for small, medium and large enterprises. The project ICS is a clean cooking service, which is in line with this policy.

- National Energy Policy 2014[8]

The energy policy seeks to ensure affordable, competitive, sustainable and reliable supply of energy to meet national and county development needs at least cost while protecting and conserving the environment. The policy among other things prioritises and promotes the development of local technologies in energy development and delivery. The project ICS reduces the consumption of woody biomass, which reduce the expense to buy it.

2.3.10 Project Ownership

Iceberg purchases ICSs and distribute them to end-users free of charge. Before the distribution, end-users and Iceberg have signed 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.

[8] https://www.ctc-n.org/content/kenya-2014

3 BENEFITS FOR PEOPLE AND PROSPERITY

3.1 Condition of Stakeholders at Project Start

(a) The ICS end-users

Social: 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 population[9]. However, only 29% of Kenyans have access to improved sanitation[10]. The under-five mortality rate is 43 per 1000 live birth[11]. The poverty headcount ration at 2.15 USD a day has increased from 29.4% to 36.1% from 2015 to 2023[12].

Economic: The unemployment has increased from 2.8% to 5.7% from 2015 to 2023[13], doubled in the last decade

Culture: 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. There is no significant change in this element in the past decade.

Figure 4: The photo of a woman who is cooking

[9] https://www.usaid.gov/kenya/agriculture-and-food-security

[10] https://www.unicef.org/kenya/water-sanitation-and-hygiene

[11] https://www.unicef.org/kenya/health

[12] https://data.worldbank.org/country/kenya?view=chart

[13] https://data.worldbank.org/country/kenya?view=chart

(b) Stove manufacturer and distributor

Economic: The stove manufacturer and distributor is a small scale enterprise. It does not have many manufacturing equipment and employees. The investment for the implementation of the project helps them obtain enough investment to purchase more equipment and hire more employees, which contributes to the development of stove industry in Kenya. There is no significant change in this element in the past decade.

Social: The efficient and durable designs are more popular with users. This choice of technology reflects the local community's quest and expectations for energy efficiency and durability. There is no significant change in this element in the past decade.

Culture: The thermal efficiency of stoves the manufacturer produced needs to be measured by a water boiling test to ensure that they are efficient. This constant focus on performance is part of the manufacturer's corporate culture. There is no significant change in this element in the past decade.

(c) Local authorities

Social: Local authorities face significant challenges in the provision of social services. Residents in many areas are unable to meet their basic needs owing to the lack of modern energy infrastructure. There is no significant change in this element in the past decade.

Economic: Local authorities have limited financial resources and rely mainly on agricultural income. However, due to inefficient production and poor market channels, agricultural revenues are difficult to meet public expenditure needs. This economic situation limits local government investment in infrastructure development, social services and economic development projects. There is no significant change in this element in the past decade.

Culture: Madagascar is home to 18 main ethnic groups, each with distinct languages, customs, and governance practices. Local authorities often reflect the cultural values and traditions of these communities.

Diversity and the interactions:

The ICS end-users vary widely in terms of family size, education levels, and gender roles. Women often play a central role in cooking and are thus primary users of cookstoves. The implementation of project creates plenty job opportunities for local people. Households rely on local authorities for support, while local authorities act as intermediaries between households and project implementers. Local authorities interact with all these groups to provide regulatory support and technical assistance.

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

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, actual, 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 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, actual, 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 distributor as well as employees
Resulting Change in Well-being	It hires more workers to produce ICSs for the project. During the project crediting period, the project proponent and its local partners are 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 and distributor
Resulting Change in Well-being	The project plans to distribute 100,000 ICSs to end users across the country. It's a huge number. The local ICS manufacturer and distributor is a small enterprise before the implementation of the project. Our collaborating manufacturer expands production capacity to satisfy the needs of the project. Thus, the upstream and downstream supply chain benefits from the project.

3.3 Stakeholder Monitoring Plan

The project activity is distributing ICSs to households, which has 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.

Sampling method

The sustainable development indicators mentioned above have been monitored, which include impacts on mostly stakeholders of the project. The "health status" and "time spent on unpaid domestic and care work" need to be monitored by multi-stage sampling method as per "Standard

sampling and surveys for CDM project activities and POAs (Ver9.0)" and "Guideline for sampling and surveys for CDM project and POA (Ver 4.0)":

Parameter	Description	Purpose	Affected Stakeholder Group(s)	Frequency
$N_{y,i,j}$	Number of project devices of type i and batch j operating during year y	Determination of Impact #1	ICS end-users	At least biennial
Health status	Monitored in project survey through questionnaire	Determination of Impact #2	ICS end-users	At least biennial
Time spent on unpaid domestic and care work	Monitored in project survey through questionnaire	Determination of Impact #3	ICS end-users	At least biennial
Income	Monitoring through communication with partner, which have provided statements	Determination of Impact #4	Stove manufacturer and distributor as well as employees	At least biennial
Production capacity	Monitoring through communication with partner, which have provided statements	Determination of Impact #5	Stove manufacturer and dsitributor	At least biennial

Sampling plan

The target population for the multi-stage sampling is all the population who receives the project ICS. The sampling method combines the cluster and simple random sampling approaches in a two-stage sampling scheme which enables us to randomly select some villages from all the villages and then randomly sample some households from all the households within those sampled villages.

Iceberg and its local partners 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 collect primary information through regular visits and interviews with the end-users and other stakeholders. The data from these interactions has been 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 participant 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 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

Verification visit

During each time of the project verification, Iceberg and/or local partners conduct a multi-stage 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 are monitored and recorded in the questionnaires. Other stakeholders' opinion and suggestion also has been 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 reduces the drudgery undertaken by them especially for women and children through time savings in cutting, collecting, and carrying firewood from trees. The project also improve food security and nutrition status by reducing inadequate cooking. By using ICS, it reduces 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 also reduce the burn risk, significant to children and toddlers due to enclosure of the fire in the combustion chamber.

(b) Stove manufacturer and distributor: The manufacturer and distributor is a local enterprise,. The producing, transportation and distribution of the project ICSs need more workers. It hires more workers to produce ICSs for the project. The project contributes 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 are improved by the implementation of the project, which have positive impacts to local governments on governance and tax revenue.

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 Site[14]. 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 species[15]. 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 product[16].

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 areas[17].

In rural areas of Kenya, over 95% of the population uses solid fuels for cooking[18]. The project activity reduces wood collection and deforestation within the local area through higher fuel efficiency.

[14] https://whc.unesco.org/en/statesparties/ke

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

[16] https://www.awf.org/country/kenya

[17] https://doi.org/10.1080/21513732.2018.1529708

[18] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7446120/

According to Global Forest Resources Assessment 2010 Report of Kenya by Food and Agriculture Organization of the United Nations[19], the area of forests of Kenya in 1990, 2000, 2005 and 2010 respectively is $3708*10^3$, $3582*10^3$, $3522*10^3$ and $3467*10^3$ hectares, it has decreased 6.5% from 1990 to 2010.

4.2 Expected Impacts on Natural Capital and Ecosystem Services

Impact #1	Tonnes of greenhouse gas emissions avoided or removed
Type of Impact	Positive, actual, 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 235,215 tCO_2e 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, actual, direct
Affected Natural Capital and/or Ecosystem Service(s)	Forest area, biodiversity, and water and soil, etc.
Resulting Change in Condition	The project helps local people consume less firewood as the ICS has higher thermal efficiency. It will save 114,819 t non-renewable biomass every year and it will result in a significant reduction of deforestation.

4.3 Natural Capital and Ecosystem Services Monitoring Plan

Sampling method

To monitor the impact on natural capital and ecosystem services, the following parameters need to be monitored, determined by multi-stage sampling method as per “Standard sampling

[19] https://www.fao.org/forest-resources-assessment/past-assessments/fra-2010/country-reports/en/

and surveys for CDM project activities and POAs (Ver9.0)" and "Guideline for sampling and surveys for CDM project and POA (Ver 4.0)":

Parameter	Description	Purpose	Affected Stakeholder Group(s)	Frequency
$N_{y,i,j}$	Number of project devices of type i and batch j operating during year y	Determination of Impact #1 and #2	ICS end-users	Biennial
$B_{y=1,new,i,survey}$	Quantity of woody biomass used by project devices in tonnes per device of type i and batch j	Determination of Impact #1 and #2	ICS end-users	Determined in the first year of project implementation

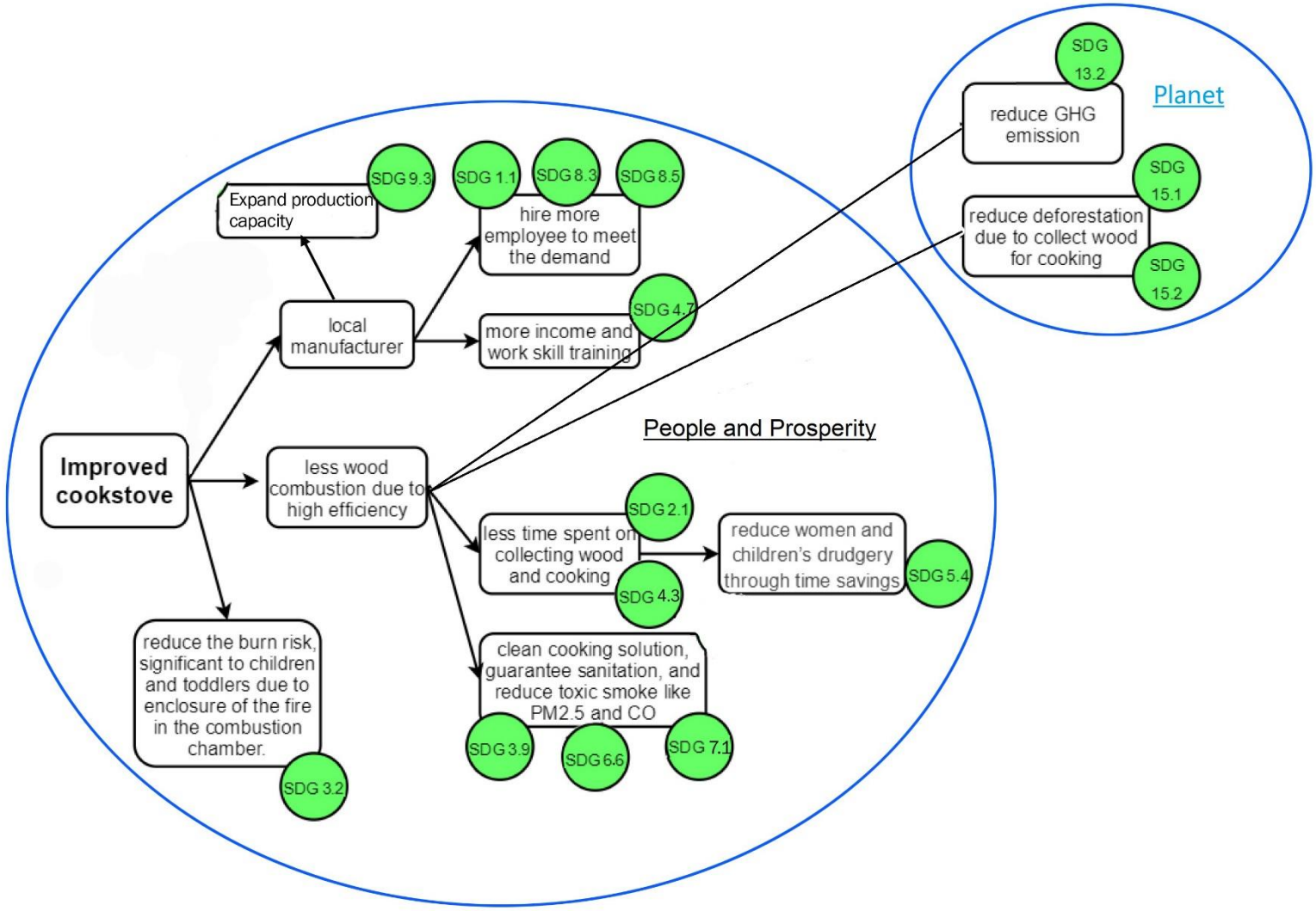
The above data is collected through survey and fuel consumption test, which is the responsibility of the local partners. Iceberg trains its local partners about the monitoring plan and supervise their work. The data may be cross checked by a third-party. The end-user households where the survey and test are conducted through multi-stage random sampling. The data from test and survey is 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 increases 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 235,215 tCO_2e. The crediting period is expected to be 10 years. Hence the total GHG emission reduction is 2,352,153 tCO_2e. The project save 114,819 t non-renewable biomass every year and it result in a significant reduction of deforestation.

APPENDIX

Appendix A: Causal chain.


Planet
SDG 13.2
reduce GHG emission
SDG 15.1
reduce deforestation due to collect wood for cooking
SDG 15.2
People and Prosperity
Improved cookstove
Expand production capacity
SDG 9.3
SDG 1.1
SDG 8.3
SDG 8.5
hire more employee to meet the demand
local manufacturer
more income and work skill training
SDG 4.7
less wood combustion due to high efficiency
SDG 2.1
less time spent on collecting wood and cooking
SDG 4.3
reduce women and children's drudgery through time savings
SDG 5.4
clean cooking solution, guarantee sanitation, and reduce toxic smoke like PM2.5 and CO
SDG 3.9
SDG 6.6
SDG 7.1
reduce the burn risk, significant to children and toddlers due to enclosure of the fire in the combustion chamber.
SDG 3.2