

The project activity will contribute to the sustainable development in the following way:

➤ **Environmental aspects**

The use of improved cooking stoves will substantially lower the amount of non-renewable biomass that is used for school and institutional cooking. The already selected UgaStove portable firewood IICS has shown to use significantly less wood fuel to cook the same amount of food in comparison to traditional stoves, hence schools reporting to having reduced their firewood expenditures by at least 50% per school term.

➤ **Social aspects**

Enhancing community access to essential social services (energy, health)

The dissemination of IICS and their use by end-users will very positively support the sustainable development of Uganda, e.g. through health benefits. This project activity targets the 96% of the Uganda population that depends on firewood or charcoal for cooking purposes. Improved cook stoves positively affect institutional energy demand by drastically reducing the quantity of fuel needed to cook. This reduction will not only reduce deforestation in the country, but will directly save on the amount spent on wood by schools and institutions, or the time women and children spend collecting wood.

Community participation in the project implementation, monitoring and evaluation

Communities will be deeply involved in the implementation of the project activity. The dissemination of IICS requires a production and supply chain that generates local employment in varying degrees for their manufacturing, assembling, distribution, maintenance and sales.

The use of social innovation and innovative technologies such as an IICS provides an added value, especially when addressing the younger generation. Children spend a large part of their time in school. Activities aimed at addressing the benefits of clean energy build the perception, motivation and behaviour for them to transfer that knowledge to their households, hence changing behaviour towards more efficient cooking practices.

Gender balance and participation of disadvantaged groups

Women are the main target user group of the project activity. Moreover, the use of IICS offers a viable pathway for women empowerment. It is usually women responsible for all cooking activities (both at the household and institutional levels). Women play an instrumental role in raising awareness between their peers and community members about the dangers of utilising traditional cooking methods and indoor/outdoor air pollution. The knowledge transfer provided from those using IICS at the schools, and the children witnessing and benefiting from it, will assist in driving demand, speeding up the adoption and widespread use of an improved cook stove within their communities. Addressing gender issues in clean energy concerns recognises that women are key players in the role played in the health, environmental, economic and climate change arena. Closing the gender gap will assist towards an equitable and robust effort towards sustainable development in Uganda.

➤ Economic aspects

Contribution to employment generation

The dissemination of IICS requires a large number of people to be involved in their manufacturing, assembling, distribution, maintenance and sales. Regardless of where the IICS is manufactured, the project activity will create employment right along the supply chain to a more modern level of mass production and distribution than the present artisanal manufacture of traditional stoves. This transformation of the delivery of IICS in schools and institutions will stimulate a more widespread adoption of distribution and manufacturing techniques that will spur rural economic development.

Contribution to saving and generation of foreign exchange

A fair-trade share of the carbon credit income is a particular feature of Simoshi's project activity. IICS are sold through payment schemes that include three equal instalments, at no interest rate, allowing schools and institutions to comfortably pay back their debt throughout the year. Schools and institutions do not need to search for money outside their budget or secure financial loans, as they use the money saved from firewood not consumed to pay back to Simoshi. By providing flexible consumer finance options and free annual maintenance, Simoshi expects to increase the rate of IICS adoption in schools and institutions.

Contribution to increased production of marketable goods and services

The project activity will create a nationwide market for IICS. These highly attractive energy and money saving appliances will rapidly spread into all rural and urban markets and will transform the energy profile of domestic and institutional cooking. By providing flexible consumer finance options and free annual maintenance, Simoshi expects to increase the rate of IICS adoption in schools and institutions.

Mutual economic benefits accruing from project activities

Sensitisation happens at the point of sale where environmental concerns are used as a marketing tool. Environmental campaigns, benefits from the use of an IICS and best practice on the use of IICS are carried out at schools/institutions during parent visitation days and special events. Children and their parents benefit from knowledge sharing on clean cooking and air pollution.

Contribution to increased demand for services

The demand for new services will be created by the widespread use of the IICS – in the form of stove maintenance technicians (all IICS will require an annual maintenance upgrade to bring them back into 'as new' condition); monitoring and sampling teams will be permanently recruited to verify that IICS are in regular use for verification purposes; and IICS testing personnel will be trained to perform rating and testing work.

Contribution to redistribution of development to address area imbalance in development

Simoshi shares part of the revenues accrued from the sale of carbon credits by providing the schools with interest free annual credit to pay back for the cost of the IICS, free annual maintenance for up to 7 years, and continuous monitoring and education to all kitchen staff and school members on the best use of the IICS.

➤ **Technology aspects**

Environmental friendly technology

IICS are beneficial to the environment as they contribute towards reducing CO₂ emissions when compared to traditional cooking technologies, such as three-stone fires. There is no evidence that the disposal or recycling of an improved stove will cause any significantly harm to the environment. Most IICS are built using clay, vermiculate, metal, cast iron, aluminium, cement and paint. Materials such as plastic are rarely used.

Technology transfer

Past efforts to popularise IICS, especially by NGOs and donor organisations, have resulted in the creation of several stove manufacturing companies and groups in Uganda. Knowledge about improved cook stove technology from other countries was accessed, and was adapted for local conditions by a small number of local manufacturers producing IICS on a modest scale. There are several identified weaknesses in the institutional IICS market, such as financial barriers and/or no access to capital to purchase an IICS as well as lack of consumer awareness and information. By providing the IICS with a package of benefits to the schools/institutions, the above weaknesses are tackled paving the way for an increase in technology adoption and transfer.

Efficiency technologies

The project activity will create employment right along the supply chain to a more efficient level of mass production and distribution than the present artisanal manufacture of traditional stoves. This will substantially lower manufacturing costs, and will facilitate IICS production to a modular design, allowing for simple annual maintenance events. This transformation of the manufacturing and delivery will stimulate a more widespread adoption of efficient distribution and manufacturing techniques that will boost rural economic development.

Acceptability of technology by local community

The specific design of an IICS plays a major role in its acceptance by end-users. The IICS's ease of use by women is a key concern of Simoshi. If IICS are not carefully designed for local users' preferences they will either not be sold or will fall out of use after a short period of time, and thus will not qualify for carbon credits. The project activity will promote competition between suppliers to meet consumers' requirements for well-designed and affordable IICS, which can be maintained to ensure their long-term use.