Across Nepal, an estimated 22 million people are exposed to harmful indoor air pollution as a result of using traditional, inefficient stoves for cooking and heating. With the support of carbon finance, this project distributes improved biomass cookstoves which deliver benefits to households such as health and well-being improvements, financial security and empowerment of women.
The project
The project is establishing markets to sell efficient, biomass rocket stoves across Nepal, with an initial focus on the Far West Development Region (FWDR). By subsidising the sale of these stoves, which have been specifically selected to suit the cooking requirements in the area, the project is enabling rural and peri-urban households, who would be unable to afford the upfront cost, to benefit.

To achieve its goal of distributing 150,000 stoves, the project offers the stoves at a subsidised price to rural and peri-urban households, who would be unable to afford the upfront cost.

Made by local manufacturers, the stoves use simple design enhancements that make them approximately 25% more fuel-efficient and significantly more durable than traditional stoves. The stoves use wood as a fuel source, the primary source of cooking fuel in the FWDR.

In part due to high poverty rates and poor road infrastructure, the benefits of improved cookstoves have not been widely shared. To achieve its goal of distributing 150,000 stoves, equating to roughly 60% of all households in the FWDR, the project offers the stoves at a subsidised price.

The project is managed as one entity but has issued some carbon credits under the Clean Development Mechanism (CDM) and some under the Gold Standard.

Carbon finance enables the project to subsidise the cost of cookstoves, enabling greater uptake amongst low income households.

Contribution to sustainable development
The project contributes to sustainable development in several key areas.

Energy access
In the baseline study of the project area, it was found that 90% of households were using wood as their primary cooking fuel, with an average consumption of around 11kg of wood a day. While using traditional cooking methods such as mud stoves (over 50%), three stone fires (25%), and metal tripod stoves (14%), users reported that both the time to collect fuelwood and its cost were increasing. By October 2015, the project had distributed 54,900 cookstoves across seven of the nine districts in the FWDR, reducing the time to collect and cost of fuelwood for households in these areas.

Job creation
Currently there are a total of 700 people working in the project supply chain, of which over 92% are hired from the local area. This total includes just over 610 cookstove promoters, who are hired in target villages to promote and sell the improved stoves. Other roles include logistics, management, monitoring and after-sales servicing. As the cookstoves’ pre-fabricated combustion chamber is produced locally, training and employment opportunities are available for local manufacturers.

Financial security
In order to establish the market to sell these efficient rocket stoves, the project must strengthen local business capacity by facilitating entrepreneurship and knowledge transfer. To enhance cookstove supply the project is training local manufacturers and building demand for the stoves by employing local village promoters.
A reduction in fuel use means less time is spent collecting wood, allowing women - the primary gatherers - more time to participate in other activities.

Education & skills
The stoves are manufactured locally and assembled in the end user’s home, requiring training of manufacturers and installers, but also promoters and monitoring staff. So far, more than 150 training programmes have been planned and organised for skilled and semi-skilled workers.

Biodiversity protection
The rocket stoves are 25% more efficient than traditional stoves, and therefore require less fuelwood to maintain normal cooking practices. As 86% of the fuelwood used by households is from non-renewable sources, a reduction in fuelwood requirement reduces the pressure on existing forests.

Health & well-being
There are a range of health benefits associated with the use of rocket stoves. In the project’s first monitoring survey, over 80% of all households reported a decreased incidence of side effects associated with indoor air pollution such as coughing, respiratory illness and itchy eyes.

Empowering women
With a primary focus on domestic life, women are most often exposed to indoor air pollution from traditional forms of cooking. Therefore, with the adoption of improved cookstoves, women are the main beneficiaries of the improved living conditions. Greater fuel efficiency also means women need to spend less time collecting fuelwood, enabling them to allocate this time to other productive activities.

The project ensures its activities are in line with the goals of the Nepalese government - to increase representation of women and marginalised individuals in the workplace. Overall, 16% of all project employees and promoters are women.

The project is strengthening local business capacity by training local manufacturers and employing local cookstove promoters to build demand.

Overall, 16% of all project employees and promoters are women, supporting the goals of the Nepalese government to increase representation of women in the workplace.
Within the project area, over 45% of people are living below the poverty line of USD $3.10 per day. With the support of carbon finance, the project is able to subsidise the sale of cookstoves, enabling a greater number of households to benefit.

Project partners
The project is being coordinated and implemented by SNV, the Dutch international development organisation, together with various local organisations. The project is consistent with the organisation’s mission to alleviate poverty by enabling access to sustainable energy sources.

To achieve the project’s targets, local capacity will be developed by the Center for Rural Technology, Nepal (CRT/N), a renewable energy NGO. CRT/N has been involved with renewable energy programmes in Nepal for over 20 years and is responsible for data collection and responding to end-user feedback.

At a national and sub-national scale, the Alternative Energy Promotion Center (APEC) will be responsible for supervising the project and liaising with government agencies. APEC is a government institution established in 1996 under the then Ministry of Science and Technology. While it functions independently, its aim is to develop and promote renewable/alternative energy technologies in Nepal.

Location
The project boundary is Nepal, but the initial focus of project activity is throughout the Far Western Development Region (FWDR).

Currently there are a total of 700 people working in the project supply chain, of which over 92% are hired from the local area

Nepal is one of the poorest countries in the world for a range of reasons, including social discrimination, low agricultural productivity for poorer households, challenging climate and terrain, and the recent decade of conflict between the government and Maoists. One of 48 Least Developed Countries (LDCs), Nepal was ranked 145 out of 187 countries on the Human Development Index by the United Nations in 2014.

The lack of economic opportunity and the decade of conflict have prompted many of the most productive members of rural households to migrate from Nepal in recent years.

Regional context
In the FWDR, it is estimated that 90% of households use fuelwood as their primary source of cooking fuel and nearly 75% across the whole of Nepal. This equates to almost 22 million people that are exposed to indoor air pollution on a daily basis, resulting in the death of an estimated 4,524 children each year.