

Project Summary: Safe Water in Gash Barka Region, Eritrea

The region of Gash Barka, Eritrea is largely rural in which local people typically use wood fuel on inefficient three stone fires to purify their drinking, cleaning and washing water. Purification of water through burning wood fuel results in the release of greenhouse gas emissions. Emissions can be avoided if a technology that does not require fuel (wood or fossil) supplies clean water desired by households.

Many existing safe water sources have fallen into disrepair because maintenance programmes have been poorly managed or proven too expensive. In this small-scale project Vita, an Irish Charity that works in Eritrea, will work with local communities to identify broken down water sources, and repair them so that they deliver clean, safe water. The project will ensure that the quality of the water delivered by the water sources is fit for human consumption for the entire length of the project, which will be a minimum of five years.

Funding for this project comes from marketing the anticipated carbon credits from the wood savings to ethical investors, so safe water source owners must agree to transfer the emissions reductions over to Vita in return for them supplying the work and materials to install, rehabilitate, and maintain the safe water sources. This project will be developed in partnership with carbon consultants, CO2balance, under the Gold Standard carbon credit body, which in addition to checking that the carbon credits from this project are real, also measures the impacts of the project towards the Sustainable Development Goals (SDGs).

Technology

An example of the technology common in Eritrea that will be installed or renovated as part of this project is shown below. This project is not limited to any particular model of hand-pump or water scheme; installation and renovation will be according to local needs.

India Mark II Hand Pump:



Sustainable Development

In addition to supplying clean, safe water and greenhouse gas savings, this project will create positive social, economic and environmental impacts:

- Result in less wood used by households, which will reduce pressure on local ecosystems
- Reduce time spent collecting water and gathering firewood to boil water
- Reduce the incidence of illness caused by unsafe water and household air pollution
- Reduce expenditure on firewood, leaving money free for other household expenses
- Train communities in water, sanitation and hygiene (WASH) techniques
- Support communities to manage and maintain their own water points

This project aims to contribute to the following United Nations Sustainable Development Goals:

Sustainable Development Goals (SDG's)	United Nations Targets	Co2balance Indicator
 <p>3 GOOD HEALTH AND WELL-BEING</p>	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and, air water and soil pollution and contamination	Provide safe water for consumption to all project beneficiaries
 <p>5 GENDER EQUALITY</p>	SDG 5.4 Recognise and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	Reduce time spent collecting firewood and water
 <p>6 CLEAN WATER AND SANITATION</p>	SDG 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	Provide safe water for consumption to all project beneficiaries
 <p>13 CLIMATE ACTION</p>	SDG 13.B Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	Realise actual CO ₂ emission reductions by removing the need to boil water for purification

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