



WATER IN ACTION

Partnerships

Knowledge

Solutions

Improving the life of villagers in the Highlands of Ethiopia

Ethiopia in East Africa is one of the poorest countries in the world with nearly 40% of the population living below the international poverty line. In the rural town of Kosoru, in the Eastern Ethiopian Highlands, UK based NGO, Tearfund and their local partner the Ethiopian Kale Heywet Church (EKHC) have undertaken a project to provide safe drinking water and sanitation services to the local community of 4,000 people, funded under the Borouge and Borealis "Water for the World" programme.

The water comes from two high springs and is piped down the mountain under gravity to two large storage tanks above the village. From here more pipes carry the water to feed 12 tap stands, 5 washing stands and 5 cattle troughs which are distributed throughout the village. All the pipes have been supplied by Excel PLC in Addis Ababa and were produced from BorSafe™ HE3490-LS-H High Stress Crack Resistant (HSCR) PE100 to make them less vulnerable to failure in the stony soil.

During a visit to the village in October 2013, Borouge's Andy Wedgner was able to witness the progress of the scheme and talk to the people about the benefits it would bring to the village.



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Benefiting all the villagers

As Tamer Mohamoud told Andy: "I am a member of the water committee and we are very pleased about this project because we ladies had to fetch water from afar, but now we have easy access to water. We also had a lot of health problems, which are now solved. Before, I would spend about 3 hours every day collecting water but now it takes no more than 15 minutes as there are enough tap stands."

The Water Supply Project

The water comes from two mountain springs which feed 12 tap stands, 5 washing stands and 5 cattle troughs distributed throughout the extended village area. Protection tanks have been built around the springs to reduce the possibility of contamination and the water has been piped down the mountain under gravity to two large storage tanks above the village. From here more pipes carry the water to the different access points around the village making it much easier for the local population to access their daily requirements.

Children were also collecting water now, whereas before it was not safe for them to do so, particularly when the weather was wet as the tracks up to the springs were difficult and dangerous. Most people used old cooking oil containers to collect and store water for their households. Many of these were 20 or 25 litres in size although the smaller children sometimes used 10 litre containers. As Hussein Ahmadhi told Andy: "In the past we have had many problems like broken bones where people fell down carrying the heavy water containers coming down from the springs and women have problem walking to the water source at night. We thank you for this as we hear about many water points being built with a poor quality - but this quality is good."

When Borouge's Andy Wedgner visited the village in October 2013, around 5.5km of the 7km of PE100 pipes had already been installed. All the pipes were supplied by Excel PLC in Addis Ababa and were produced from BorSafe™ HE3490-LS-H High Stress Crack Resistant (HSCR) PE100. This material was chosen as the soil was very stony and imported backfill materials were not available, so increasing the risk of surface damage and point loads on the pipes. The use of HSCR PE100 material will help to prevent these developing into cracks. Mechanical compression fittings are being used to connect the pipes, the largest of which is 90mm diameter, as it was difficult to use fusion welding equipment in these remote areas.

The villagers carry these heavy containers on their back, tied in place with a Gemed, which is like a scarf, so it was easy to see how people could slip and have accidents on the steep tracks up to the springs.

A better future secured for all

The scheme has four caretakers who are being trained in the repair and maintenance of the system and each tap stand has a water attendant, one lady who also helps to look after the system. Together with the establishment of a village water committee responsible for the management of the scheme and the collection of a small charge from each household, these arrangements should help secure the long term sustainability of the scheme. As one of the caretakers, Ahmed Sayed, told Andy: "I have seen other crews coming from companies and government but the work they did has not lasted. The team from EKHC are different. They undertake the work properly, are disciplined, they don't drink or chew khat and show respect for the villagers and set a good example for us."

The system was designed to last for at least 20 years and although it will initially serve only 4,000 people, the springs produce enough water to supply over 10,000 people in the longer term. Locally harvested timber was being used for fences around the water facilities which prevent access to the many domestic animals such as donkeys and goats. These are built by the local community saving money which can then be spent on other scheme elements that cannot be produced locally.

For more information on this project contact: info@borouge.com

For more information on Borouge PE100 visit: www.borouge.com



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