

## **A hand drilling deep well quenches local's thirst**

By WAHINYA HENRY

During the rainy season, the Njukini landscape in Loitokitok District is characterized by a green landscape, sending a wrong signal that the district rarely experiences serious drought conditions.

"It's not always like this. In times of drought, people are impoverished. This semi-arid area faces serious shortage of safe and reliable water," explains water expert, Nicholas Thoya.

He says the area experiences drought as the rivers and streams are seasonal, coupled with unreliable rainfall patterns. Livestock keepers narrate the effects the drought has had on their livestock when the drought hit the district last year.

Joseph Oirisho ole Senge, 49, lost over 170 animals. He sold the ones that survived at Shs.2,000 each. Currently, a cow is sold for Shs.30,000.

Thoya who is the field co-coordinator of the International Water Programme (IWP), a non-governmental organization, says a unique water technology, Kazusabori technology, introduced in the area has the answer to water shortage in Njukini.

Thoya explained that in Japan, the Kazusabori technology is only a piece of history in a museum. But in Njukini, the technology has been a big relief to residents, ensuring that clean water is available, for both domestic and animal husbandry.



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Ole Sesei says, his wife spent many hours in search of water before the technology was introduced in Njukini. “She had little time for other chores at the household level. The alternative would be to fetch contaminated water from River Njukini whose source is Mt Kilimanjaro.,” Ole Sesei pointed out.

### **The Technology**

“The Kazusabori System for Sustainable Development is a Japanese unique technology. In Njukini, all the building materials are sources locally. Nothing is imported from Japan. Not even the tools to do the work,” says Joseph Matiku ole Satio,61. Ole Matio says this is the reason why the system was easily accepted by local people as appropriate technology.

The Kazusabori is the only technology which can drill deep wells by manual in the world. Beneficiaries belong to community-based organizations for the purposes of ensuring the project will be sustainable after the sponsors leave.

“We contribute money to maintain the project. Members are trained on how to implement the project. They pass over the knowledge to those who were initially trained,” says Matio.

Japan International Co-operation Agency (JICA) is a major sponsor of the project in Loitokitok, Kaloleni at the coast and Funyula in western Kenya.



**Residents drawing water from tanks pumped from the well.**

According to Hisayo Ohno, the project manager with IWP, the Kazusabori is an original form of modern boring system by machine. He says the diameter of the hand-drilled well is about 120mm. PVC pipes are installed to it as casing.

In areas where bamboo is available, it is used for drilling and casing. If bamboo is not available, iron or steel materials are used as an improved method. The technology is improved to adapt for the areas as circumstances demand.

“This is why the Kazusabori System is called “appropriate technology”. It is neither hi-technology nor low-technology. We call the Kazusabori a middle-technology that is suitable for sustainable community development,” says Ohno who is IWP Water Manager.

### **The benefits**

Ohno says human power is the only requirement and not heavy machinery as the public is involvement in the implementation of the project. “It means that the System is very cost-effective.

The simplified Kazusabori System is easily transferred to local people, “explained Ohno at the site, 58 kms from Loitokitok town. Unlike the common wells, the walls of the Kazusabori do not collapse during rainy seasons.

The technology is Eco-friendly because it doesn’t make big noise like a boring machine. “There is no exhaust gas like a compressor. It doesn’t pollute the atmosphere at all and guarantees availability of safe and reliable water supply from aquifers throughout the year,” Ohno says.