



*TITLE: CASE STUDY ON COMMUNITY
ADAPTATION TO CLIMATE CHANGE BY PEOPLE
LIVING ALONG THAMALAKANE RIVER IN
BOTSWANA*

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Abstract

Case study on community adaptation to climate change by people living along Thamalakane river in Botswana. The river is found in the northern part of Botswana, in the village called Maun. This river is one of the distributary streams that form the part of the Okavango Delta. The annual surface water floods depend on the climate change. The more the rain are experienced upper the stream in Angola the more surface water will get in the Thamalakane river. The water travels through two countries to reach Botswana being Angola via Namibia. During the low floods upper at Angola, due to climate changes most of the down streams in the Okavango Delta get dry, Thamalakane river being one of them. People living in the delta due to this climate change vulnerability, came up with a social innovation activity of making the well points along the banks of the river as a way to adapt to this severe climate change. This area is one of the hottest regions in Botswana with temperatures ranging from 38 to 40 degrees Celsius during summer.

BACKGROUND

Geographically Botswana is placed in the heart of sub Saharan Africa which is characterized low and unreliable rainfalls. Consequently, the water resources in the country are scarce and limited and it has therefore become imperative that a proper water resource management plan be put in place to safeguard these scarce resources and ensure sustainable and equitable use. The objective of the case study on Community adaptation to climate change along the Thamalakane river in Botswana is to relate water, climate change and social innovation done by people living in the area. The climate change causes some vulnerability to the community at large. Due to extreme temperatures and change in the dynamics of the rain fall patterns, the rivers down the Okavango Delta have dried up, and they are no longer perennial but turned to seasonal. People living in this area experience unreliable and unsustainable surface water source that they used to rely on long back in `1970's.

The community around the area adapted drilling of well points as a social initiative to mitigate the shortage of water during dry seasons for their social, agricultural and economic use.

People used to drill hand dug well known as open well, but recently the well point were drilled in high number, since Thamalakane river dried up in 2018, there was increase in to this innovation of well points. The well point has been found to be affordable as compared with drilling of Borehole. This year May 2020, Thamalakane river is flowing again back to normal though it is called new normal due to the epidemic of corona virus.

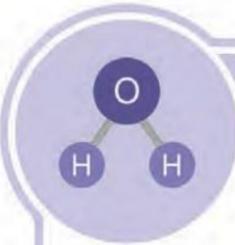
DESCRIPTION

Definition of key words:

- A well point is a small diameter well, used for dewatering, and consist of shallow shaft, a dewatering pump, riser pump to draw water to the surface at a depth less than 20m.
- Climate is the weather condition prevailing in an area over a long period of time.
- Climate change is the change in global or regional patterns, or those variations in climate that persist for a longer period of time.
- Vulnerability refers to the degree to which people or the things they love or value susceptible or unable to cope with, the adverse impact of climate change.
- Adaptive is the degree to which people could mitigate the potential for harm by taking action to reduce exposure or sensitivity.

THE SCOPE

The of the study is to show how people living along Thamalakane river in Botswana got adapted to the vulnerability of climate change. The community introduced well points as additional source of water, to add to portable water that is provided by Water Utility Cooperation to be used for watering lawns and watering plants and livestock.



TECHNOLOGICAL SOLUTIONS

The community traditionally used to dig hand dug wells which were made open at a diameter of 1 to 1.5 meters at a depth of 3 to 6 meters. This type of open wells were causing a risk to the people and living thing around that area. During the digging the soil can collapse and cause death, some and other crawling animals.

Now with technology the well points have been introduced. To drill a well point, people use water pump, a pipe with diameter of 20mm to 50mm and water. The water is pressurized into the sandy soil until they reach a shallow aquifer. The well points are reliable during droughts and cover less area.

Most of the community that relied on surface water, in olden times were used to drink untreated surface running water. The use of well point came as an advantage as the water being drawn will have been sieved, and requires less treatment which is disinfection to kill any germs.

The supply of portable water, have been allocated to Water Utility Cooperation. Botswana is a semi-arid country and most of the water comes from boreholes. In the area I stay the company uses telemetry technology to view the water levels of tanks, this helps in rationalization of water with wards during break down or water shortage.

The Department of water and sanitation in Maun has a laboratory where samples are tested for water quality to insure safety of community. The company ensures that water is readily available to all the community in the area.



GOVERNANCE STRUCTURES

Botswana water policy allows only one company to do portable water supply across Botswana. This was done to ensure that a clear control safe and clean water access to all Batswana. It was also done to ensure that, the control of water born disease can be easily traced, as there will be only one supplier of fresh water.

Previously the water supply was done by government Department called Water Affairs, which now changed to Water and Sanitation. The endorsement of water supply to move from Water and Sanitation to Water Utility Cooperation was done at the parliament and the endorsement was effected in 2012.

The drilling of well points is surported by one of the government structures like small scale agricultural works ,



CAPACITY DEVELOPMENT



The awareness is done on water conservation, through kgotla or customary meetings, advert in daily news, posters and Radios.

When the person want to make his new connection, for fresh water , he starts by applying for water connection at Water Utility Cooperation. He will then be required to pay certain amount. As the capacity building the person will be encouraged to dig a trench for him/her and means of creating ownership and install a sense of water conservation to people.

The community are hands on digging well points for them self as a way of capacity building. Some do hire the local supplier of water related materials called Water Africa.

The community utilises the the laboratory by submitting the water sumples for water quality testing to ensure that the water that they drilled, they know their quality and use it accordingly .



BUSINESS ROAD MAP

The Water Utility Cooperative as the only sole supplier of portable water in Botswana its aim is to ensure that safe water is readily available and accessible by all, on the same time they ensure that they collect water bill charges to ensure continuity and operation to cope with demand, without failing.

The department of water and sanitation as a mother department identifies source and hand it to Water Utility Cooperation for operation. This is to say the Department of Water and Sanitation is mandated to drill borehole, build dams, construct major pipelines and after completion and commissioning of the project they hand it to Water Utility cooperation for operation. The two departments have a forum where they meet to discuss and map way forward on how best they can serve the community at large.

The community living along the Thamalakane river have adapted to climate changes they are experiencing. They have drilled some well points along the river as a social innovation to respond to dryness of the river. The government of Botswana is committed to increase access to water to people through Water Utility Cooperation and the Department of Water and Sanitation. The community is taught on different platform to re self-reliance and on water conservation.

- AfriAlliance module 3 and module 5 power point.
- **How to do a case study** Date published May 8, 2019 by [Shona McCombes](#). Date updated: June 19, 2020
- AfriAlliance web site.

