

# Nkovukeni Youth Employment Service (YES) Youth CCA Workshop Day 1

Date: 25 June 2024

Venue: Nkovukeni Hub

Attendees: YES youth; 17 female, 15 male, eldest 28, youngest 18

## Introduction

The 2024/2025 YES intake has started their workplace internship where they are supposed to get real work experience. Of the 30 odd youth for this round, about 8 are from Nkovukeni with the rest coming from neighbouring villages in Mvutshana, Mazambane and others. The youth have organized themselves transport that drop and pick them up by the lake every workday and pay R350 per person for the month. In the Climate Change Base Adaptation (CCbA) project headed by the Wild Trust, the youth will be championing the climate change adaptation work where they will be working with local farmers. This means that the youth group must be well informed on climate change in general and what this means for individual households in Nkovukeni. Furthermore, they will be responsible for helping households experiment with various practices in their attempts to increasing resilience to the changing weather patterns.

This workshop was a process for the young people to think through climate and climate change, the process of breaking down impacts' changes have on everyday lives. For Nkovukeni; ecotourism, fishing, crops production in both vegetables and staples, craft are major livelihood activities. People mostly grow food in wetlands, floodplains and gardens for immediate household consumption. In wetlands and floodplains there is some water readily available for production and that is a great pull factor as water is a problem up the hill in their home gardens. Plots of vegetables such as spinach, beetroots, cabbage, carrots, green peppers ect are grown in raised beds with water standing in the pathways. Crops in raised beds easily access water and nutrients from all the deposits happen in this part of the wetland. Garden production in the households is limited to fenced off sizes of about 200m<sup>2</sup> where sometimes half the plot is worked due to water issues. Fishing is a big part of livelihoods predominately for men but women as well, where both contract and subsistence fishing are done. On top of fishing, there is harvesting of mussels, crab and a range of other water species. Grasses and other material for craft also grow along the edges of the lakes that women mainly harvest for craft and mats sold to tourists and visitors to the area's beautiful scenery and pristine nature.

Continuously increasing temperatures and erratic rains because of climate change have resulted in adverse impacts on the livelihoods and ultimately food security. Unplanned and poorly managed cropping in the wetlands and floodplains continue to deteriorate the ecosystem services nature provides while gum plantations threaten underground water sources and tributaries feeding livelihood underpinning lakes. Poor yields in fields and garden put pressure on marine ecosystems thus resulting in excessive fishing and harvesting of marine species. Gum plantations and alien species continue to "drain" water off the lakes resulting in reducing water volumes and life in water, surrounding life is also affected by this resulting in the deterioration of what was one pristine beauty.

## Climate change

When asked about climate change, the group was quick to say that this refers to the changes in weather patterns over years. These changes can be seen in the increasing temperatures year after years with winters warming up then what they usually were. They also referred to unprecedented severe floods and storms occurring out of the summer season as well more severe and extended periods of droughts. They attributed changes in climate to heavy human activities that produces more CO<sub>2</sub> into the atmosphere thus causing a warming effect on the planted. This warming effect causes ice to melt, resulting in rising sea levels while in other parts of the world extended droughts sees water scarcity, less rains with other knock-on effects on human lives. the group is aware and afraid that current impacts from climate change will be intensifying more in the future and people need to relook at their interaction with the environment to curb these negative impacts. They are certain that the costs of living will continue to increase as means of production for necessities continue to increase and this will have a fatal impact on the poor.

Table 1: Past, present, future

Past	Present	Future
<b>Farmers and people could plan around yearly weather</b>	Weather become unpredictable	Unpredictability will increase
<b>More crop variety</b>	Increased temperatures	Less crop variety
<b>More predictable weather</b>	Unprecedented floods	More flash floods
<b>Droughts were not as bad</b>	Extended drought periods	Even longer drought periods
<b>Food was almost in abundance</b>	Poor yields and crop quality	No yields leading to hunger
<b>Although water in lakes may have been decreasing but not as fast</b>	Decreasing water volume in lakes	Gum will continue drain water as more people grow it to make a living
<b>Large herd sizes</b>	Poor grazing land growth and rehabilitation, smaller herd sizes	Poor rehabilitation and grazing, even smaller herd sizes
<b>Less diseases and pests on livestock and crops</b>	Increased pests and diseases on crops and livestock	Infestation of diseases and increased pests, increased livestock mortality
<b>High crop diversity, various crops grown e.g. maize and beans with imifino, pumpkin, ibhece ect</b>	Stop growing millet, sorghum, maize already hard to grow, low crop diversity	Hard time growing staple crops e.g. maize, even crop diversity
<b>Less prevalence of storms and their severity</b>	Destruction of houses by storms	More sever storms, like what we saw on the 2 <sup>nd</sup> of June 2024 in Nkovukeni
	Drinking water scarcity, no rains	Further struggles for water access
	Prevalence of wildfires	More wildfires as temperature increases
<b>Not as many gum plantations</b>	Increased gum plantations	

## Seasonal mapping

Changes in climate happen over time; decades, as was the case from the scientific evidence from the South African Environmental Observation Network (SAEON). The network clearly states that temperatures have increased and rain is more unpredictable due to human activity. Significant changes in land use have implications for the amount of CO<sub>2</sub> released into the atmosphere, thus causing a greenhouse warming effect. This increases the incidence and severity of storms, tornadoes, and droughts that were bound to happen. The more heat we produce, the longer and intensifies hot periods, with warmer oceans fuelling even more the severity of storms and tornadoes. With livelihoods entirely dependent on yearly temperatures and rainfall distribution, we asked the group to split into two groups, using kebab sticks and flip chart paper, to draw a graph showing temperature and rain across the year.



Figure 1: YES Youth doing and presenting their seasonal maps

## Reality impact maps

After a discussion on what the future looks like in terms of impacts from increased temperatures and increased rainfall variability, the group was tasked to create a mind map of social, economic and environmental impacts. The main here was to paint a picture of impacts and problems we are headed for if we do not take the issue of climate change more seriously.

**Social impact**-the struggle for food will get even harder as more and more people will not be able to grow their own food due to water shortages, no rains, droughts with crops and livestock prone to diseases and pests. The inability to produce food will always mean the unavailability of nutritious food and this will put a lot of pressure on pension and child support grants as less food can be purchased with the same amount of money. Less options in terms of food choices directly results in poor nutrition and this will see a rise in diseases and hospital admission as those with lifelong sicknesses will be a great risk.

This will also see crime shoot up and more and more people struggle to survive and may resort to theft as a quick response. Livestock theft may see an increase with livestock stolen while travelling long distances in search for food. Those wanting to sell of their livestock may not fetch good price due to the condition of the animals and economic viability of the next person keeping them.

**Economical impact**-the other hand, increased growing of gum will drain the lakes and surrounding water sources dry thus impacting on the green and freshness of the area thus slowly deteriorating the scenery and tourism viability. This will see a huge knock in local homestays, tour guides, local boat cruise drivers and so on. We will also see a loss of formal employment from nearby lodges and eateries. Continuous overfishing will result in the loss of contract fishing and local selling, already we can see that fish stock have reduced.

**Environmental impact**-droughts and floods coupled with human activity have an impact on biodiversity of both animal and plant life. Alien species that people grow for income threaten to outcompete indigenous crops changing our landscape as we know it. Overgrazing and poor rehabilitation of environment may see soil erosion, compaction and increases severity in cases of fires. The destruction of mangroves and other important components in the environment means this important ecosystem service area will no longer filter our water, clean our air and provide other ecological services.



water tanks. Individuals were then asked how they selected those practices as opposed to the other one they didn't choose and the answers were, water efficiency or helping with harvesting water as water is a big challenge in the area, safety from roaming livestock was the other. Tunnels would allow households to produce food all year round and crops would be safe from livestock roaming free. They also wanted long term beneficial practices where you can benefit for years to come like deep trenches.

Table 2: Matrix ranking

Criteria	Access to water/water efficiency	Producing all year round	Protection from livestock	Long term benefits/fertility	Total
RWH jojo's	3	3	3	3	12
Tower garden	3	3	1	2	9
Drip kits	3	3	3	3	12
Tunnels	3	3	3	3	12
Deep trenches	2	3	3	3	11

1-low/easy/poor

2-medium/average

3-high/difficult/expensive

## CRA demonstrations

Trench Bed – This trench bed was demonstrated on the Enkovukeni Community HUB, this is a location which is accessible to every member in the community thus putting this practice to everyone it caught its eyes on. Whoever who want to learn about this trench bed can come and have the skills to do it in their homestead assisted by the Hub staff. This trench bed was made to be one meter deep and two meters long, this was because there was limited space to prolong it as the space given had hidden water pipes and sewage pipes underneath, not wanting to risk damaging it we made the trench two meters long. Tins and bones which are used it the foundation of the trench were not collected by the Hub stuff; therefore, the first layer was the dry manure which were leaves from the fallen trees, following by the soil.



Figure 3: Nqobile (MDF) facilitating deep trench demonstration in the newly established hub demonstration garden

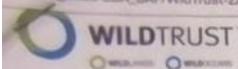
After the second layer (Soil) we applied cattle manure which have been already prepared two days ago, it was collected on the neighboring household, about 8 wheelbarrows of cattle manure was at place ready to be used. After that its dry manure, soil and cattle manure. The cycle continues until the trench is filled up and ready to design a bed, then three bags of cattle manure was mixed with sand to create the topsoil and the bed was designed. Crop we mixed in the bed, red lettuce, kale, onion, cabbage, green paper, mustard and some herbs.

Tower Garden - This tower garden was placed at the back yard at the Enkovukeni community hub, it was demonstrated at the same day after the trench bed demonstration. A two meters net which has already been netted was used, it meant to have sides with 0.5 meter is length, this is because the soil of Enkovukeni are sandy soils which has loose particles, two meters will make the 80% shade net to hold the soil. Four wood logs from the fallen trees were used as the four poles to stand the tower. Three wheelbarrows of cattle manure were mixed with sand to be bagged in the net.

A column of gravel stone was carefully made as the soil mixed with manure was bagged inside the net. This gravel column is designed to distribute water to all the ends of the net and acts as a filter when using grey water. It was emphasized in the workshop and the demonstration site that, when using grey water, it should first be kept in the drums where wood ash is to be applied water should be left and waited for about a week before it can be used. This is done to get rid of the bad smell of water and the soap as it is a detergent and can be harmful to the crops if used raw. Crops planted were red Lettice, Onions, Kale, Mustard and herbs.



Figure 4: Tower garden and trench demonstrations planted with seedlings



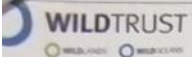
Attendance Register

Date: 26/06/2024

Village: Enkoukoni

Workshop: Climate Change Workshop

No	Name	Surname	Gender	Age	Cell No	Signature	Comments
1	Mkhokompu	Mthethiwa	Male	26	076 610 9842	[Signature]	
2	SANELE	Mkhumbuzi	Male	25	072 405 9116	[Signature]	
3	Sikolala	Mgobane	Male	20	068205654	[Signature]	
4	Sbonelo	Mxakane	Male	23	079 802 8841	[Signature]	
5	Nazitho	Mthembu	Female	22	064814731	[Signature]	
6	Lungile	Mama	Female	23	071 455 7543	[Signature]	
7	Peebus	Biyela	Female	25	0765490614	[Signature]	
8	Nkamisile	Ndluli	Female	25	0721857618	[Signature]	
9	SAMMIE	Mthembu	Male	27	010419354089	[Signature]	
10	Lwlethu	Makhenjwa	Female	21	0762549127	[Signature]	
11	Nokukhula	Mthembu	Female	24	082 486 8444	[Signature]	
12	Blindokhule	Khambule	Female	18	072 637 3977	[Signature]	
13	Imvaseca	Mthembu	Female	19	051 801 9419	[Signature]	
14	Mandisi	Mthembu	Male	26	0714262846	[Signature]	
15	S'elokhule	Mthembu	Female	21	0162781654	[Signature]	
16	Melokhule	Mkhumbuzi	Female	20	082 480 2785	[Signature]	



17	Cebile	Sibya	Female	27	076657308	[Signature]	
18	Bongintosi	Manzini	Male	25	072 542 3211	[Signature]	
19	Nkululeko	Mukhanganyi	Male	24	07 29531026	[Signature]	
20	Celimpilo	Ntuli	Male	23	0291460789	[Signature]	
21	Owesini	Mahlangu	Female	20	0725204541	[Signature]	
22	Luhle	Mabuyakhele	Male	22	0661501592	[Signature]	
23	Sakhile	Manzini	Male	27	0764388630	[Signature]	
24	Sindle	Chi	Female	24	079 267 1070	[Signature]	
25	Nomvelo	Nbisi	Female	24	064 944 3014	[Signature]	
26	Aunee	Mhongo	Male	11	086 433 217	[Signature]	
27	Nkandoyenkosi	Mkhonto	Female	25	079689526	[Signature]	
28	Ncediso	Msubane	Female	18	066 398 2839	[Signature]	
29	Simeotuse	Sihlale	Female	24	0715255441	[Signature]	
30	Zandile	Khumalo	Female	21	0799 725282	[Signature]	
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## Monitoring on previously planted tower gardens

Fortunate volunteer farmers spared from the devastating storm are already enjoying fresh greens from their tower gardens. They were very much delighted witnessing vegetables in this newly introduced practice where they are using greywater. They have also put concerted efforts into revamping fencing to keep livestock away using branches that are closely packed. Below are pictures from Elizabeth Ngubane and Violet Sibiya's tower gardens.



Figure 5: Elizabeth Ngubane, then and now



Figure 6: Violet Sibiya's tower garden partly damaged by the storm