

**iwrm**  
water for development & growth

# Water and small-scale infrastructure



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Enver Buckas (eThekweni Metro)

## IWRM Projects

1. Canal upgrade – Langebome Cederberg
2. Canal upgrade – Beukeskraal Cederberg
3. Water awareness & conservation – Ebenhaeser
4. Tap & Leak Repair – Koue Bokkeveld





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# Canal Upgrade - Langebome Cederberg

## Background:

Langebome one of 13 Wupperthal Mission Stations

Small community of 25 families

Each family has access to between 1 - 3 hectare land

Water is a limiting factor in the development

The earth canal is a major problem as it leaks, blocked by  
alien invasive plants, which results in crop losses

Flood irrigation is common practice





**Langebome  
Moravian Church  
Buitepos**



**Langebome  
Subsistence  
Farming**



**Earth canal  
brings water for  
kilometres from  
Wupperthal**



**Vision:** Development of agricultural resources (water and land), participate in export markets and improve livelihoods in Langebome

**Mission:**

- To upgrade canal or replace with a pipeline
- To produce quality organic vegetables
- To improve water efficiency



## **Project objectives**

- Clear vegetation choking the furrow
- Build new concrete irrigation canal or pipeline
- Replace flood irrigation with drip system
- Improve productivity & variety of vegetables
- Food security for Langebome
- Surplus produce sold to generate income



## Long Term Goals

- The creation of employment opportunities
- Empower the women of the Langebome
- Facilitate socio-economic development in Langebome
- Halt the loss of youth from the rural areas







## Questions



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# Canal Upgrade – Beukeskraal Cederberg

## Background:

Beukeskraal “buitepos” of Wupperthal is home to 70 households

Community relies heavily on agriculture for livelihoods

Each family has access between 1 and 3 ha of land

Flood irrigation is widely practised

Water for irrigation is transported in an open earthen canal for more than 5km

The canal is old, often blocked and leaks – resulting in unpredictable water supply & crop loss







**Typical thatched  
cottage in  
Beukeskraal**



**Earth canal  
brings water**



**Traditional  
agriculture in  
Beukeskraal**





**Vision:** Sustainable development of agricultural resources to improve livelihoods of the inhabitants of Beukeskraal

**Mission:**

- To improve socio-economic conditions in Beukeskraal
- Production of organic vegetables en rooibos tea





## **Project objectives**

- Extension & upgrading of the existing canal
- Improve irrigation efficiency



# Long Term Goals

- Improve water supply for agriculture
- Increased productivity







## Questions



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# Water Awareness & Conservation

## Ebenhaeser Matzikama

**Vision:** To improve water conservation awareness in the community & to maintain water services in Ebenhaeser

**Mission:**

- To empower local inhabitants to manage their water supply & provide them with the necessary skills to use water wisely.



## **Project objectives**

- To create job opportunities
- To empower residents with the necessary skills & capacity to efficiently manage their water use
- Conduct a water conservation awareness campaign







## Long Term Goals

- To increase levels of water conservation awareness
- To help maintain the water services infrastructure in Ebenhaeser
- Develop a sustainable business

## Conclusion

The project aims to educate & empower the local residents to understand that water is a scarce resource







## Questions



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## Tap & Leak Repair – Koue Bokkeveld

**Vision:** To impact positively on lives and improve the conditions in which the community of Op-die-Berg live.

**Mission:**

- To provide work to five poor families.
- Create awareness of water conservation.
- Protect water resources.



**Background: 170 families  
Many are impoverished**



**Factors that  
contribute to leaks:  
Poorly built houses  
Very cold winters  
Human factor**



**Poor infrastructure**



**Leaking  
water meters**



**Human factor**



**Extreme cold  
bursts pipes &  
taps**

## **Project objectives**

- Create awareness in local school children (visit 15 schools totalling more than 1800 learner)
- Create awareness amongst farm workers on +- 52 farms
- Train five local unemployed people in plumbing
- Identify & repair leaking pipes, taps and toilet cisterns in 140 houses of Op-die-Berg

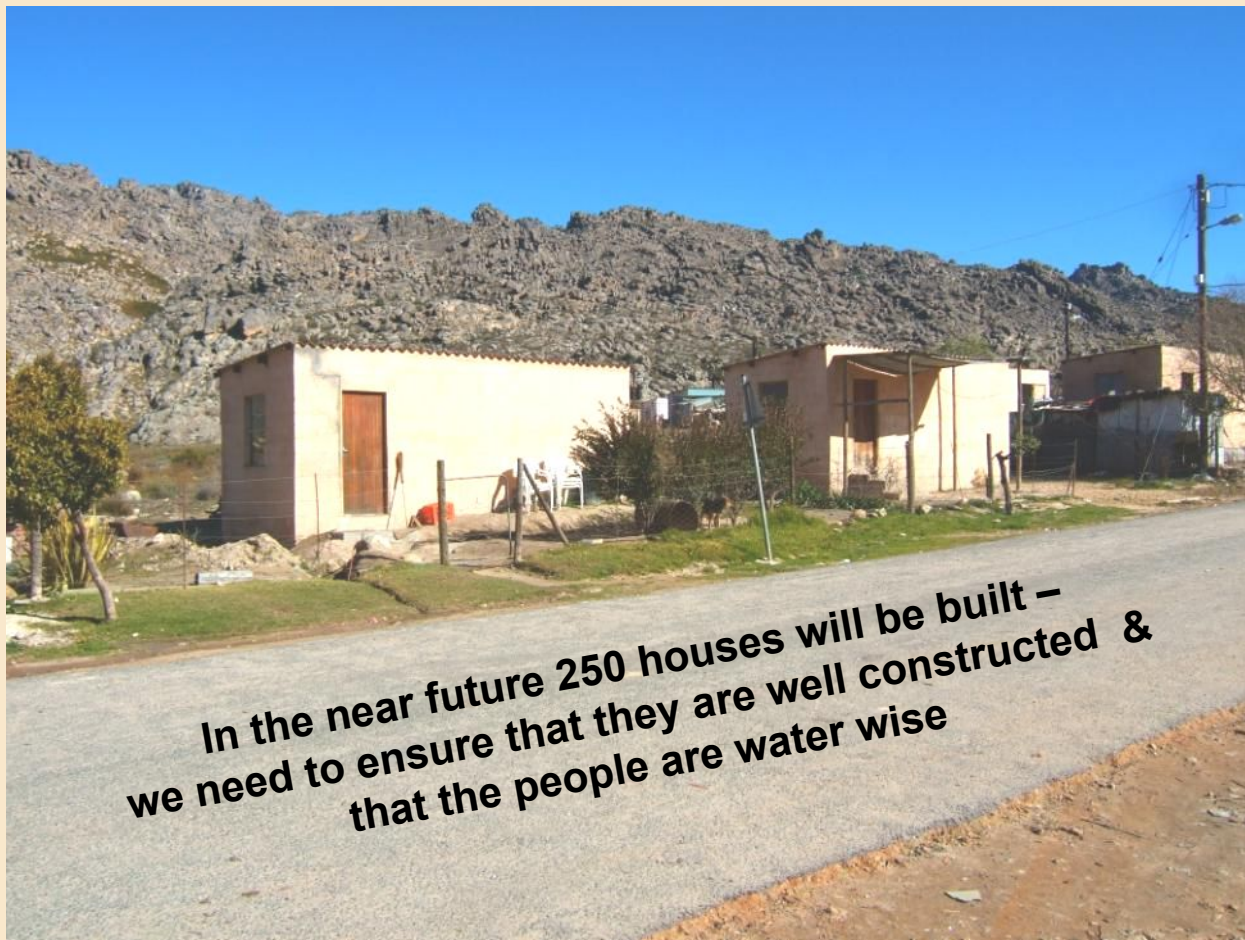




## Long Term Goals

- Save water & money
- Alleviate poverty of those that can not afford to waste water.





**In the near future 250 houses will be built –  
we need to ensure that they are well constructed &  
that the people are water wise**

## Questions



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