



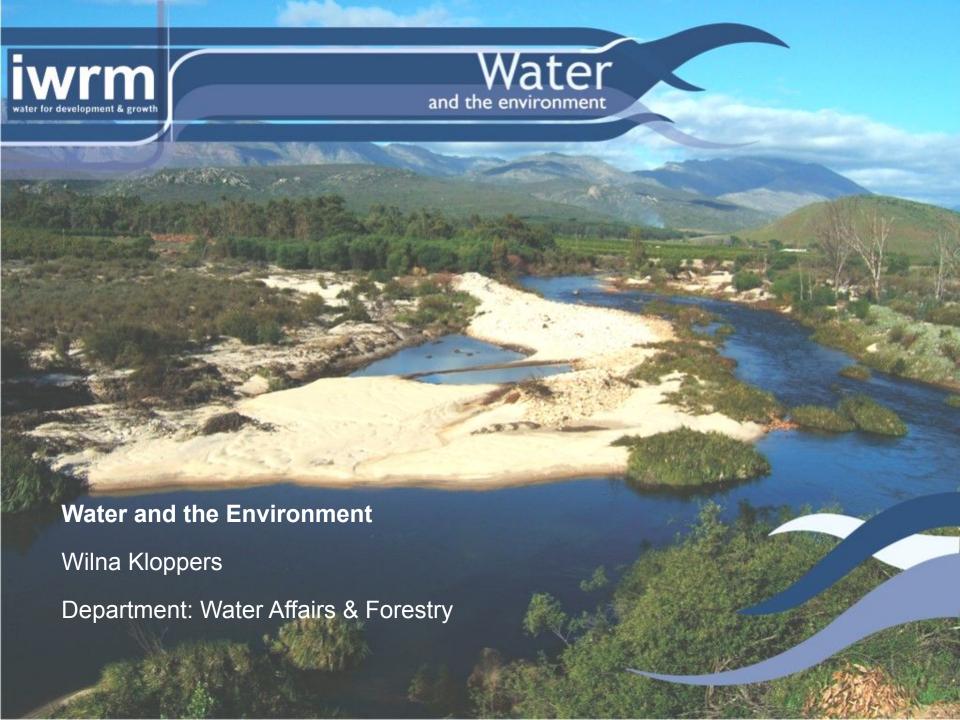
Water and the Environment – Wilna Kloppers

Department: Water Affairs & Forestry

IWRM Projects

- 1. Groundwater & Climate Change Swartruggens
- 2. Olifants River Wetland Awareness Ebenhaeser
- 3. Clearing Alien Invasive Plants Ebenhaeser
- 4. River Health & Awareness Agter-Witzenberg
- 5. Waste Recycling Koue Bokkeveld
- 6. River Cleanup Op-die-Berg Koue Bokkeveld
- 7. Water resources capacity building WWF







Strengthening our understanding of water resources

Shaun Johnston
World Wildlife Fund for Nature
(WWF-SA)





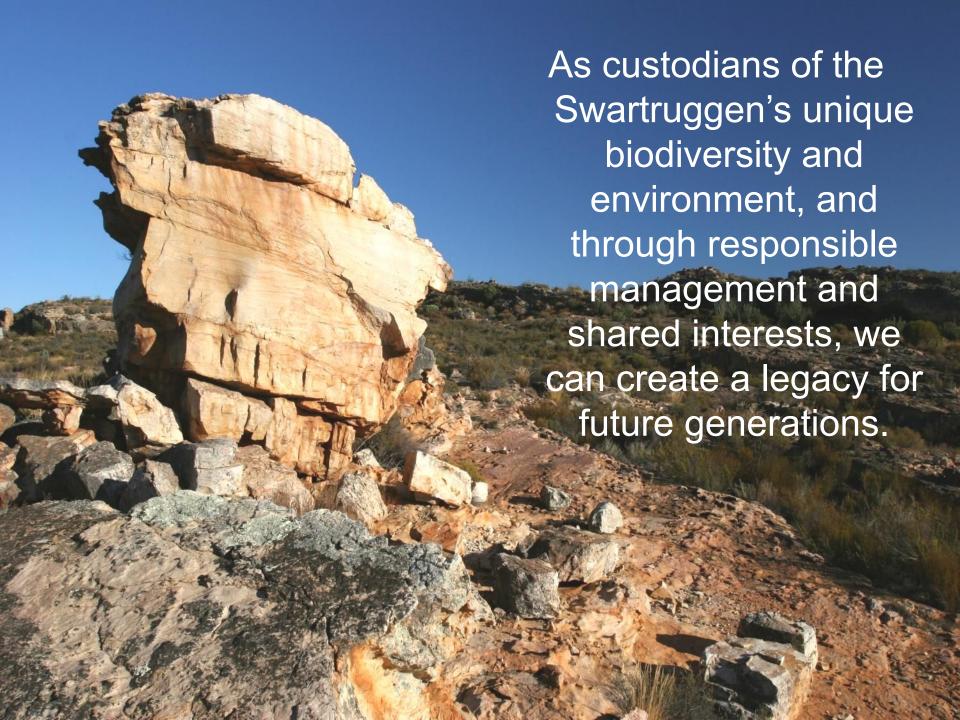
Groundwater & Climate Change Monitoring

Swartruggens Conservancy

Background

- Conservancy consists of 23 landowners covering and area of more than 100 000 ha of rugged mountainous terrain between the Koue Bokkeveld & the Ceres-Karoo
- Area receives low rainfall of between 100 300 mm/a
- Agriculture, tourism and farm workers rely heavily on groundwater.

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Project Objectives

- Identify important springs & boreholes
- Train 4 people to build spring protection
- Rehabilitate leaking artesian borehole
- Protect 10 springs
- Monitor groundwater monthly
- Establish a network of 6 weather stations
- Monitor climate continuously
- Process groundwater & climate data











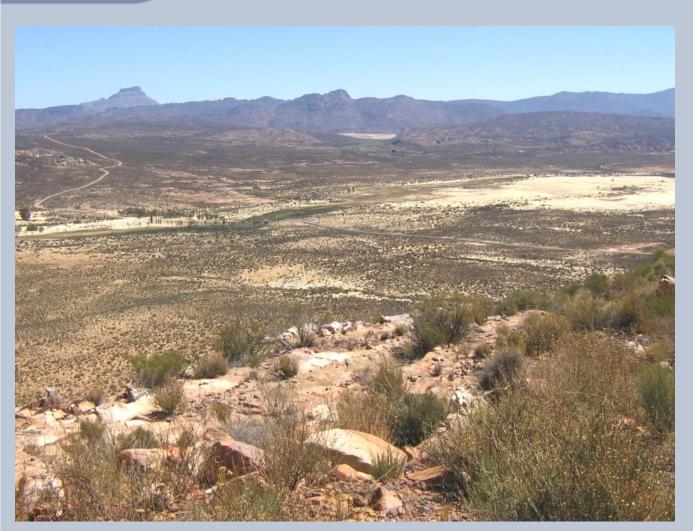


Long Term Goals

- Protect groundwater resources.
- Measure effects of climate change locally.
- Ensure economic sustainability of agriculture & tourism







Questions











Introduction

- The wetland is found on the Southern Banks of the Olifantsriver, approximately 15 km upstream from the river estuary and the Atlantic Ocean –and next to the Olifants River.
- The wetland ecosystem consist of approximately 3-4 ha.
- Water quality and quantity play an important role in the survival of wetland ecosystem.









Introduction (cont...) Background

- Wetland originate from the floods of the 1925's.
- 10-15(30 ha) Pieces of land are been influenced by the wetland ecosystem.
- Lead to conflict between small scale farmers and environment.

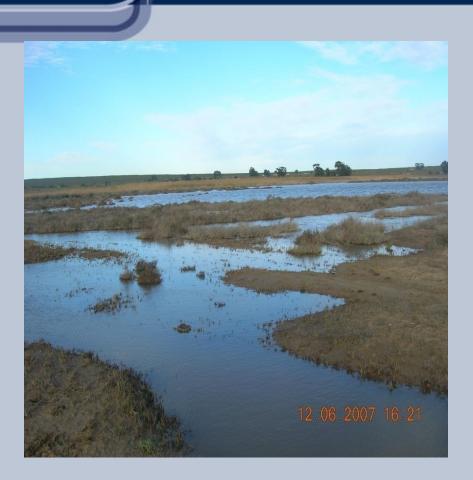




Mission

Promote the responsibility, tolerance and mutual-understanding, through the facilitating and implementation of a wetland ecosystem conservation area. 25



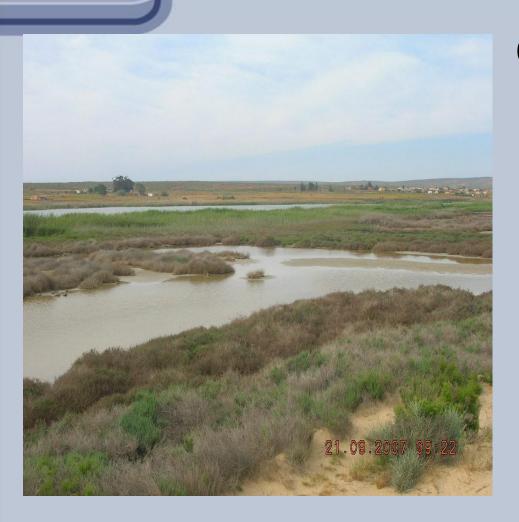


Objectives (General)

- To develop a set of interventions through stakeholder involvement.
- Set-up a comprehensive wetland monitoring team.
- Raise community awareness and promote education, training and long-term development through proactive initiatives and entrepreneurship.
- Establish a environmental club.





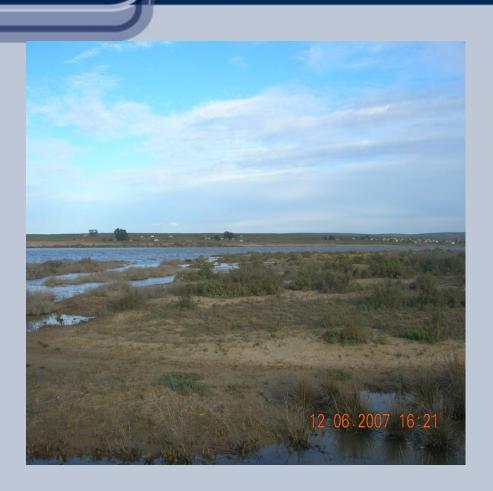


Objectives (specific)

- Sustainable utilization of natural and cultural resources in an integrated, equitable and collaborative manner.
- Protect and preserve the wetland and other natural resources in and around Ebenhaeser
- Job creation (5-6 unemp. youth), skills development.
- Promote eco-tourism and entrepreneurial opportunities.







Short-term goals

- Establish the status of the wetland.
- Surveying the wetland ecosystem.
- Identify potential and suitable funders.
- Conduct a feasibility study.









Long-term goals

- Protect and preserve the wetland and other natural resources in and around Ebenhaeser.
- Develop a set of environmental awareness material focusing on the diversity.
- Develop a bird-and hiking trail and link to the West Coast Hiking trail.
- Establish an eco-school/enviro-school.
- Create permanent jobs.





Challenges



- Institutional arrangements.
- Community dynamics.
- Lack of understanding from small scale farmers.
- · Leadership.



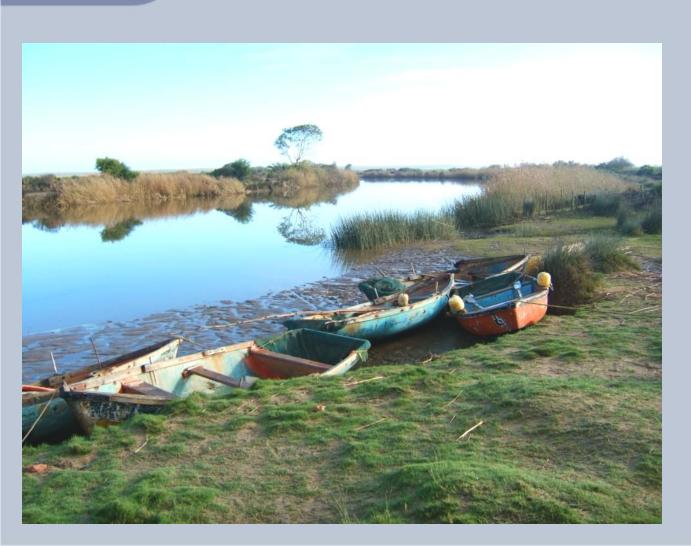


Conclusion:

- The success of the project needs to ensure that the community, small scale farmers and "the so called" community leaders became involve with wetland conservation.
- The project needs to identify the need for an fully fledge wetland development unit.







Questions





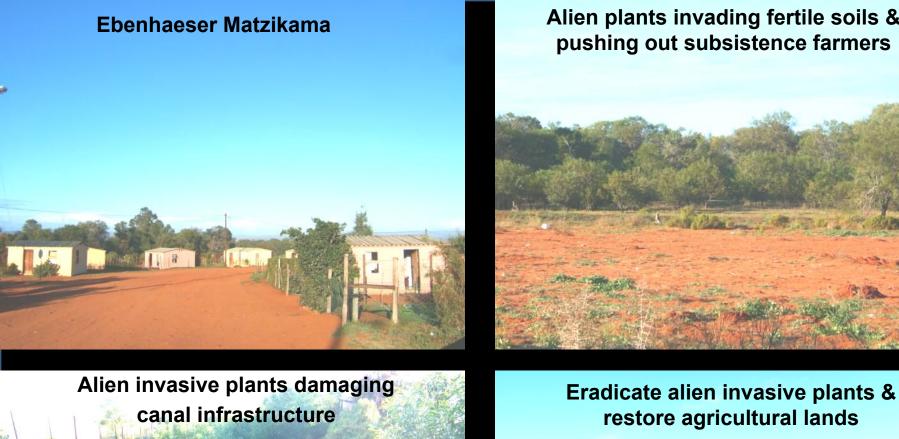
water & forestry

Clearing alien invasive plants

Ebenhaeser Matzikama

Background:

- Project in Matzikama IDP
- Ebenhaeser 45km from Vredendal, 2500 inhabitants
- Land restitution case
- Tenure reform process
- Subsistence, small-scale farming & socio-economics
- Alien invasive plants encroaching onto fertile agricultural land, community attempts











Vision: Job creation, eradication of poverty and the conservation of the environment for current & future generations

Mission:

 An integrated community initiative to clear alien invasive plants in Ebenhaeser, thereby serving as a vehicle to create job opportunities and alleviate poverty.





Project Objectives

- Determine the nature & extent of alien invasive plants in and around Ebenhaeser.
- Determine their effects on the environment, water resources and infrastructure.
- Clear alien invasive plants in pre-selected areas.
- Create 12 temporary and 10 secondary job opportunities over a 12 month period.
- Integration with the Ebenhaeser water awareness and wetlands project





Long Term Objective

To permanently clear alien vegetation from Ebenhaeser in order to preserve the environment, protect water, soil resources and infrastructure, while building capacity amongst residents.

Conclusion

Alien vegetation is destroying the environment and consuming water – this is the first step to eradicate this pest while creating jobs – we look forward to your assistance in our fight.









Questions





Olifants River Health & Awareness

Agter-Witzenberg

IWRM I micro-project initiated as part of a capacity building programme investigated water quality at the source of the Olifants River, while creating water quality.

Vision: Create awareness of the importance of water at the source of the Olifants and Breede rivers, in terms of quality and quantity for themselves and water users downstream.

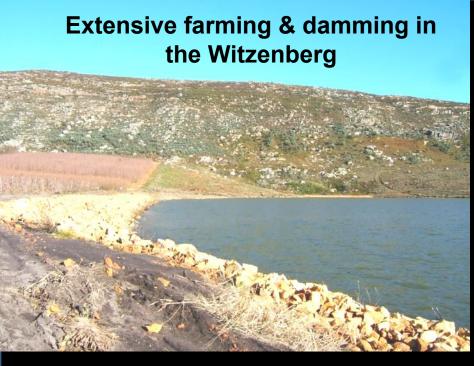




Mission:

- To train farm workers to identify and repair leaking pipes, taps and toilet cisterns in order to save water.
- To create water quality and conservation awareness at local primary schools.
- Monitor water quality to prevent pollution.













Project Objectives

- Awareness in three schools (650 learners)
- Awareness & leak repairs at 255 farm worker houses.
- Test water quality of the Olifants-River.





Long Term Goals

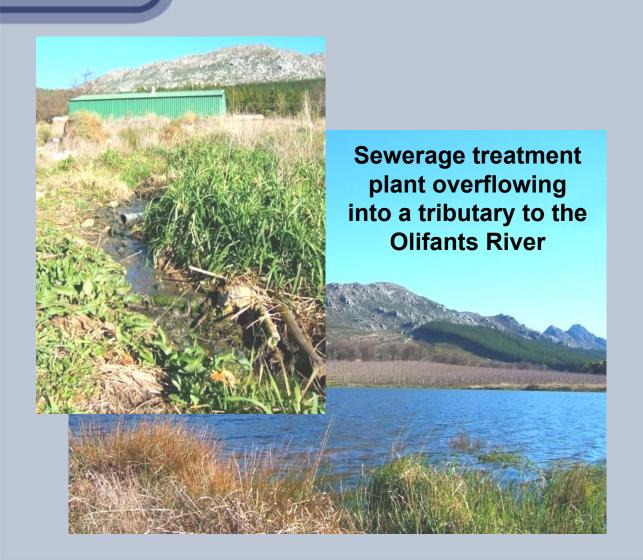
- Water awareness creation and conservation.
- Ensuring good water quality in the Upper Olifants River and protection of the environment.

Conclusion

There is great potential for development in the Witzenberg Valley, especially tourism, but we need to preserve our environment.







Questions





Fransies Waste Recycling Koue Bokeveld Witzenberg

Vision: To create a cleaner environment while ensuring an improved quality of life for the inhabitants of Op-die-Berg.

Mission: Collect, sort and recycle waste from the town of Op-die-Berg.





Background:

- Op-die-Berg, 45km north of Ceres, is a small rural community consisting of +- 250 households.
- Most of the town's inhabitants are seasonal farm workers as a result unemployment, poverty and illness is commonplace.
- Domestic waste is currently buried in a landfill site far from the town.







Project objectives

- Job creation for the 13 local unemployed, women (60%) & disabled persons.
- Income generated through sale of recycled matter.
- Eradicate poverty & hunger
- Awareness programme at local schools.
- Cleaner town & environment.







Long Term Goals

- Sustainable employment
- Eradication of poverty
- Improved safety and health of the community
- Prevent water pollution through removal of wastes
- Extend the life of the municipal landfill site
- A catalyst for other projects second phase recycle waste generated from farms
- Third phase vegetable farming



Important wetland downstream of the landfill site at risk





Conclusion:

We are positive that our project will make a difference in our community.







Questions





River Cleanup & Bridge Repair Op-die-Berg Koue Bokkeveld

Background

- Rivers separate communities of Op-die-Berg
- Access routes to the shops & schools cross rivers
- Cleanup of rivers
- Repair & safety of two bridges
- Create employment, empowerment & poverty relief



Droog-voet Bridge School bridge







Vision:

Creation of a safe and hygienic environment through awareness & conservation of water resources.

Mission:

- Improved water quality environment & rivers
- Sustained environmental awareness.
- Improved living standards.
- Personal growth & development







Project Objectives

- Cleaning of environment & rivers
- Repair of two bridges & pathway
- Temporary employment





How

- Integration with other stakeholders
- Project duration 6 months after which environmental ethic will be entrenched
- Effective financial management & planning
- Continual communication
- Capacity building through training





Long Term Goals

- Encourage caring for nature.
- Training & awareness of inhabitants
- Facilitation of life skills
- Improvement in living standards
- Towards greater responsibility wrt conservation & use of natural resources





Conclusion:

A project by the community for the sake of the community to the advantage of the community Op-die-Berg.

To contribute to Millennium Development Goals (fight against poverty, empowerment of women & youth, combat diseases & environmental sustainability)

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Questions



