

# Ebenaezer Irrigation Scheme

## Case study

### South Africa

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## Introduction

- Small holder irrigation schemes have the potential to make significant, local, socio-economic impacts as well as contribute to improved food security, poverty alleviation and increased employment
- In SA unfortunately a large number of smallholder irrigation schemes have collapsed whilst the rest are suffering reduced efficiency

## Factors required for successful revitalisation

- Upgrading of infrastructure
- Conflict resolution
- Farmer training
- Greater farmer participation
- Improved training of extension officers
- Security of land tenure
- Profitability
- Improved markets

## Geographical position

- Is situated on the West Coast of South Africa
- Cold Atlantic Ocean provides cool dry Mediterranean climate with sterile sea winds which makes it ideal for high quality wine, seed and summer vegetable production
- Annual rainfall only 152 mm which falls predominantly in winter (see map in document)

## Background

- The community consists of 1 500 adults
- They were moved to that area in 1926 under the Ebenhaezer Exchange Land Act
- They were allocated 275 ha of water rights for the 153 individuals .
- Each individual received 1.68 ha with an annual allocation of 12 200 m<sup>3</sup> per ha per annum (see Map 1 in the document)

## Current situation

- Distributing canal and dividing structures are dilapidated without any system in place to request a specific volume of water on a specific date and time
- Upstream owners take up much of the water where the downstream owners rarely get some water
- utilization of irrigated land is only currently 20%

## Proposal for revitalization

- Pump water from balancing dam to an new elevated balancing dam, making use of off-peak electricity tariffs
- Distribute water through a gravity feed pipeline to individual plots
- Water will be supplied at 30 meters head and a delivery rate of 30 m<sup>3</sup> per hour
- This will allow the farmers to make full use of the land and eventual become commercial farmers

## Proposals for revitalization

- Capital Cost estimate R 30 million (USD 4 million) for which government will take responsibility
- Operational costs R3 460 per ha/annum (USD 460 per ha/annum)
- Calculations indicate that the farmers will be able to afford the operational costs

## Provisos

- Farmers can be elevated from the current level of ineffectiveness and poverty if the following issues are addressed to ensure sustainability
  - Connections to be established with commercial enterprises and marketing channels
  - Current level of farming needs to be up-scaled (training and mentorship to be provided)
  - Interim government funding to subsidise input costs
  - - large farming units can be established (benefit of scale) provided that the sentiment of land owners to operate their own propertise can be dealt with.