

## Preliminary Screening of Reconciliation Options

The overall objectives were to understand the water resource status in the catchment, agree on the possible reconciliation options and to decide which options must be further investigated. A total of 21 options were identified for screening.

A total of eight different criteria were used for the evaluation of the options. These included additional yield, capital and operating costs, unit reference value, social and biophysical impacts, management intensity and time to implement.

The main outcome of the workshop was that 20 options to reconcile water requirements and water availability out of the 21 identified options warranted further investigation.

The identified reconciliation options were divided into two groups, i.e. options that will reduce the water demand, and those that will increase the water supply.

### 1. Reducing Water Demand

- Introduce compulsory licensing
- Water conservation and demand management (WCDM) and optimizing assurance of supply for the irrigation sector
- WCDM in the urban sector
- WCDM in mining
- Reduction in water losses from bulk infrastructure, e.g. on regional schemes
- Removing alien invasive plants
- Integrated system operating rules

(Note: To eliminate unlawful use will surely also have the effect of reducing the water demand, but it was not viewed as an option, since addressing unlawful use must be done as a priority.)

### 2. Increasing Water Supply

- Transfers of water to Limpopo WMA from alternative sources (possibly Zambesi River) rather than from the Olifants WMA. (Note: This option will increase water supply in a neighbouring WMA and will in turn reduce the water demand in the study area)
- Transfer of treated sewage effluent from sewage treatment works in the Vaal Basin
- Transfer raw water directly from Vaal Dam
- Transfer desalinated seawater to the WMA
- Expand Rand Water Supply to eMalahleni, Steve Tshwete and Bronkhorstspuit
- Groundwater option – utilising the Malmani dolomite aquifer as it is currently not fully exploited
- Rainwater harvesting
- Rainfall enhancement

- Implementation of water quality improvement options such as acid mine drainage treatment plants (similar to the eMalahleni Acid Mine Water Reclamation plant)
- Re-using sewage effluent

### Possible new dams:

- Dam on the mainstream of the Olifants River
- Blyderivierspoort Dam Raising
- Smaller dams to supply water
- Off channel storage dam on one of the tributaries with pumping from the Olifants



Figure 4: De Hoop Dam under construction

## The Way Forward

It was unanimously agreed that:

- The options will be ranked in order of preference,
- Selected options will be further investigated and each one's feasibility will be assessed in more detail
- A preliminary strategy will be compiled and presented during November 2010 to the Strategy Steering Committee (SSC), which comprises a group of key stakeholders within the study area who will give direction during the course of the study. It will then be presented to a broader group of stakeholders during a public meeting early next year

The purpose of the Preliminary Strategy is to address the immediate needs with immediate effect. The Final Strategy will be completed towards the end of 2011.

## OLIFANTS RECONCILIATION STRATEGY (ORS) NEWS

### Development of a Reconciliation Strategy for the Olifants River Water Supply System

This is the first Newsletter in which information on the progress of the ORS study will be conveyed. In this edition, background information on the study will be provided, as well as information on the recent preliminary screening of reconciliation options.



water affairs

Department:  
Water Affairs  
REPUBLIC OF SOUTH AFRICA



## What is the ORS study about?

The Olifants River catchment is one of South Africa's most stressed catchments in terms of both water quantity and water quality.

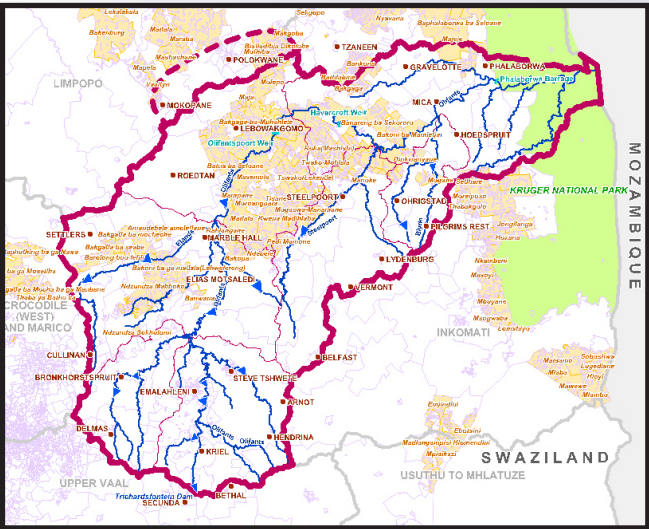


Figure 1: The Study Area

The water requirements in the Olifants Water Management Area (WMA) have long exceeded available yield due to diverse activities of agriculture, mining, power generation and the steel industry. These requirements have increased substantially over the last number of years, with the mining sector in particular growing rapidly. This has brought rapid urbanisation and the expansion of manufacturing and industrial development. Further to this has come the recognition of the importance of the ecological needs and the ecological Reserve, i.e. that rivers require, and are entitled to, a certain quantity and quality of flow. These needs are further highlighted by the position of the Kruger National Park at the bottom end of the catchment. The Kruger National Park and other wildlife reserves and recreational facilities are major income generators for the country. The Olifants River ultimately drains into Mozambique and in line with the Protocol of Shared Watercourse Systems in the Southern African Development Community Region, brings about international obligations with regard to the quantity and quality of flow delivered.

As the trustee of the country's water resources, the Department of Water Affairs (DWA) acknowledges the need for a dynamic and interactive planning approach to meet future water requirements for this key area of the country. A reconciliation strategy had to be developed for the study area to alleviate the current water deficits and to ensure a sustainable water supply for the next 20 years and beyond.

## Approach to the study

The study is anchored by technical and stakeholder engagement processes that are intertwined. Figure 2 illustrates the envisaged flow of the processes.

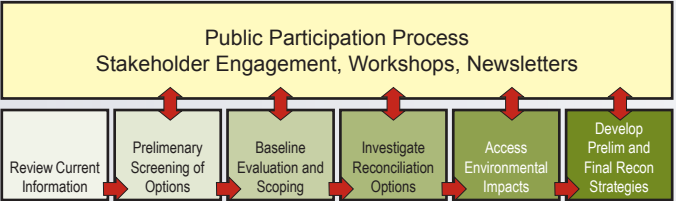


Figure 2: Technical and Public Participation Processes

The technical process has already started with a review and consolidation of the available information from previous and current reports on the Olifants catchment.

The review was followed by a preliminary screening workshop held at Letaba Rest Camp in the Kruger National Park on 7 July 2010, where a list of possible reconciliation options were evaluated by a group of key stakeholders who had to decide which options should be investigated further.

Further steps of the technical process, i.e. baseline evaluation and scoping, investigation of reconciliation options and assessment of environmental impacts, all lead to the development of the strategies. A preliminary strategy will first be developed halfway in the study to address the immediate needs and the final strategy will be developed to also include the long term needs.

To achieve the objectives of this study, all possible stakeholders are consulted through workshops and information sessions. The diagram in Figure 3 depicts the processes to be followed in the engagements.

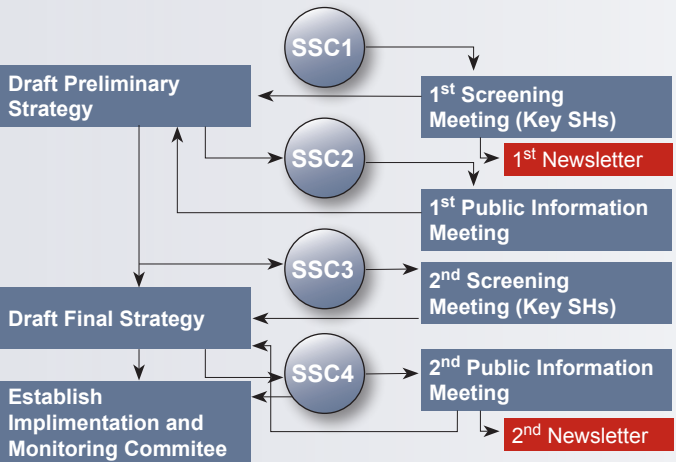


Figure 3: Process for Stakeholder Engagement (Note: SSC = Study Steering Committee)

## Contacts

Further information about the study can be obtained as follows:

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More information on the study as well as a full report on the Preliminary Screening Workshop are available on the DWA website at <http://www.dwa.gov.za/Projects/OlifantsRecon/default.aspx>