

Work Packages IWRM South Africa - Phase II

A Value Generating Water Intervention Measures

- A.1 Analysis of and new approaches in international division of labour, supply and value chains of water management in the context of WIM - *IEEM*
- A.2 Cost-benefit-analysis and optimisation of the complete water-(re)use cycle - *ZEF*
- A.3 VRM pilot plant - *HUBER*
- A.4 Investment scheme for water management and sustainable utility management - *REMONDIS Aqua*
- A.5 Detailed investigation of fiscal and legal issues - *TIGGES, Märkische Revision (both sub-contractors of IEEM)*
- A.6 Value generating sewage sludge utilisation concepts - *IEEM, HUBER*

B Capacity Building

- B.1 Workshops on technologies and facility operation - *IEEM, HUBER, REMONDIS Aqua*
- B.2 Accompanying schooling and training measures - referring to institutions und governance - *ZEF*
- B.3 Development of a water game to support capacity building measures - *DHI-WASY*

C IWRM-Modelling

- C.1 Update WRM - *IEEM*
- C.2 Update WAM - *ZEF*
- C.3 Comprehensive processing of IWRM - *IEEM, ZEF*
- C.4 Software and programming support - *DHI-WASY*
- C.5 Adaptation of remote measurement and remote transmission techniques for IWRM monitoring - *LAR*
- C.6 GIS-Modelling, general support services, communication - *U+Ö, disy*

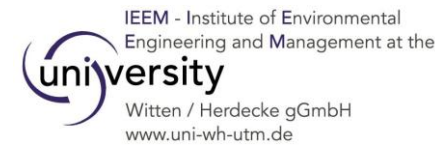
D Cross Border Dissemination

IEEM, ZEF, Industrial Partners

Project Partners



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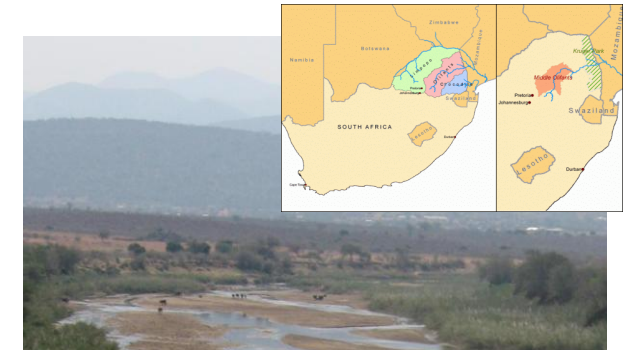
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Integrated Water Resources Management in the "Middle Olifants" river basin South Africa

Phase II
Focusing IWRM interventions
on added-value
to secure sustainability

June 2012 - May 2015

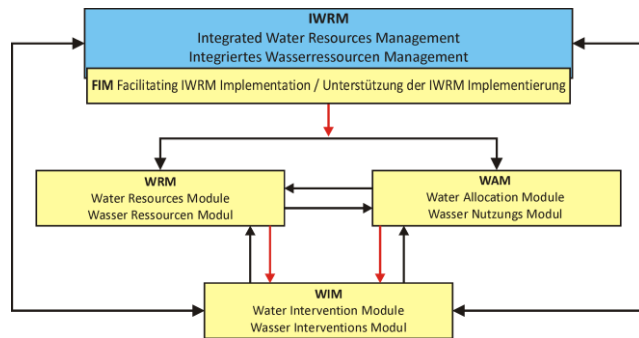


Integrated Water Resources Management (IWRM)

IWRM is a process which promotes the co-ordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

IWRM South Africa Phase I

The project region is the "Middle Olifants", a river catchment northeast of Pretoria. This region is characterised by a large quantity of users with high water consumption: large scale irrigation farming, households, mining and tourism. The high water demand results in over-exploitation and pollution of water resources.



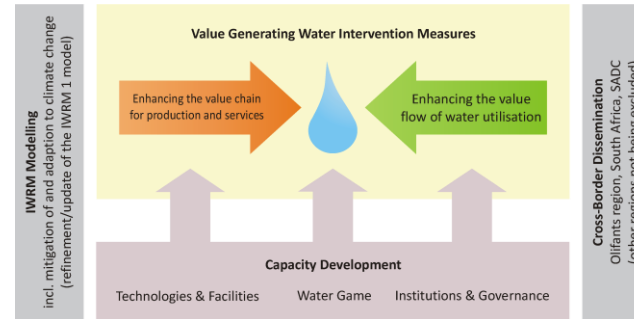
IWRM South Africa I delivered a complete IWRM-concept, consisting of three interlinked modules: **WRM** (Water Resources Module), **WAM** (Water Allocation Module) and **WIM** (Water Intervention Module).

IWRM South Africa Phase II

Especially work on WIM showed that a successful implementation of IWRM depends on the creation of suitable local structures. These structures include technical and legal working conditions necessary to assure the sustainable operations and maintenance of water facilities, but also economic incentives and sources of financing at the local level.

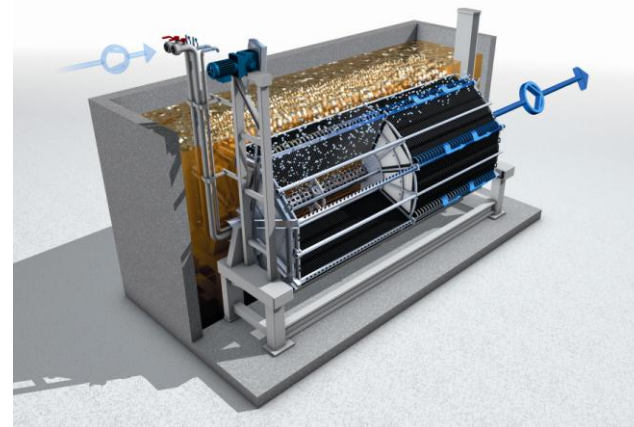
Increasing the added value of all water-related activities in a sustainable manner is the main research objective of IWRM South Africa II.

Research of the current project focuses on economy/financing and institutions to ensure the implementation of the IWRM measures according to market principles ("incentive engineering").



Value Generating Water Intervention Measures

- Enhancing the value chain for production and services
- Enhancing the value flow of water utilisation
- Demonstrating efficient water treatment technologies on the example of HUBER Vacuum Rotation Membrane
- Investment schemes and operational concepts
- Sewage sludge utilisation concepts for rural settlements

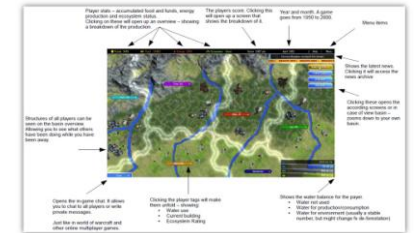


HUBER VRM® (Vacuum Rotation Membrane)

Capacity Development

Accompanying measures of local capacity development shall support the realisation of the value generating water intervention measures. A necessary condition for IWRM success is to promote the involved parties' interest to improve knowledge and skills continuously. Workshops are planned on the following topics:

- Technologies & facilities operations
- Institutions & governance
- Awareness building by use of educational games ("Water Game")



Water Game (DHI-WASY)

IWRM Modelling

- Further development of the IWRM model for application
- Development of GIS tools for the IWRM model
- Conception and operation of a mobile laboratory
- Deployment of an online analysis and data transfer system



Mobile Laboratory (LAR)

Cross Border Dissemination

- Exchange of information
- Strengthening south-south dialogue
- Increasing practical use and pertinence
- Evaluation of the project results