

# Moving Research to Impact

GBCSA Convention: Policy & Innovation - October 2017

Chantal R-Kotze

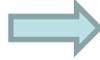


# WRC Background



water & sanitation

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA



**Water  
Research  
Act (Act No.  
34 of 1971  
as amended)**



- Promotes co-ordination, co-operation and communication in the area of water research and development;
- Establishes water research needs and priorities;
- Stimulates and funds water research;
- Promotes effective transfer of research and innovation;
- Enhances knowledge and capacity building within the water sector

**Water Resource Management | Water-Linked Ecosystems | Water Use and Waste Management | Water Utilisation in Agriculture**

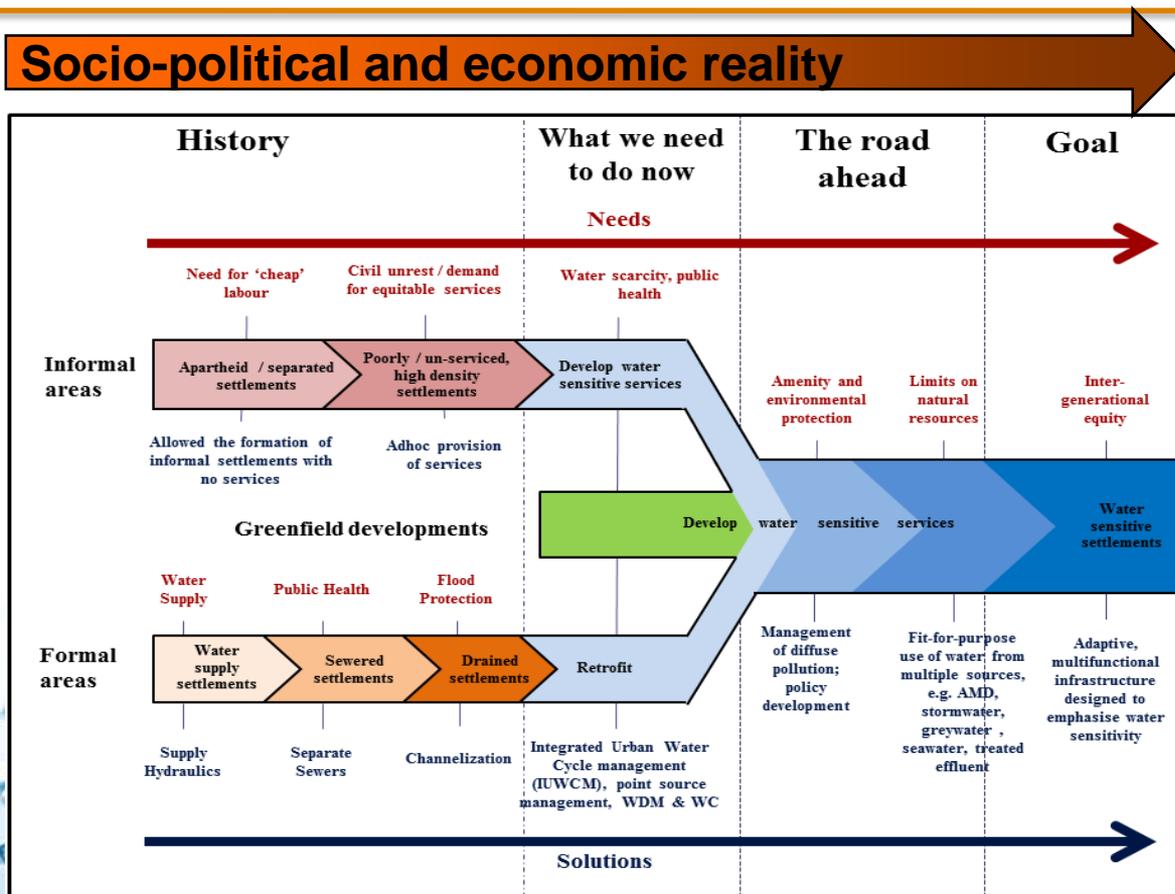
**Climate Resilience | Water & Big Data | Water Quality & Health | Water-Energy-Food Nexus | Water Scarcity & Extreme Weather Events | Water Behaviours**

SA ranked 19th in the world for its contribution to published research related to water and wastewater;

**Challenge:** translation of world class research into innovations that address current and future socio-economic challenges and the development of a sustainable economy.

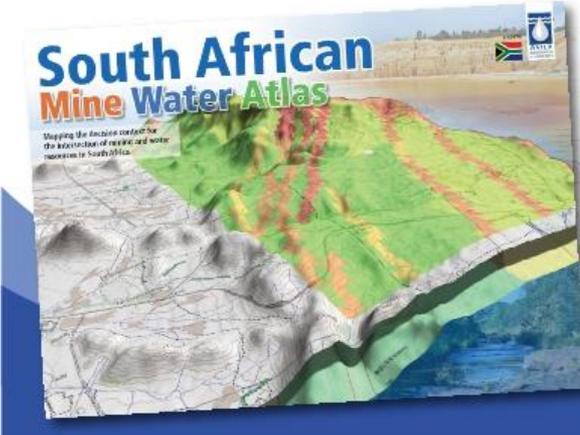
*(Pouris, 2013; Rose and Winter, 2015)*

# Framework for Water Sensitive Settlements in RSA, "Two histories, one future" (Developing World)





# Decision Making Tools & Guidelines



## South African Mine Water Atlas

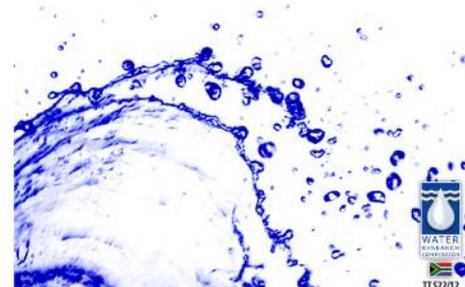
A comprehensive reference on the vulnerability of water resources to mining activity in South Africa. It shows the critical interplay between mining and water resources and is the most extensive set of documents of its kind.



## The State of Non-Revenue Water in South Africa (2012)

R McKenzie, ZN Siquabala & WA Wegelin

## AquaSmart Hotels USER GUIDE



# Decision Making Tools & Guidelines

## Water Sensitive Urban Design (WSUD) for South Africa: FRAMEWORK AND GUIDELINES

Neil Armitage, Lloyd Fisher-Jeffes,  
Kirsty Carden, Kevin Winter,  
Vinothan Naidoo, Andrew Spiegel,  
Ben Mauck & Daniel Coulson



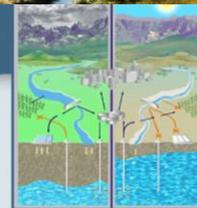
## Preliminary Guideline for the Determination of Buffer Zones for Rivers, Wetlands and Estuaries CONSOLIDATED REPORT

DM Macfarlane, IP Bredin, JB Adams, MM Zungu, GC Bate & CWS Dickens



## Artificial Recharge

### Case Studies



Artificial recharge is not a new concept in South Africa. The Atlantis scheme near Cape Town has been operational for over 20 years, and farmers throughout the region have built numerous earth dams for the purpose of enhancing groundwater recharge. Since 1997 the Water Research Commission, the Department of Water Affairs and municipalities have supported research, feasibility studies and the implementation of schemes. Examples in Southern Africa are summarised in Section B.3 (p 38) of the Artificial Recharge Strategy.

### Location of Case Studies of Artificial Recharge Projects

(click on the locations on the map for extracts of case studies)



- Home
- Introduction
- DWA AR Strategy
- AR potential
- Case studies
- Prince Albert & Atlantis Video
- Implementation check-list

# Water Use Efficiency work @WRC

## The National Surveys (NATSURVs)

- National survey highlights how tanneries have stepped up their water game

The latest in the Water Research Commission (WRC) National Survey (NATSURV) series of reports on industrial water and wastewater management focuses on the tanning and leather-finishing industry. Article by Sue Matthews



### Detailed overview of the specific industry in South Africa

- Determine **local electricity, water, and effluent prices and by-laws** within which these industries function,
- Evaluate **trends + indicators** water conservation demand management and environmental imperatives.
- Critical evaluation - specific industry **water** (including wastewater) **management processes adopted**
- **Adoption of key concepts** e.g. cleaner production, water pinch, etc.

**NEW for 2<sup>nd</sup> editions:** Recommendations on the best practice for industry.

# INDUSTRIAL POLICY ACTION PLAN

2017/18 - 2019/20

Economic sectors, employment and  
infrastructure development cluster

## PART 2: THE ENGINE ROOM OF CHANGE

- \* In-depth economic analysis: global and domestic
- \* Sector reports
- \* Case studies: successful public-private sector cooperation
- \* Key action programmes, 2017-2020

Smart industrialisation | Innovation | Value addition | Exports |  
Empowerment | Social inclusion | Sustainable jobs

*Industrial policy in a turbulent world*

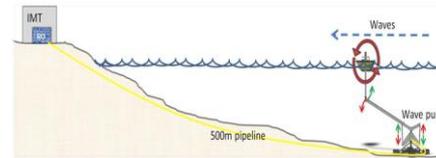
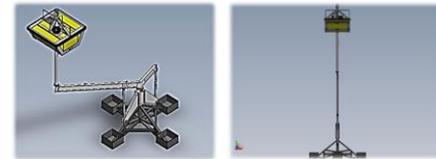


**the dti**

Department:  
Trade and Industry  
REPUBLIC OF SOUTH AFRICA

## Water and sanitation

- Water Industrialisation Development Plan
- Desalination in manufacturing
- Next generation sanitation cluster development
- Advanced wastewater technologies in manufacturing



New Generation Sanitation Solutions



## **Policy and Process Design for IP management**

Advising on drafting policies to enable the organization to manage its IP. Designing processes which support and implement policies for IP management, including drafting of standards and contracting guidelines.



## **Awareness and Capacity building**

Creating awareness of IP and how to manage it. Building competence in management of inventions, formal IP and the processes to create, protect and commercialise IP. Capacity development programmes.



## **IP Management & Protection Services**

Advising on appropriate protection strategies for inventions, software and knowledge. Evaluation of invention merit, NIPMO compliance and reporting.

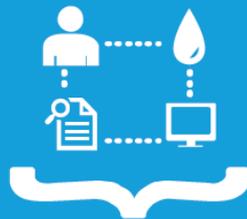


## **Patent Strategies**

When and where to patent. Route to patenting. Patent clustering. Identifying potential partners. Advising on addressing infringers.

# Hosting of Water Technologies Demonstration Programme (WADER)

## Wader-Your Water Innovations Partner



### **PULLS TOGETHER**

The applied research and development and pre-commercialisation stages of the water innovation continuum.

### **ACTS AS AN INNOVATION INTERMEDIARY TO**

Facilitate high-level, collaborative technology demonstrators from the public and private sectors to maximise the potential of the water innovation value chain.



### **AIMS TO**

Accelerate technologies to the market

# Innovations and Technology



Website: [www.aquatrip.co.za](http://www.aquatrip.co.za)



Food-energy-water nexus and rural empowerment



2017/10/08

# Critical Role of Partnerships

## GOAL 17

STRENGTHEN THE MEANS OF IMPLEMENTATION AND  
REVITALIZE THE GLOBAL PARTNERSHIP FOR  
SUSTAINABLE DEVELOPMENT

**SUSTAINABLE DEVELOPMENT GOALS**

More at [sustainabledevelopment.un.org/sdgsproposal](https://sustainabledevelopment.un.org/sdgsproposal)



## 6 CLEAN WATER & SANITATION

Ensure availability and  
sustainable management of  
water and sanitation for all

THANK YOU

Chantal Ramcharan-Kotze

[chantalrk@wrc.org.za](mailto:chantalrk@wrc.org.za) 083 265 5756

[partnerships@wrc.org.za](mailto:partnerships@wrc.org.za)