



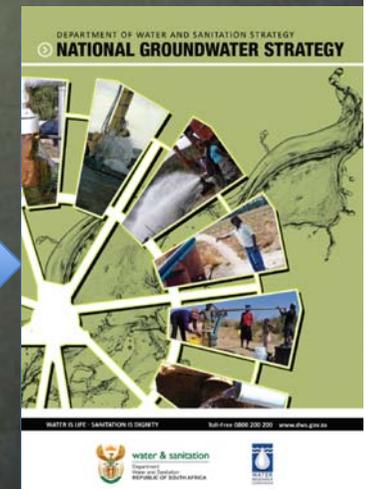
**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

# National Groundwater Strategy

Presented by  
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# Why a National Strategy for Groundwater?

Experience (own and world-wide): development of effective approaches for groundwater management will require a long term process through which viable national, regional and local systems can evolve.

A national strategy is required to:

- *To let the full role/potential of groundwater towards water security in SA unfold.*
- *To establish a framework within which stakeholders at all levels can become an essential part of good groundwater governance in SA.*
- *To initiate a long-term process of rolling out sustainable groundwater utilization within IWRM.*
  
- *This is fully in line with the direction of the DWA Functional Management Committee 2/2011*

## Where We Are – by early 2017

- A Draft strategy has been produced in partnership with the Water Research Commission;
- It has been widely consulted – in all 9 provinces, with a full range of stakeholder representatives (mining, agriculture, energy, local government, civil society);
- **National Stakeholder Consultation - 22 November**
- **Excellent inputs have been received, giving authority to the Strategy (now as Draft Final);**
- **NGS approved as a component**  
**of the *National Water Resources Strategy***  
**and start of roll-out – early 2017.**

# Global Groundwater Governance - A Framework for Action (2015)

**Partners:** UNESCO, GEF, FAO, World Bank,  
IAH

## Series of 3 Outcome Documents

- Global Diagnostic
- A Shared Global Vision for 2030
- Global Framework for Action



### Groundwater Governance Project A Global Framework for Action

#### The project

The Groundwater Governance project is a 3-year initiative (2011-2014) designed to address emerging global concerns on groundwater resources management.

It is funded by the Global Environment Facility (GEF) and is jointly executed by the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Bank and the International Hydrological Association (IAH).



#### Objectives



The project is designed to increase awareness of the paramount importance of sound groundwater resources management to tackle the global water crisis. It intends to identify and promote best practices in groundwater governance as a way to achieve the sustainable management of groundwater resources.

#### Expected outputs

The project will develop a Global Framework for Action consisting of a set of general principles and guidelines for policy-makers and stakeholders, including policy options, laws, regulations and customary practices.

A Shared Vision on Groundwater Governance based on case studies, thematic papers and a Global Groundwater Diagnostic integrating experiences and information collected from a series of regional consultations around the world, will inform the design of the Global Framework for Action.

Targeted outreach events will be organized to promote the results of the Project and the Global Framework for Action.



# Objectives of NGS

*To ensure **sustainable, accessible and cost-effective groundwater supplies** for human survival and socio-economic development, while maintaining **environmental services** that groundwater is supporting, in an **integrated development approach**.*

- improved **rural water supplies** (groundwater and other local sources)
- sustainable **small town / village supplies** (local scale IWRM)
- improved water security in **urban development (conjunctive use)**
- expanded irrigated **agriculture**,
- **new groundwater sources** in increasingly complex locations
- **Protection and conservation** of groundwater resources and its vital services, **by all sectors of society**.
- **An appropriate groundwater governance system**  
**to ensure sustainable resource utilization**

# Groundwater Governance

## Principle

*The unique, widely distributed groundwater resource, with its open access to a large number of users and a wide range of impacts, requires local level management of the shared groundwater resources within an appropriate enabling and supporting environment.*

## Internationally recognized groundwater management approach

*“National facilitation of local actions”*

## Groundwater Governance Framework

**Local action level** (individual users, local collective management institutions, relevant regional/local public agencies)

**National / Strategic level** (coordinating, regulating and supporting)

**Enabling environment** (policy; capacity)

# NGS Groundwater Governance Framework

## National Level (enabling environment)

0. Enabling legislation and strategy (is in place)

1. Stakeholder-driven development
2. National Groundwater Leadership

## National / Regional /Basin Level

3. Regulatory Framework	4. Groundwater Protection	5. Sustainable Utilization	6. Institutional Development	7. Awareness, Skills & Capacity	8. Redirecting Finances	9. Planning and Development	10. Information Management	11. Regional / International Partnerships
<i>Implementing regulations at aquifer level</i>	<i>Protecting aquifer resources</i>	<i>Achieving aquifer sustainable utilization</i>	<i>Establishing local institutions</i>	<i>Building the local awareness skills &amp; capacity</i>	<i>Collecting &amp; utilizing local funds</i>	<i>Planning and developing shared aquifer resources</i>	<i>Monitoring and managing aquifer information</i>	<i>Enhancing aquifer management regionally and globally</i>

## 12. Local Action

# 7. Water sector awareness, skills and capacity

## Objectives

Develop and maintain skills and capacity for the sustainable development and management of groundwater resources **at all management levels** and with participation of all stakeholders as part of a long-term, ongoing process.

## Principles

It is important that all levels of capacity development must be addressed, **the individual, the institutional and societal levels** – towards a well-performing groundwater sector.

It is important to have ways to **measure capacity and monitor progress** in its development.

## Challenges

Seriously missing the public sector as a major player in capacity building and mentoring;

Complete lack of capacity within municipalities for local management;

Vulnerable capacity situation in groundwater academic sector

# 7. Water sector awareness, skills and capacity

## Strategic Actions

**Capacity gap analysis** (within emerging groundwater governance framework; linked to the groundwater research planning of WRC and to capacity building initiatives in different sectors)

**DWS lead role** (as identified in NWRS; use of PSP contracts to leverage capacity-building)

**WRC leveraging role** (build networks of people and technology across institutional borders)

**FET-Water** (strong emphasis to achieve stakeholder cooperative projects)

**Academic institutions** (from single discipline to grooming 'broader' professionals )

**Private sector role** (much larger role in education and training; Groundwater Division a mobilizing role)

**SA Groundwater Center of Excellence** (industry-supported virtual centre)

# 7. Water sector awareness, skills and capacity

## Strategic Actions (2)

**Private Sector Role** (mentoring, MoU with DWS RO – on the job experience, GwD mobilizing groundwater sector)

**Technical Education & Training** (a rethink needed on role of universities and technical universities to cater for different capacity gaps)

**Professional registration** (practice by competent persons, system of required Continued Professional Development;)

**Capacitating of Municipalities** (decision – maker level, awareness campaigns and training, hiring of hydrogeologist, “Adopt a Municipality”)

**Groundwater in Basic Education** (school curriculum, DWS, DoE & WRC)

**Long-term relationship: government / academic institutions**  
(anchored in agreements of sustainable cooperation)

**Public/private sector partnerships** (private sector role in capacity building at local level during transition period)

# 7. Water sector awareness, skills and capacity

## Strategic Actions (3)

**Stakeholder involvement** (systematic involvement of all stakeholders,)

**International cooperation** (capacity development linked to regional cooperation objectives of DWS and WRC )

**Capacity building indicators** (measure and monitor capacity development)

**Groundwater Awareness - raising** (long-term process of institutional development, WRC – deliverable, appropriate valuation of resource, Academic institutions & private sector & individual specialists showcase, government departments share info, parliamentary decision-makers

## Enabling Strategies

### 1. Stakeholder-driven development

Continuously improve stakeholder understanding and collectively agree on and work within an expanding framework of local level participative management and 'good' groundwater governance.'

- *A long-term process of to **step-wise institutional development** and the wider implementation of improved groundwater resource management*
- *A major **ongoing awareness campaign** at all levels during the long-term process.*
- *A **Groundwater Trust** through which the groundwater sector / industry can be mobilized to develop and lead a multilevel awareness and education campaign.*
- *Need for **departmental task team** to drive implementation process of the strategy and this should involve **groundwater champions from all sectors (stakeholder core group)**;*

## Enabling Strategies

### 2. National Groundwater Leadership

Develop and maintain the national groundwater champion that must hold the overall groundwater governance framework together and **facilitate and support its roll-out, smooth functioning and growth.**

- *The groundwater leadership in terms of **coordinated resource planning, sustainable development and protection, policy, regulation, research, training platform, central database – with one point of entry for users.***
- *Foresee a **‘governance center’** which would include the DWS Regions and could draw on the resources of other institutions to fulfil the evolving, wide range of its responsibilities.*

# A Planned Roll-out of NGS

Early inclusion of NGS roll-out in:

- national plans of different sectors
- groundwater plans of each CMA
- WSDPs of each Municipality

This should result in local institutional development

Support the roll-out systematically with:

- Resource status monitoring / Regulations / Guidelines / Awareness-raising / Capacity development

Ongoing stakeholder participation:

- held together by **stakeholder core group** and through **ongoing communication**

## Key Deliverables in First Year of Roll-out

THEME

The national groundwater champion designated and developed	2
Stakeholder communication initiated with a website in this regard (linked to the Community of Practice - below)	1
The National Stakeholder Core Group established and functional	1
A Groundwater Governance Strategic Action Plan, indicating critical deliverables and respective stakeholder responsibilities, developed	1
A Groundwater Governance Community of Practice established as a long-term process for achieving a stakeholder-driven NGS roll-out initiated (potentially through a WRC programme)	1
A 'groundwater awareness-raising through stakeholders' strategy developed, including the media	1, 7, 12
Groundwater sector organisation in response to the participation requirements (Groundwater Division; Groundwater academic institutions) underway	1
Plans for groundwater source protection by municipalities in place (with WRC support)	4
A prototype groundwater management plan developed for one CMA (possibly as a WRC consultancy)	9
A strategy for a new, more detailed, phase of groundwater resource assessment in place	10

## Key Deliverables in 3 Years of Roll-out

THEME

A Groundwater Code of Practice (widely understood national policy) developed cooperatively	3, 4, 5
A groundwater management plan for each CMA developed (per example – above) as basis for overall roll-out to local level	9
Introduction of groundwater sustainable utilisation into various sector development plans as the basis for the roll-out of further sector actions.	9
Promotion of relevant available guidelines ongoing and commissioning of critical new ones underway	5
Groundwater use verification completed country-wide	3
A country-wide groundwater pollution assessment undertaken	4
A suite of groundwater regulations developed and publication initiated	3
The first local shared aquifer management institutions in place in all nine CMAs	6, 7
The new phase of regional / local groundwater resource assessment underway	10
A National Groundwater Information System in place, adapted and expanded with participation of stakeholders	10
A groundwater capacity building strategy developed and implementation underway	7
A groundwater education & training programme, initiated jointly by the groundwater academic and technical institutions, for stakeholders at all governance levels	7
Indicators of 'groundwater sustainable utilisation and good governance', linked to the Water & Sanitation SDGs, developed. (See Table 3-3 examples)	10, 11
District / Local Municipalities have started to appoint/contract hydrogeologists to manage water supplies from groundwater and shared aquifers.	5, 6, 12

## Ongoing Communication

- Communication supporting vertical and horizontal integration with different sectors at all levels of management is **essential**;
- **Sharing of best (and poor) practice** as essential part;
- WRC is suggesting the possibility of a **Community of Practice programme** to facilitate the NGS roll-out.

# Download of NGS document

- [www.dwa.gov.za/Groundwater/NGS2016.aspx](http://www.dwa.gov.za/Groundwater/NGS2016.aspx)
- Email: NGS@dws.gov.za