



# Integrated Sector Support and Improved Sustainability within Water for Growth and Development

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# Government's Challenges

- Providing basic services for all - MDGs
- Addressing inequitable distribution of water and sanitation infrastructure. Previously, storage investment in SA biased towards small proportion of population and therefore water security in few growth poles - e.g. water security challenges in Limpopo
- Serious constraints on the availability of water resources and meeting competing social, economic and environmental demands
- Inequitable allocation of water resources in terms of productive uses and benefit within the 1st and 2nd economies



# Government's Challenges

- Managing impact of climate change & increasing environmental degradation
- Costs associated with new technological development e.g. hydro-power,
- Lack of understanding of the economic value of water by users and some decision makers
- Vulnerability to water shock
- Deepening poverty, especially in rural areas
- Stimulating economic growth (hence new policies such as GEAR, ASGISA etc)
- Transformation of the state – in particular its institutions
- Ensuring institutional and human capacity and skills

# The National Challenge

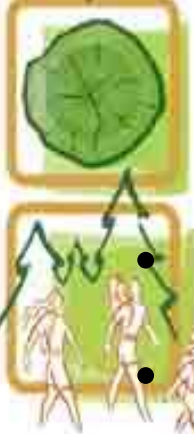


**Competition  
for  
scarce water**





## Implication of WfGD within the SA context

- 
- Water investment must result in ensuring **responsible growth** through environmental sustainability, social inclusion and equity
  - **Protection of the economy** from “water shocks” and disasters is important
  - **Water management & allocation** is equally critical to ensure basic human needs are met, protection of the resource, prevention of natural disasters
  - Improved access to water and sanitation must provide an **impetus for poverty alleviation**
  - **Achieve balance** between allocation for **agriculture** and **other sectors**
  - Projects and programmes aimed at utilising water for growth and development should address either/both the **1<sup>st</sup> and the 2<sup>nd</sup> economies of South Africa**

# Water for Growth and Development Scope & Content

## ENVIRONMENT

- Climate change impact
- Water security & shock mitigation
- IWRM
- Sustainable water use
- Biodiversity & ecological protection
- Land use & management

## SPATIAL DEVELOPMENT

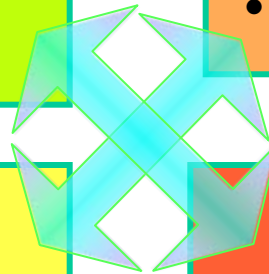
- Population demographics
- Infrastructure
- Services
- Built environment - housing / construction
- Energy (esp hydro)
- Transport

## ECONOMIC GROWTH

- Agriculture
- Mining
- Industry
- Manufacturing
- Commerce & business
- Tourism & recreation
- Property development

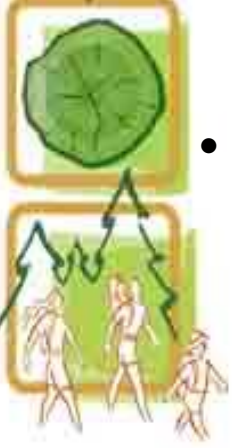
## SOCIAL DEVELOPMENT

- Poverty eradication
- Improved livelihoods
- Job creation & SMMEs
- Health & hygiene
- Food security
- Combating HIV&AIDS
- Gender mainstreaming





# WR Planning Approach

- 
- DWAf's approach in water resource planning, project planning and design as well as national infrastructure implementation include.
    - Ensuring that knowledge exists about the situation, with particular reference to the “hotspots”.
    - Conduct water reconciliation studies to determine scenarios of future water use and whether new infrastructure is required to meet future needs
    - Provision for water in our rivers, dams and underground to supply water for socio economic growth and development,
    - Infrastructure development programmes to ensure future supply of water to our growing economy,
    - Clamping down on illegal water users, and develop plans for major new dams where needed e.g GP.
    - Need to correct imbalances of the past in regard to access to water for drinking purposes and productive use.
    - Consider Climate change, and its possible impact on water resource availability has been considered in these studies.



# Infrastructure for WFGD

- Capital projects and already completed projects at a cost of R1,3 billion, such as Nandoni dam (Limpopo) in 2006 and the Mooi-Mgemi Transfer Scheme (Phase 1 in KwaZulu-Natal) in 2004.
- Currently implementing another 6 major water resources infrastructure projects at a projected cost of R8, 8 Billion, to be completed between 2008 and 2012,
  - De Hoop dam in Limpopo
  - Berg Water Dam in the Western Cape
  - Vaal River East-Subsystem Augmentation Scheme (VRESAP Pipeline), which will supply sufficient water to Eskom power stations and Sasol.
- 9 major water resources capital projects are at the planning stage which will be built in the next 5-10 years at an estimated cost of R12 Billion
- Proposal for new dam to service Gauteng by 2019. Feasibility to determine the location underway.



# Water and sustainability



- It is universally agreed that Water is necessity for economic growth
- Water is also necessary to accelerate job creation and poverty eradication
- But ,  
Water is not free and unlimited especially in South Africa, and the water being wasted or polluted costs us money
- Access to water, water infrastructure, and the effective management of water institutions key component of growth and development
- Strong regulation is a key component of ensuring sustainability of the resources.

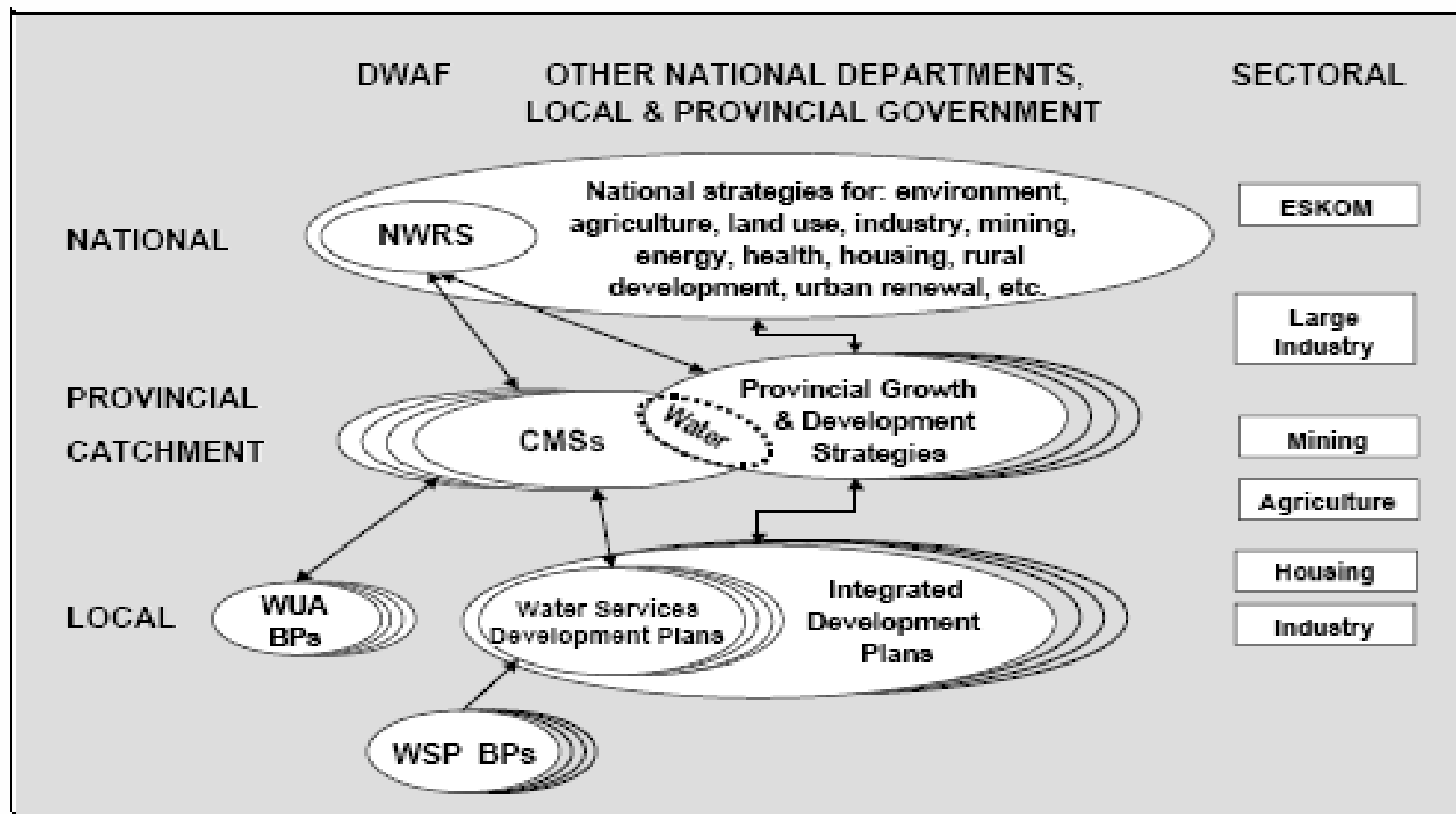
# The South African Water Sector in Context

As indicated in the diagram below the water sector:

- Cuts across national, provincial and local government priorities
- Impacts different sectors of the economy
- Is crucial for growth and development

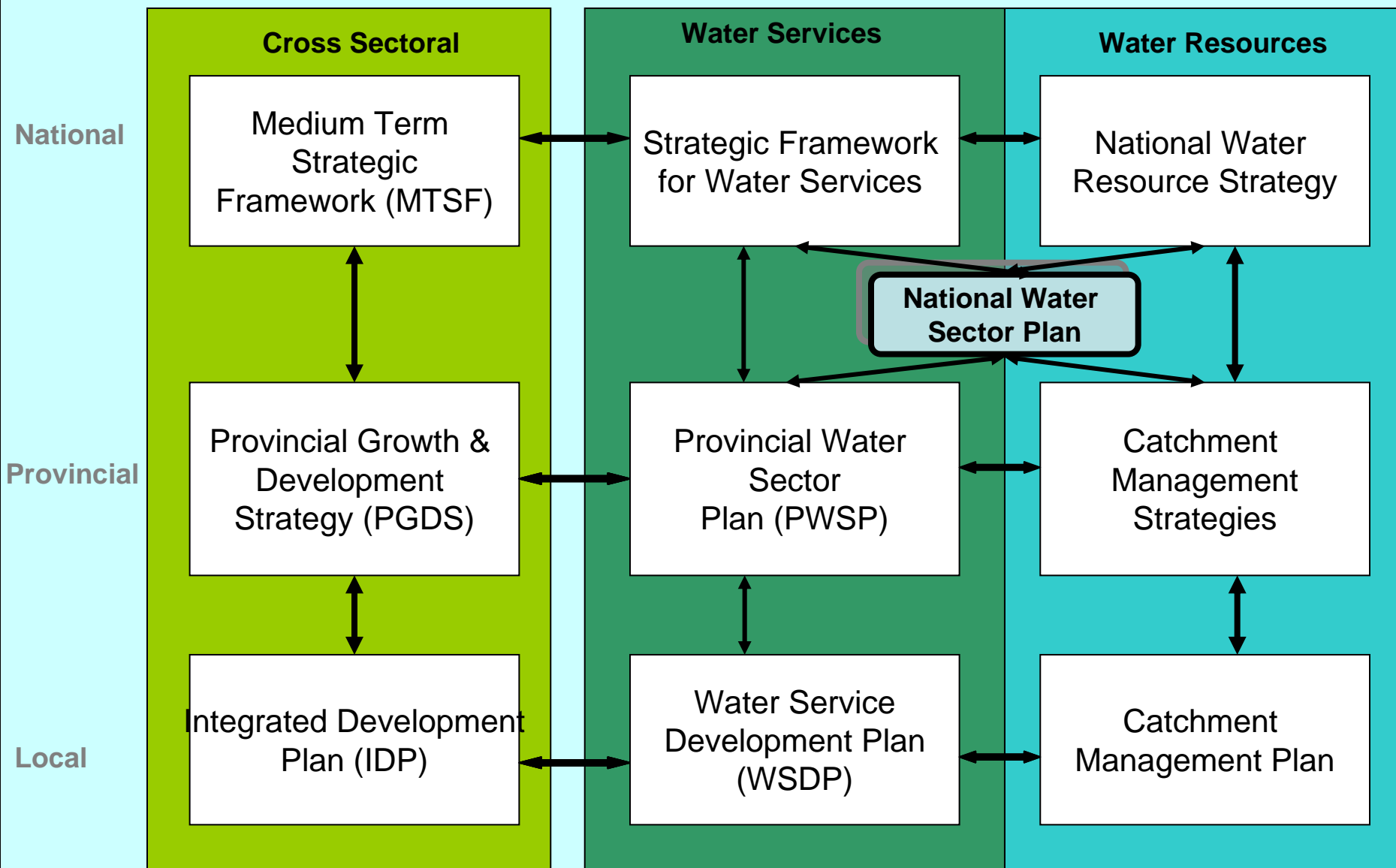
(Source of diagram: Nat. WR Strategy)


Fig 5.1: Water-related planning in the national planning framework




CMS - catchment management strategy; WUA - water user association; WSP - water services provider; BP - business plan.

# Integration of Water Sector Planning at the three tiers of Government





# Principles of the National Water Act & linkages to WfGD

- 
- Meeting the basic needs of present and future generations
  - Promoting equitable access to water
  - Redressing the results of the past racial and gender discrimination
  - Promoting efficient, sustainable and beneficial use of water in the public interest
  - Facilitating social and economic development
  - Providing for growing demand for water use
  - Protecting aquatic and associated ecosystem and their biological
  - Reducing and preventing pollution and degradation of water resources
  - Meeting international obligations
  - Promoting dam safety
  - Managing floods and droughts




# Priority programmes to ensure sustainability within WFGD

- Regulatory environment that promotes compliance and enforcement of standards
- Water conservation and demand management
- Water Quality management
- Asset management
- Equitable allocation of WR
- Meeting basic service delivery targets
- Capacity building and skills development



# Principles of Water Allocation Reform Process

- 
- The primary focus is redress past race and gender imbalances in water use.
  - Must be supported by capacity development programmes that promote the productive and responsible use of water by all users.
  - Must contribute to Broad-Based Black Economic Empowerment (BBBEE) and gender equity by facilitating access by black- and women-owned enterprises to water.
  - Must respond to local, provincial and national planning initiatives, as well as to South Africa's international obligations and regional SADC initiatives.
  - Must be undertaken in a fair, reasonable and consistent manner and existing lawful uses must not be arbitrarily curtailed.
  - Must allow for the protection of water resources by promoting the phased attainment of both developmental and environmental objectives



# DWAF Regulatory imperatives

- Monitors the health of our rivers
- Identify and focus on high risk sites where there is pollution
- Accelerate licencing of wastewater treatment works
- Enforce discharge standards in line with “the polluter pays principle”
- Expanding the capacity of our regulatory and compliance unit to deal with non-compliance
- Explore incentives for good performance treatment and mangement of effluent quality
- Monitor drinking Water Quality according to framework
- Oversee contract development in terms of water provision
- Develop economic regulatory principles and techniques to review tariffs



# Regulatory measures for WSA's

- Ensuring access to Basic Water services
- Drinking water quality monitoring
- Management of impact on environment
- Strategic asset management
- Water conservation and Demand management
- The level of customer service standards
- Financial performance
  - Collection efficiency
  - Financial self reliance
  - Financial audits
- Institutional effectiveness



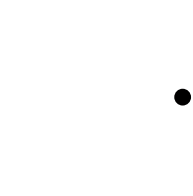
# Drinking Water Quality

- Quality management is the responsibility of municipalities;
- Department of Water Affairs and Forestry, has an oversight and regulatory role
- DWAF implemented a country-wide system to assist with the overall management of drinking water quality
- On average 3000 samples are taken nationwide from water supply systems,
- Result have shown that more than 94% compliance with the health aspects of the national standard for DWQ.
- The quality of drinking water from our taps is one of the best in the world



# River Pollution

- State of our rivers is not good, there is pollution in our rivers from various sources
  - The mining industry other manufacturing firms do not meet effluent discharge standards
  - Poor municipal infrastructure which is unable to treat the waste water to the required standards
  - Many municipalities struggling to operate and maintain waste water treatment works
  - Informal settlements that establish themselves alongside rivers
  - Agriculture activities
- DWAF will increase capacity for compliance monitoring and enforcement within the “polluter pays” principle
- DWAF River Health programme seeks to engage all stakeholders to ensure that the health of the rivers is protected and conserved





# Interventions on WC/DM

- Support the municipalities with developing business plans for Water Conservation and Water Demand Management,
- Assist with the implementation of WC/DM plans
- Recognise and acknowledge those that have significantly contributed towards Water Conservation and Water Demand Management.
- Provide training to communities, given to consumers, water institutions and planners.
- Expand the Water Wise campaign to reach more people
- Educate learners and therefore communities through the Baswa LeMetsi programme
- Mobilize a special fund from Treasury to assist municipalities on WC/DM programmes



# WC/DM flagship programme

## Four Pillars:

### 1. The Social interventions

- ✓ Conduct and intensify National Waterwise Campaign, use Radio, TV adverts, and Newspaper,
- ✓ Training of communities to make people more aware of the scarcity of water in our country and how they can contribute to saving water.

### 2. Technical intervention

- ✓ repair leaks,
- ✓ replace the old plumbing that uses too much water,
- ✓ Installing devices that can save water.

### 3. The Economic intervention

- ✓ Provide incentives to water users to use less water.
- ✓ Repair leaks and implement water saving technology.

### 4. Institutions and legislation intervention,

- ✓ Municipal bylaws.
- ✓ regulations, guidelines and standards for items such as toilets, taps, showers, washing machines and dishwashers to be more water efficient.





# Asset Management & sustainability

- Adopting an asset lifecycle management approach
  - Developing cost-effective management strategies for the long-term;
  - Providing a defined level of service and monitoring performance;
  - Understanding and meeting the impact of growth through demand management and infrastructure investment;
  - Managing risks associated with asset failures;
  - Sustainable use of physical resources; and
  - Continuous improvement in asset management practices.



# Towards Improved Asset Management

Change approach from only focusing on the development new infrastructure to proper management of even existing assets

- Set common standards for integrated asset management
- Develop measures to maintain and monitor infrastructure and measure performance
- Develop and maintain KPI's according to set standards
- Encourage autonomous maintenance of Bulk infrastructure
- Develop maintenance plan for plants and treatment works have maintenance
- Improve funding and develop adequate skills in the area of asset management
- Conduct swift repairs on critical pipelines and sewer networks
- Increase monitoring capacity & develop training programmes for personnel and act promptly on Bulk pipeline network deviations
- Increase budgets for O&M



# Interventions by DWAF

- An extensive database on all plants is under development.
- The monitoring system is being extended to also include functionality management, governance, and condition.
- The initial audit is to be extended to all waste water treatment plants.
- A special bulk infrastructure fund has been established.
- A dedicated program on infrastructure planning is under way.
- Special guidelines have been developed on infrastructure management.
- An asset management programme has been initiated.
- Special attention is given to institutional capacity development with the focus on sustainable management – both for the long and short term.
- Special attention is also given to the regulation of the sector which includes accountability, performance monitoring and legal intervention.
- Continuous one-on-one intervention is also taking place




# Meeting service delivery targets

- Bucket eradication programme for the pre-94 period almost completed
- An integrated plan for water and sanitation programme to meet MDG's goals aligned with the housing programme
- Funding for bulk infrastructure provided through DWAf from Treasury
- Support for meeting water and sanitation targets provided to municipalities through Siyenza Manje, Operation Gijima, Masibambane Programme support



# Key Service Delivery Challenges

- 
- Significant capacity constraints in many municipalities (including general skills shortage)
  - competition in the building industry for scarce resources in preparation of the 2010 FIFA World Cup
  - Unreliable or non-existent backlog related information.
  - Growing informal settlements due to increased migration to urban centres.
  - Growing backlog, combination of refugees and migration, as well growth in households
  - Rising infrastructure costs, due to shortage of materials and capacity.
  - Lack of community ownership of the government supply driven programme.
  - Rapidly filling up of pits where onsite dry systems are provided.
  - Funding limitations, the capacity of local government to deliver,

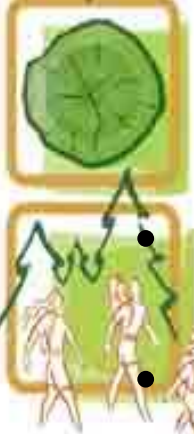


# Proposed interventions

- Clear project guidelines and support for BP process
- Alignment with IDP
- Enhanced integration between departments
- Short & medium term interventions (2008 & fbw)
  - Identify quick wins and build on success
- Engagement of water boards and private sector
- Integrated funding strategy – gearing of grants
- Implementation monitoring & quality control




# Monitoring and Evaluation

- 
- Information flow is always challenging in a multi-tiered environment stretching across multiple organizations.
  - As sector leader DWAF is responsible for monitoring and evaluating information about water services delivery and provision
    - Treasury regulations impose strict financial and performance reporting requirements on all government departments and compliance is audited by the Auditor General.
    - New systems being developed to integrated and enhance reporting
    - Coordination of information flow however remains a high priority of DWAF.



# Skills and Capacity in the sector



- The sector is experiencing challenges in recruiting and retaining suitably qualified staff, current interventions include

- Siyenza Manje programme to re-introduce retired engineers into local government,
- Project Consolidate of the Department of Provincial and Local Government that supported municipalities through Programme Management Units,
- The deployment of engineers to municipalities through our regional offices
- The establishment of a training academy for young graduates
- Improved compensation by the implementation of a special dispensation allowance for scarce skills
- Operation Gijima that focuses on sanitation delivery acceleration to meet the 2010 targets.

- Prioritisation of job creation, poverty alleviation and the involvement of CSO's and women & the youth in all social projects.



# Sector Collaboration



Through Masibambane support sector forums have been established and IGR Act an enabling environment has been created to engage all Stakeholders and this has promoted,

- Alignment with provincial government has been achieved in most provinces and MEC for LG political champions for the Water Sector.
- The Provincial Water Sector Plan reflects the development priorities of the Provincial Growth and Development Strategy (PGDS).
- Strengthen partnerships with all stakeholders, sector departments and private sector
- Integrated planning between all sector Departments to avoid duplication
- Mutual support, collaborative spirit and lesson sharing among stakeholders in the sector
- Monitor the implementation of the Masibambane III Outcomes and the National Water sector Plan and provide feedback to all relevant stakeholders



# Proposed Strategic Interventions

- Develop the Strategic framework for WfGD that speak to political imperatives and macroeconomic challenges in the country.
- Focus on the qualitative side of delivery – Water Quality, Water Conservation & Demand Management, Health & Hygiene, Regulations, Monitoring & Compliance etc.
- Focus on the development of skills in line with JIPSA and prioritise development of institutions that will adequately address challenges of growth and development
- Support and strengthen existing key initiatives such as WAR, institutional reform & establishment of CMAs
- Focus on multiple uses of water for poverty alleviation and improved livelihoods
- Promote a learning culture – sharing knowledge and lessons for best practice promotion



**THANK YOU**