



Water for Growth and Development

Consultation Summit

26-27 March 2009



Background

- SA 30th driest country – limited water resources
- Water is central to any development (social, economic and environmental)
- Serious constraints on the availability of water resources and meeting competing social, economic and environmental demands
- Water has a critical role to play in all sectors (agriculture, industries, mining, power generation, water services; poverty alleviation)
- Need to cater for all layers and at all scales for productive use of water.



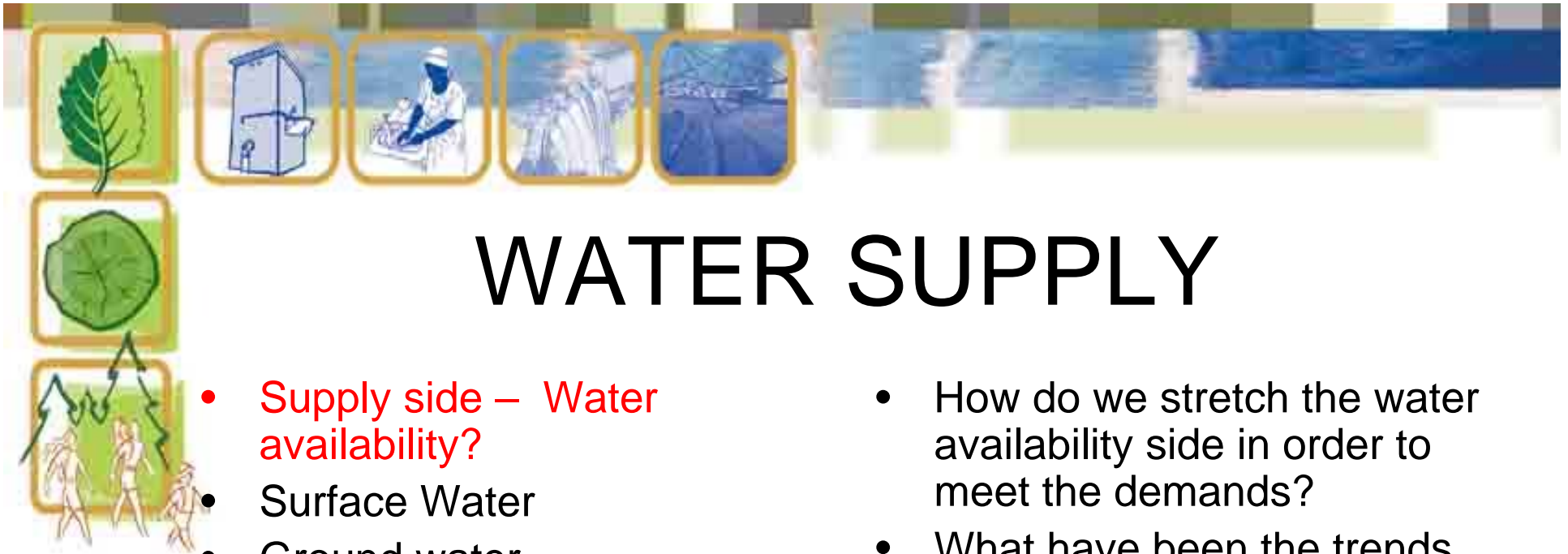
Challenges Impacting on Growth

- Inter-basin water transfers are expensive
- Ageing water infrastructure and limited access
- Poor regulation – compliance and enforcement
- Some economic activities are impacting negatively on water quality and the environment (acid mine drainage)
- Unlawful use of water
- Lack of technical skills and human resources



Challenges impacting on growth

- Impacts of climate change
 - Uncertainty of CC already factored into scenario planning
 - Future requirements (security) major issue
 - Water resource characteristics
 - Adaptation and mitigation measures from a water perspective
- Economic situation especially global credit crunch
- Migration and Demographic Change
- Aging and poorly maintained infrastructure
- Decreasing water resource quality
- Changing Institutional Arrangements



WATER SUPPLY

- **Supply side – Water availability?**
- Surface Water
- Ground water
- Recycling
- Desalination
- Dam extensions
- Rainwater harvesting
- Increased return flows
- Integrated Water Resource Management
- How do we stretch the water availability side in order to meet the demands?
- What have been the trends in terms of supply?
- When we increase supply are we aiming at volume or location or both?
- What are the trade offs?
- What are other water scarce countries doing?
- What is their supply mix?



WATER DEMAND (Cont...)

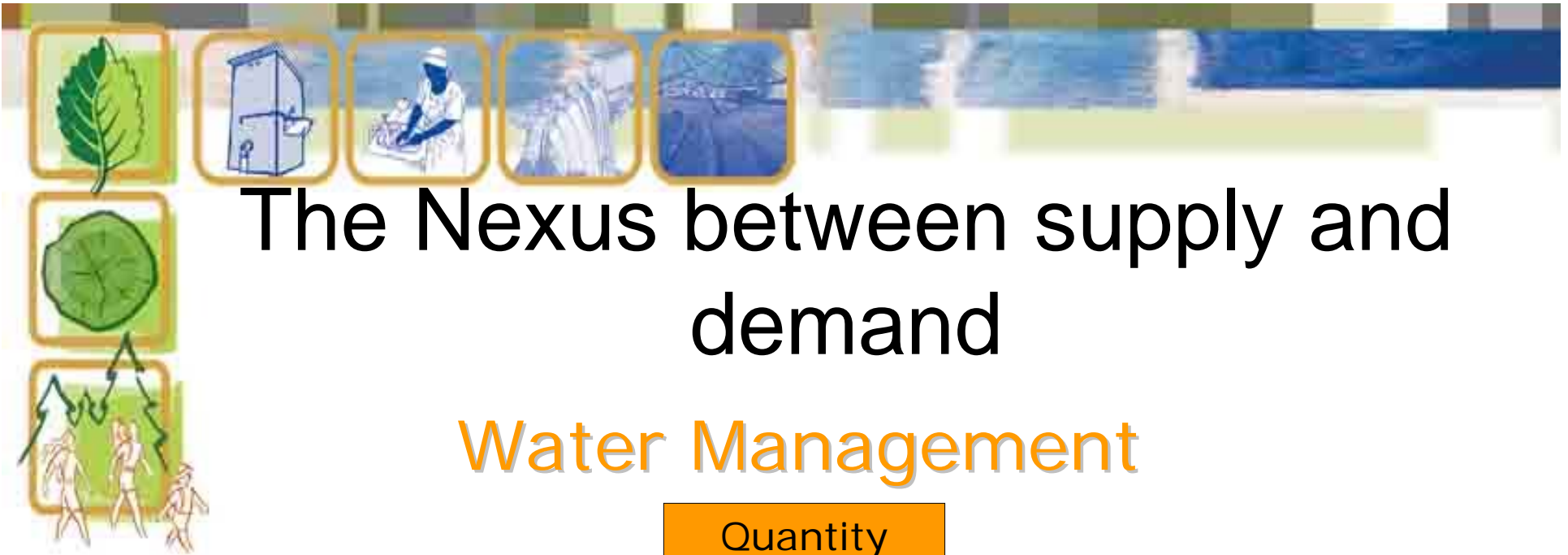
- **Water Demands/Needs/Usage**

- Economic (Mining, Power Generation, Agric etc)
- Social (broadening access, domestic)
- Environment
- Efficiency or other social and economic imperatives?
- Growing sectors vs. stagnant sectors?
- What would be the cost of guaranteeing supply to Power generation and who is going to lose out?
- What instruments would we use to deal with managing demand (e.g. subsidies, incentives, regulation of use, pricing etc)
- What is our real demand (consumption less wastage/losses)



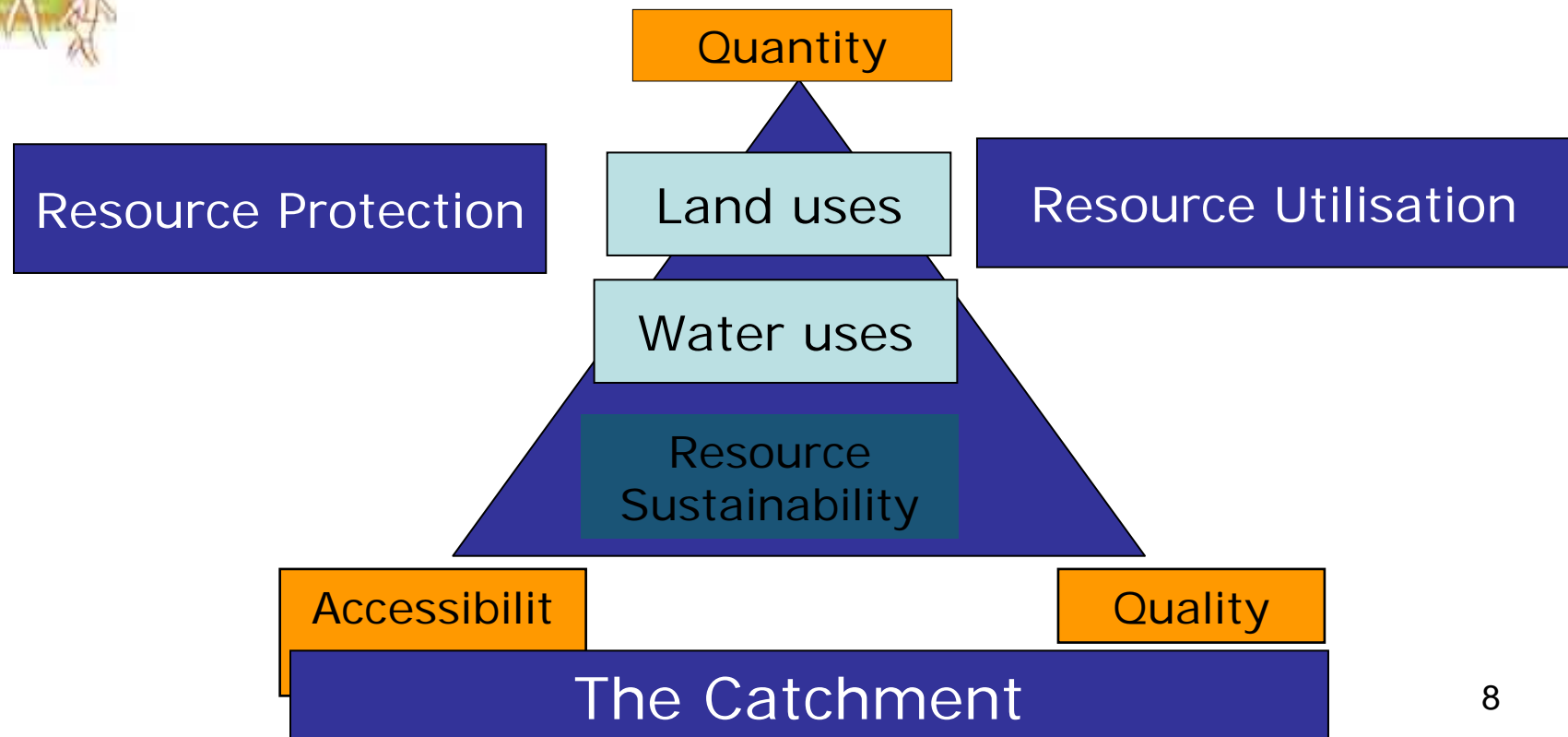
WATER DEMAND

- Water Demands/Needs/Usage
 - Economic (Mining, Power Generation, Agric etc)
 - Social (broadening access, domestic)
 - Environment
- Water Demands/Needs/Usage
 - Economic (Mining, Power Generation, Agric etc)
 - Social (broadening access, domestic etc)
 - Environment: Who is the biggest user and should we continue guaranteeing supply or its time to put some restrictions to the users? What would inform the restrictions?



The Nexus between supply and demand

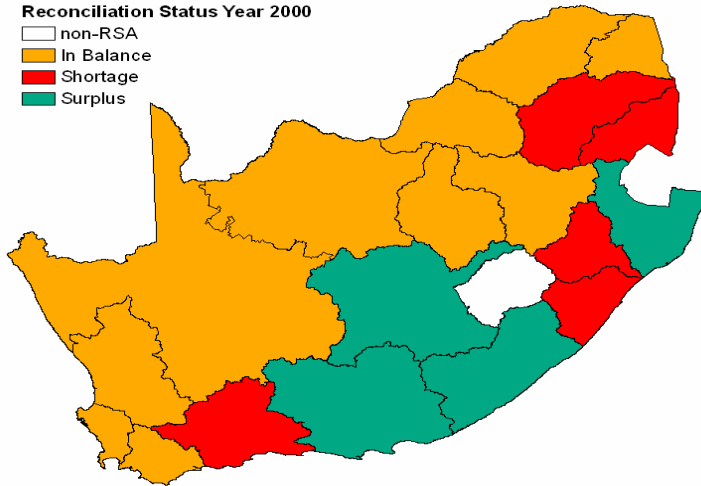
Water Management





Reconciliation Status Year 2000

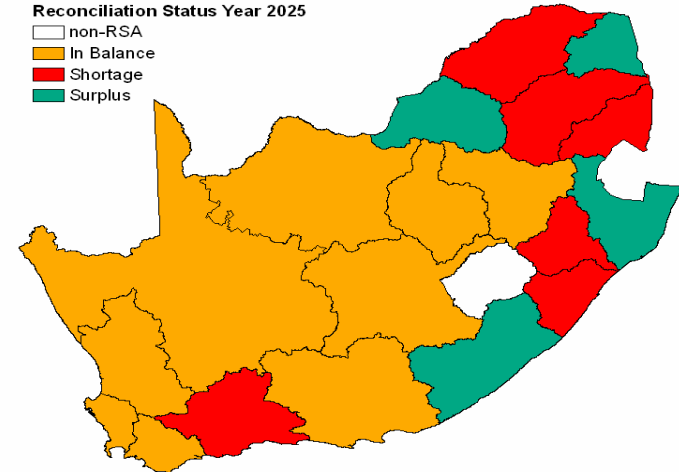
□ non-RSA
 ■ In Balance
 ■ Shortage
 ■ Surplus



Scenario 2000

Reconciliation Status Year 2025

□ non-RSA
 ■ In Balance
 ■ Shortage
 ■ Surplus



Scenario 2025

- A quarter (five) of the total 19 water management areas experience water shortages (scenario 2000); A further quarter have water surpluses and remainder are in balance.
- Shortages will become more prevalent if proper attention is not given to providing more water (scenario 2025).

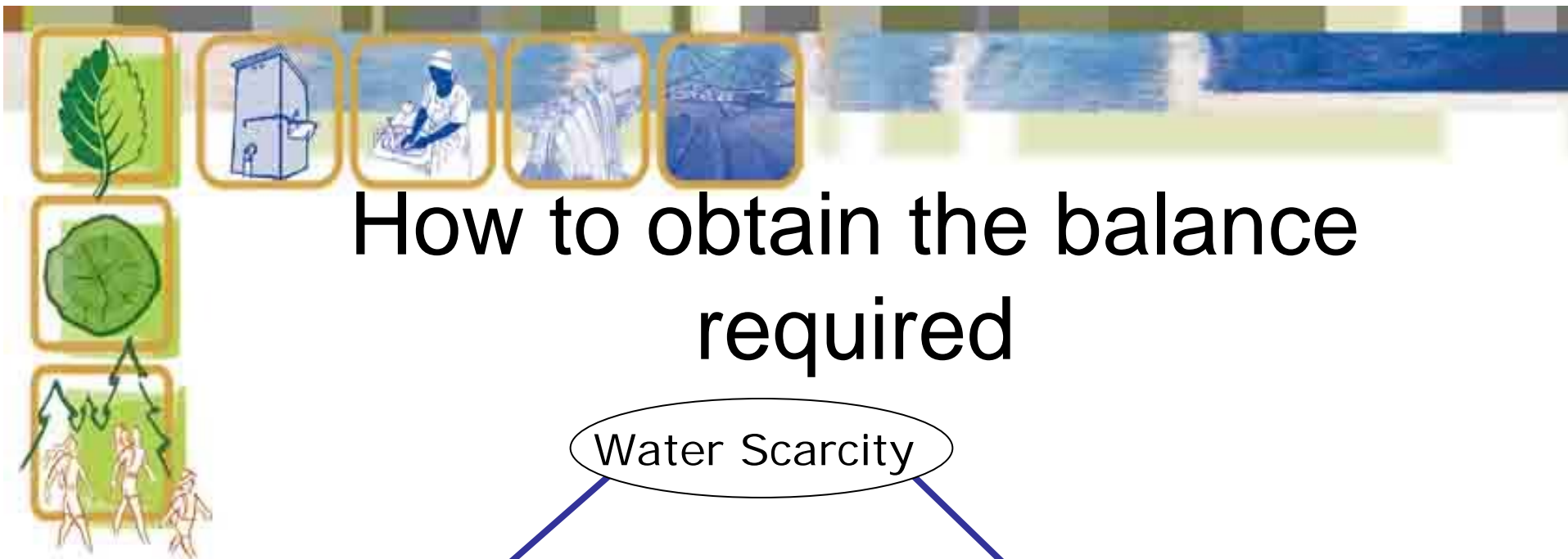


- If reconciliation strategies are developed and implemented, the country's demand and supply could be in balance.
- This is what we must strive for.

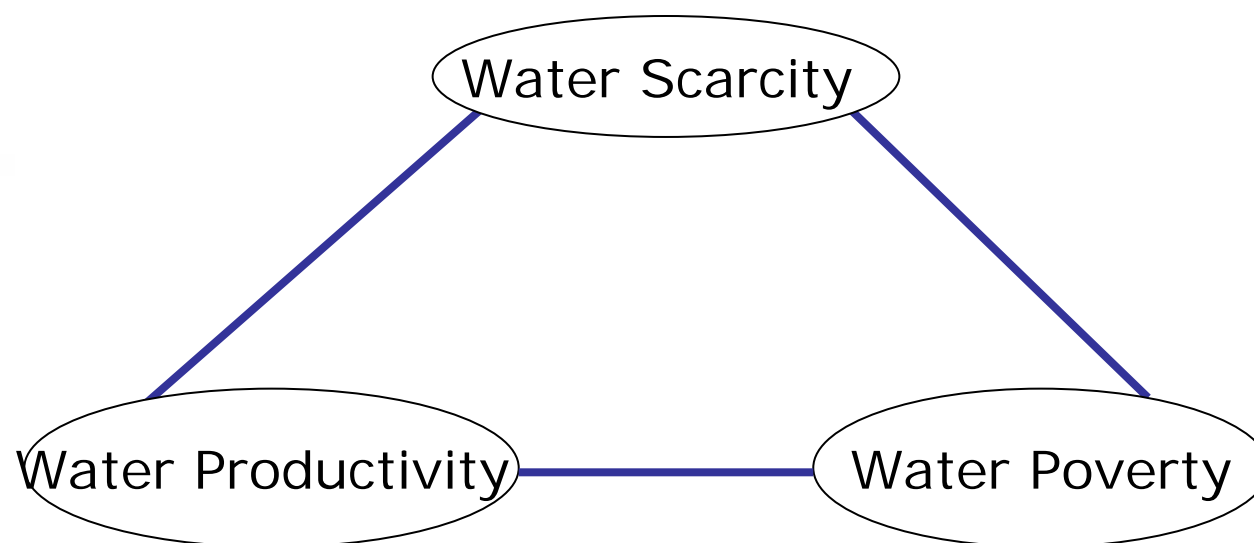
The National Challenge

**Competition
for
scarce water**





How to obtain the balance required



Technology

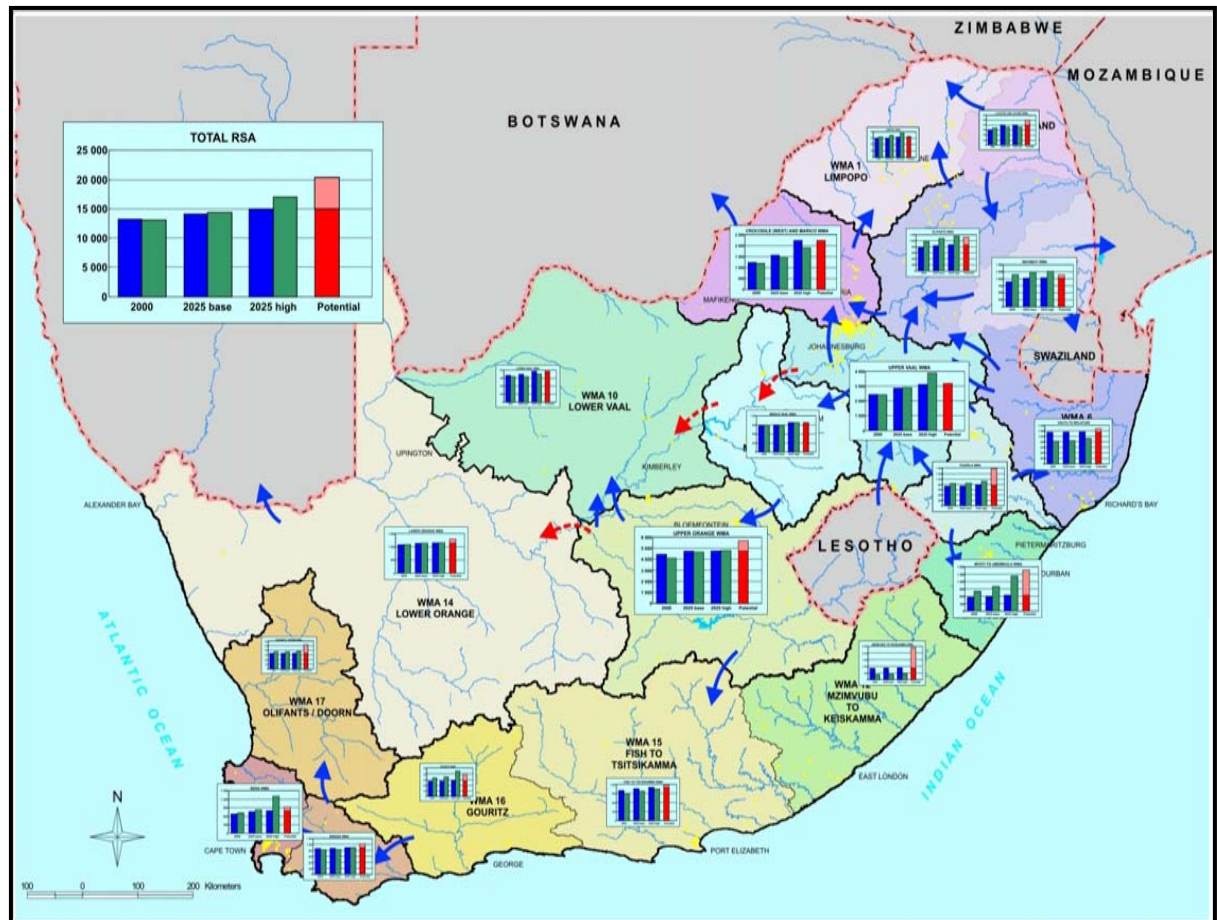
Knowledge

Policy

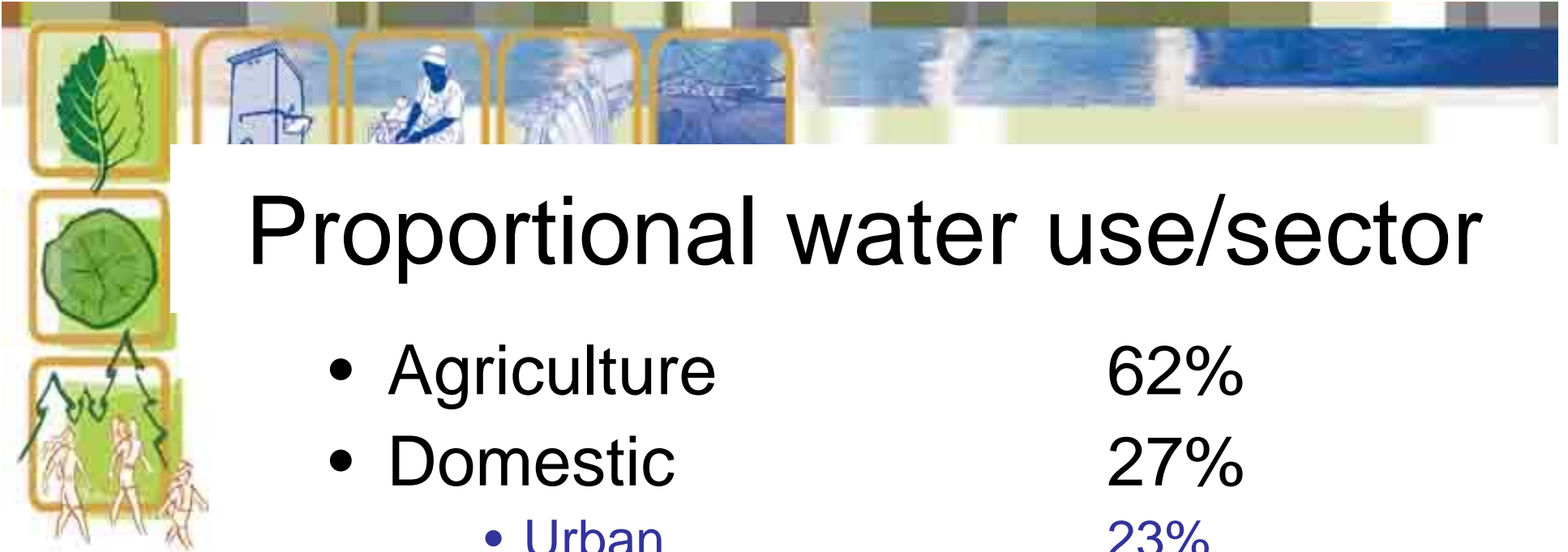
Impact (economic, social, health, environment)

Water availability vs use

- Current water use match water (yield) availability
- Potential for further resource development still exists in KZN (south) & East of EC
- Limited potential for further resource development in most areas



Water demand and availability projections for 2025 (National Water Resource Strategy, 2004). Blue bars = water availability; Green bars = water use; Red bars = water development potential.



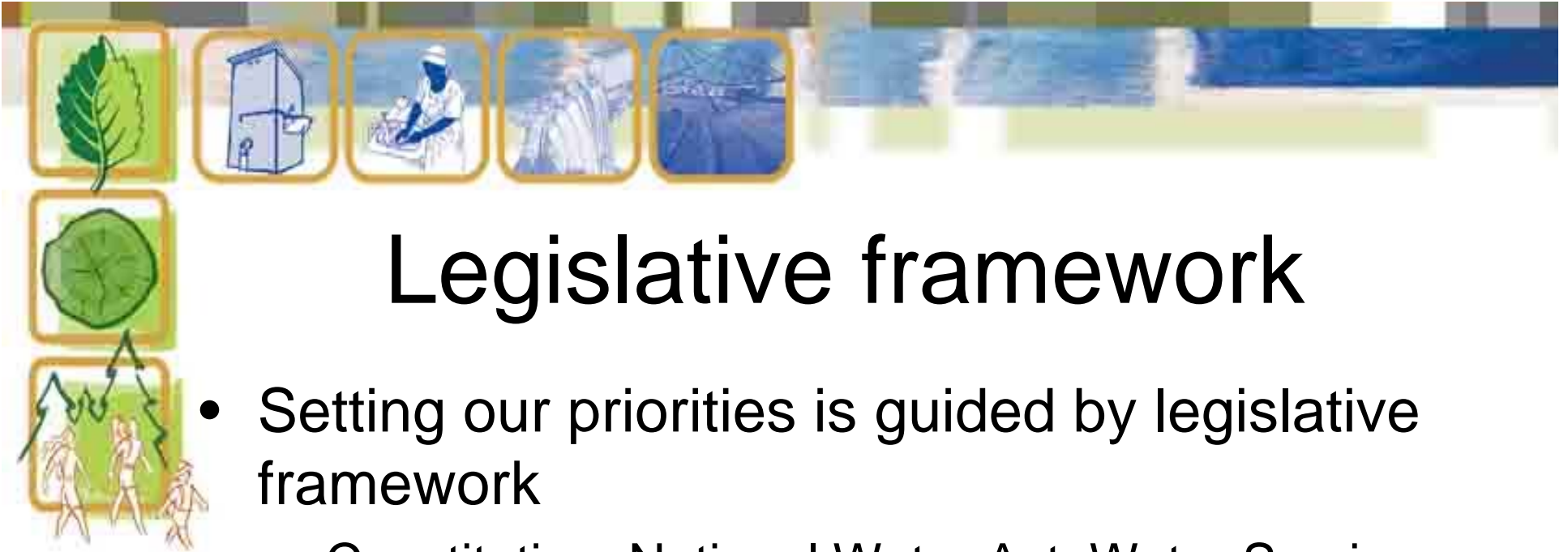
Proportional water use/sector

• Agriculture	62%
• Domestic	27%
• Urban	23%
• Rural	4%
• Mining	2.5%
• Industrial	3.5%
• Power generation	2.0%
• Afforestation	3.0%
• Environment	Base



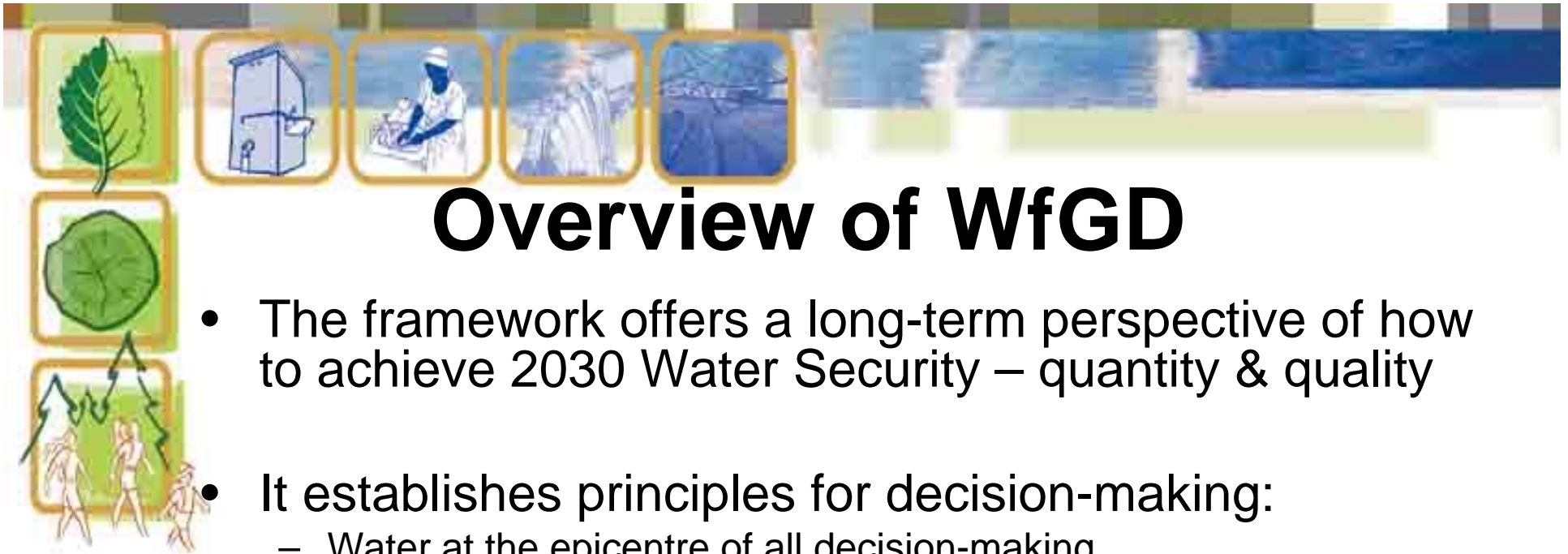
Opportunities for using water enable growth and development

- Adaptation and innovation
- Investing in people
- Leveraging infrastructure
- Finance and pricing
- Institutional reform
- Integrated planning



Legislative framework

- Setting our priorities is guided by legislative framework
 - Constitution, National Water Act, Water Services Act,
- DWAF implementation mechanisms and tools
 - National Water Resource Strategy, Strategic Framework for Water Services, Catchment Management Strategies, (Internal Strategic Perspective), Reconciliation Studies, etc.



Overview of WfGD

- The framework offers a long-term perspective of how to achieve 2030 Water Security – quantity & quality
- It establishes principles for decision-making:
 - Water at the epicentre of all decision-making
 - Ensuring basic access to water for all South African citizens is non-negotiable
 - Balance social, economical and environmental needs
 - Cost-benefit analyses to factor in full range of costs and benefits
- It establishes gaps that affect decision-making
 - Roll-out of Reconciliation Strategies
 - Thorough feasibility studies to establish most cost-effective ways of ensuring water security
 - Strengthening information for decision-making e.g. National Groundwater Information System




High level recommendations

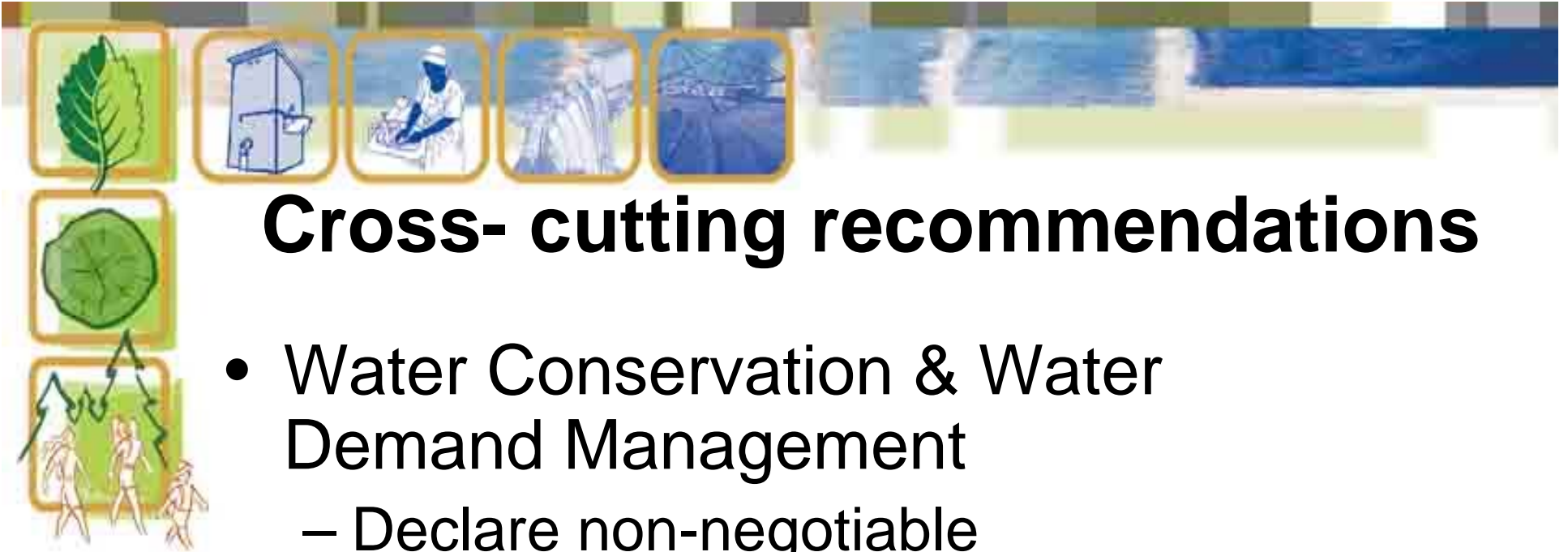
- **Mainstreaming water**
 - Water at the forefront of planning, not an afterthought
 - Strengthening sectoral cooperation
 - DWAF strengthening its regulatory capacity
- **Strengthen institutional capacity**
 - Water scarcity exacerbated by ineffectual management
 - Restructuring and re-alignment
- **Striking a balance between supply and demand-side measures**
 - WCWDM provides a better return on investment
 - Greater support to municipalities to ensure widescale adoption of WCWDM measures
- **Addressing service backlogs**
 - Critically assessing reasons for persistent backlogs and a comprehensive strategy to address in concert with delivery partners
- **Changing water use behaviour for the future**
 - Finding the right mix of mechanisms to effect change in behaviour: regulatory, self-regulatory, market-based instruments and awareness and education



Water Mix



Water supplies	2008	Midterm 2025	Long-term 2040
Surface water	77%	72%	65%
Groundwater	8%	10%	12%
Re-turn flows (irrigation, treated effluent and mining)	15%	19%	25%
Desalination	<1%	5%	7%



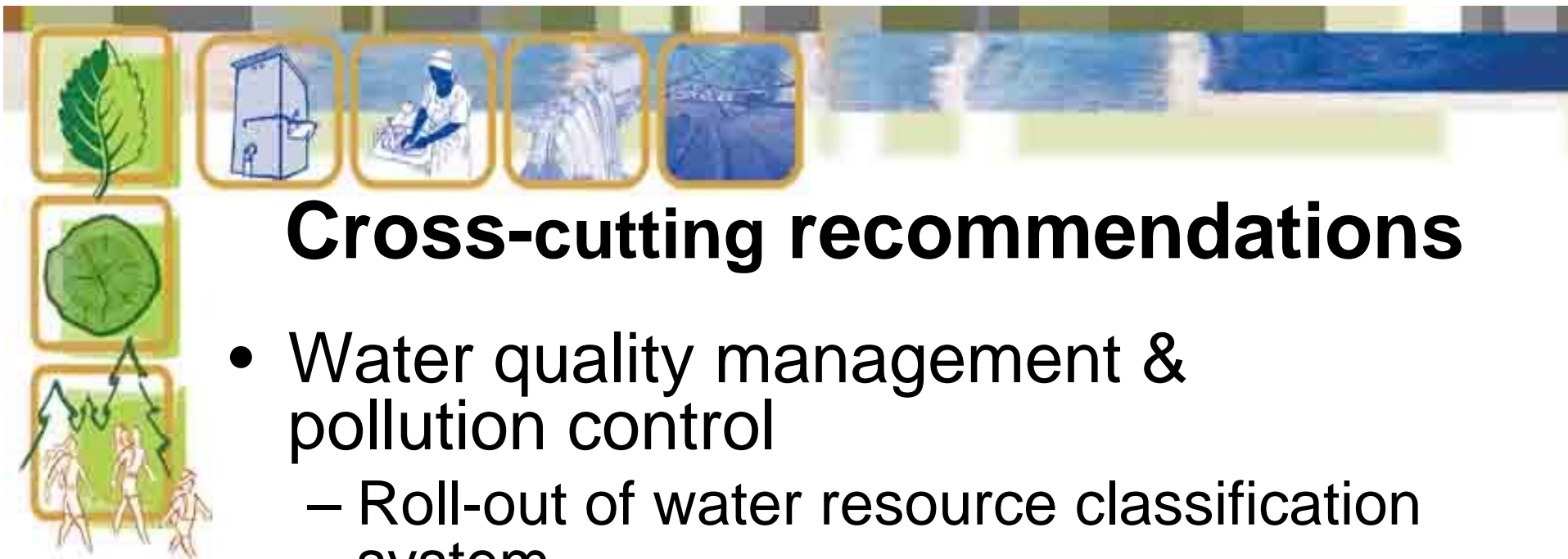
Cross- cutting recommendations

- Water Conservation & Water Demand Management
 - Declare non-negotiable
 - Set up sector specific targets
 - Regulation through economic instruments
- Water Loss control
 - Enforcement for all municipalities
 - Set a target limit on this as a condition for all sectors



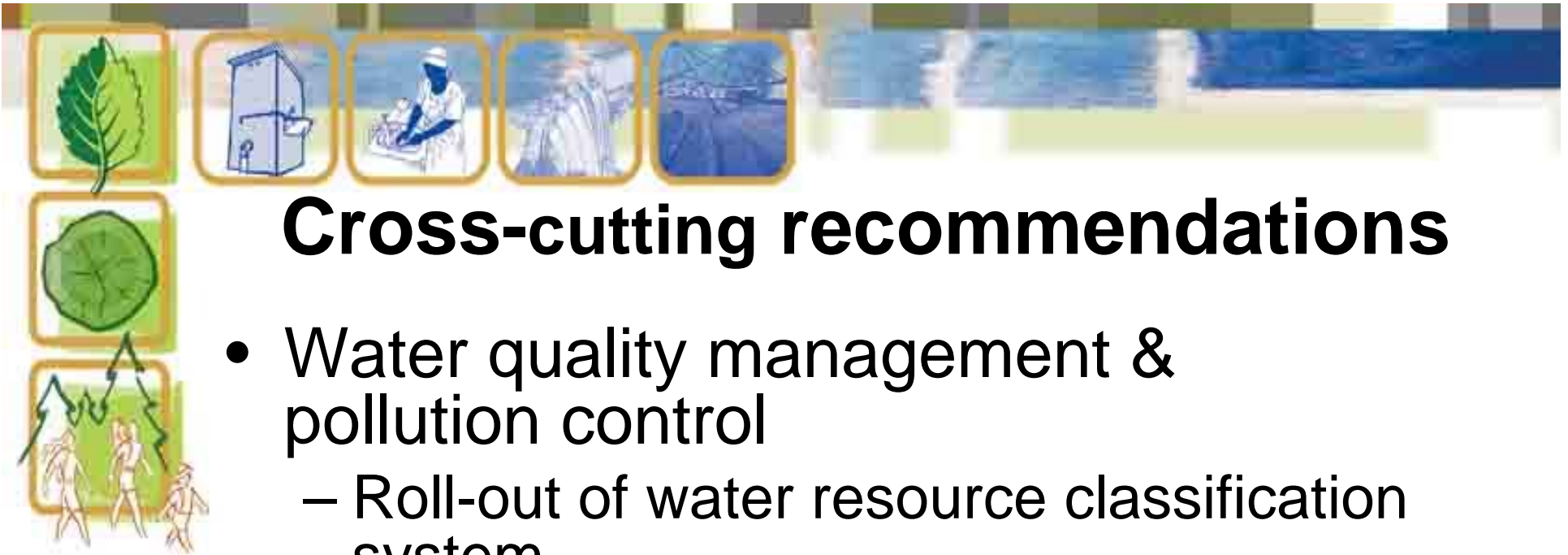
Cross-cutting recommendations

- **Infrastructure**
 - Promote construction of Inter-Basin Water Transfer (IBWT) & multipurpose dams
 - Prioritise development according to needs
 - Operation and Maintenance of existing infrastructure
 - Refurbishment of existing ageing infrastructure



Cross-cutting recommendations

- Water quality management & pollution control
 - Roll-out of water resource classification system
 - Adherence to licence waste discharge standards & conditions to be monitored rigorously
- Climate Change
 - Develop mitigation and adaptation plans for the Sector
 - Climate Change Response Policy Development Summit (side event)



Cross-cutting recommendations

- Water quality management & pollution control
 - Roll-out of water resource classification system
 - Adherence to licence waste discharge standards & conditions to be monitored rigorously
- Climate Change
 - Develop mitigation and adaptation plans for the Sector
 - Climate Change Response Policy Development Summit (side event)



Sector specific recommendations

Energy	Investing in and upscaling of technology that promotes water use efficiency.
Mining	Much stronger regulation of mining & greater use of treated effluent and groundwater.
Domestic (urban and rural)	Implementation of reconciliation strategies and rolling out to all towns. Feasibility studies for desalinated water and treated effluent. Explore rainwater harvesting.
Irrigated agriculture	Enforce irrigation scheduling. Incentivise the use of technology for enhanced water use efficiency. Introduction of cascading water tariffs. Stop all illegal water use.
Environment	Implementation of resource directed measures indicate a need for massification of natural resource management programmes.
Forestry	Restrict afforestation to relatively under utilised wet catchments.



Process to Date

- Internal consultation within government resulting in the establishment of a reference group of key sector departments
- Consultation with members of the Water Sector leadership group
- November 2008 – A panel of international experts convened to give input and critique the framework. Experiences from Mexico, Namibia, Israel, Gambia.
- Work on experience of 8 countries commissioned (India; Morocco; Myanmar; Germany; Australia; Uganda; Brazil and Mexico)
- January 2009 - Framework on WfGD approved for consultation by cabinet
- 2 March 2009 – Launch of WfGD Framework as part of National Water Week Celebrations
- WfGD consultation Summit on 26-27 March 2009



Purpose of the WfGD Consultation Summit

- To **strengthen the sector perspective** within the Water for Growth and Development Framework in terms of high-level recommendations, sector specific recommendations and cross-cutting recommendations addressing both supply- and demand-side interventions.
- To discuss and agree on **solutions** and **joint actions** to be embarked upon in dealing with the challenges highlighted in the Water for Growth and Development Framework.
- To set **sector specific targets** for the implementation of Water for Growth and Development