



KOMATI BASIN WATER AUTHORITY (KOBWA)
A Working Shared Watercourse Institution

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KOBWA

09 August 2016

Learning Journey to the Nile River Basin Authority

08 – 10 August 2016



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Presentation Outline

A. Legal context

- 1. International Conventions**
- 2. South African Legislation**
- 3. Swaziland Legislation**

B. Evolution of KOBWA

- 1. Treaties**
- 2. Evolution Stages**
- 3. Main Objectives**
- 4. Need for Bi-national Executive Arrangement**
- 5. Mandate**
- 6. Functions**

A. Funding and Benefit Sharing

- 1. Project Cost Sharing**

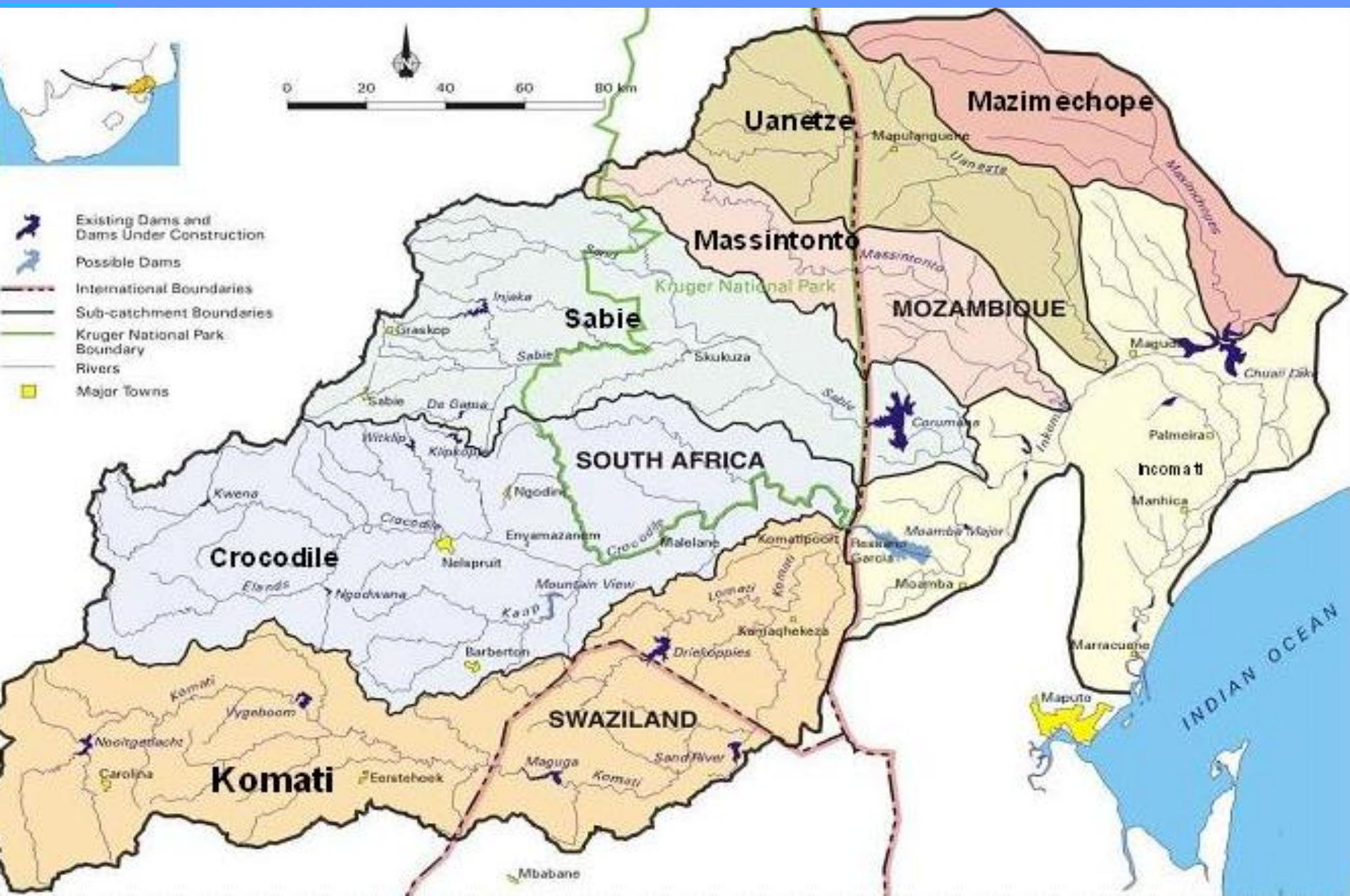
D. Project Benefits

- 1. Examples of Completed Community Development Projects**
- 2. Current Community Development Projects (In Progress)**

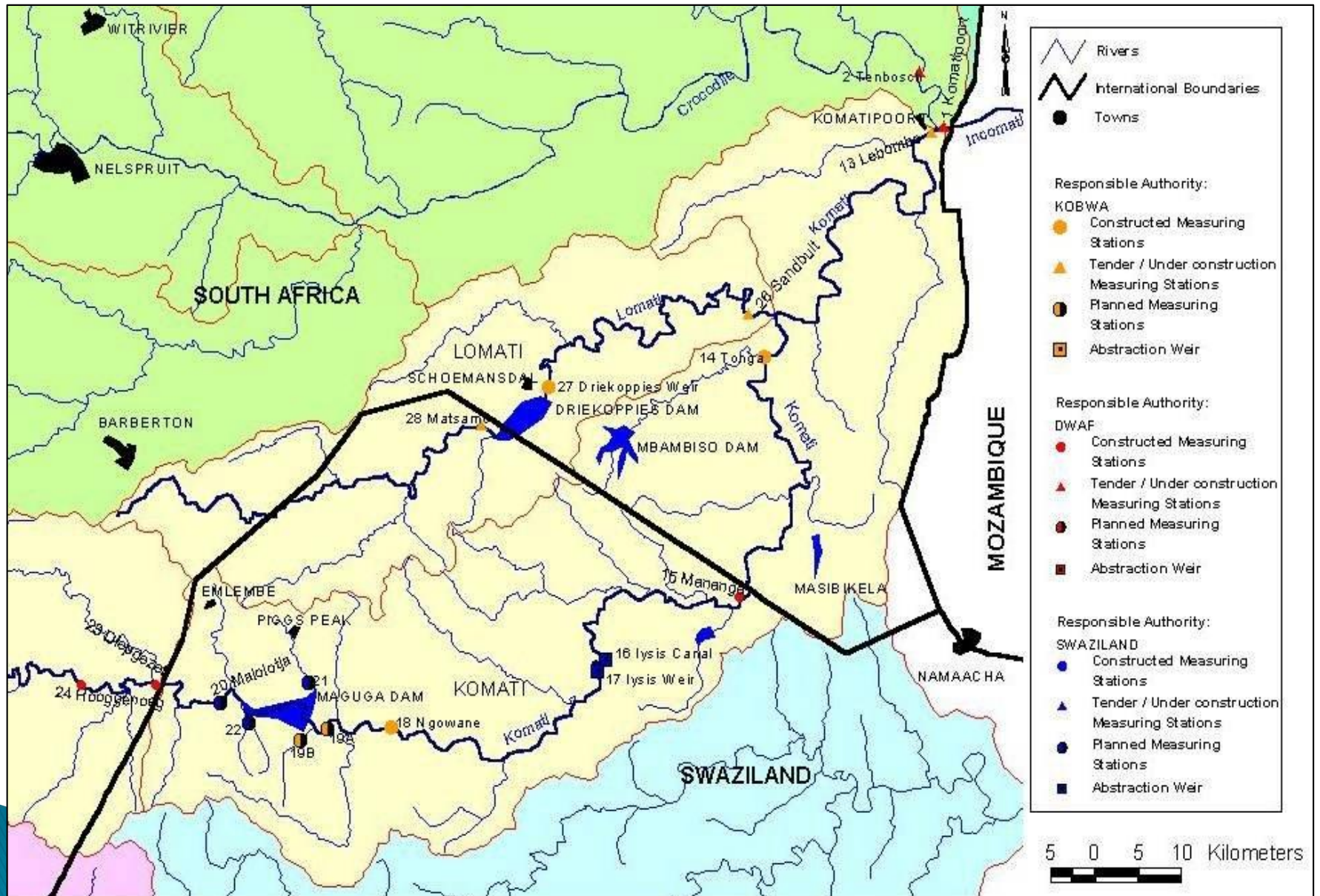
D. Success Factors

E. Challenges

The Incomati System



AREA OPERATED BY KOBWA





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A. LEGAL CONTEXT

1. UN Convention on Non-navigational uses of International Waters

- ▶ Article 3(3) says, “*Watercourse States may enter into one or more agreements, hereinafter referred to as ‘watercourse Agreements’, which apply and adjust the provisions of the present Convention to the characteristics and uses of a particular international watercourse or part thereof.*”



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2. SADC Protocol on Shared Watercourses

- ▶ *Article 3(5) “State Parties undertake to pursue and establish close cooperation with regard to the study and execution of all projects likely to have an effect on the regime of the shared watercourse.”*
- ▶ *Article 5(3)(a) “Watercourse States undertake to establish appropriate institutions such as watercourse commissions, water authorities or Boards.”*

3. South Africa National Water Act (1998)

- ▶ Article 102, *“The Minister may, in consultation with Cabinet, by notice in Gazette, establish a body to implement any international agreement entered into between South African Government and a foreign government relating to (a) investigating, managing, monitoring and protecting water resources; (b) regional cooperation on water resources; (c) acquiring, constructing, altering, operating and maintaining a water-work or (d) the allocation, use and supply of water.”*

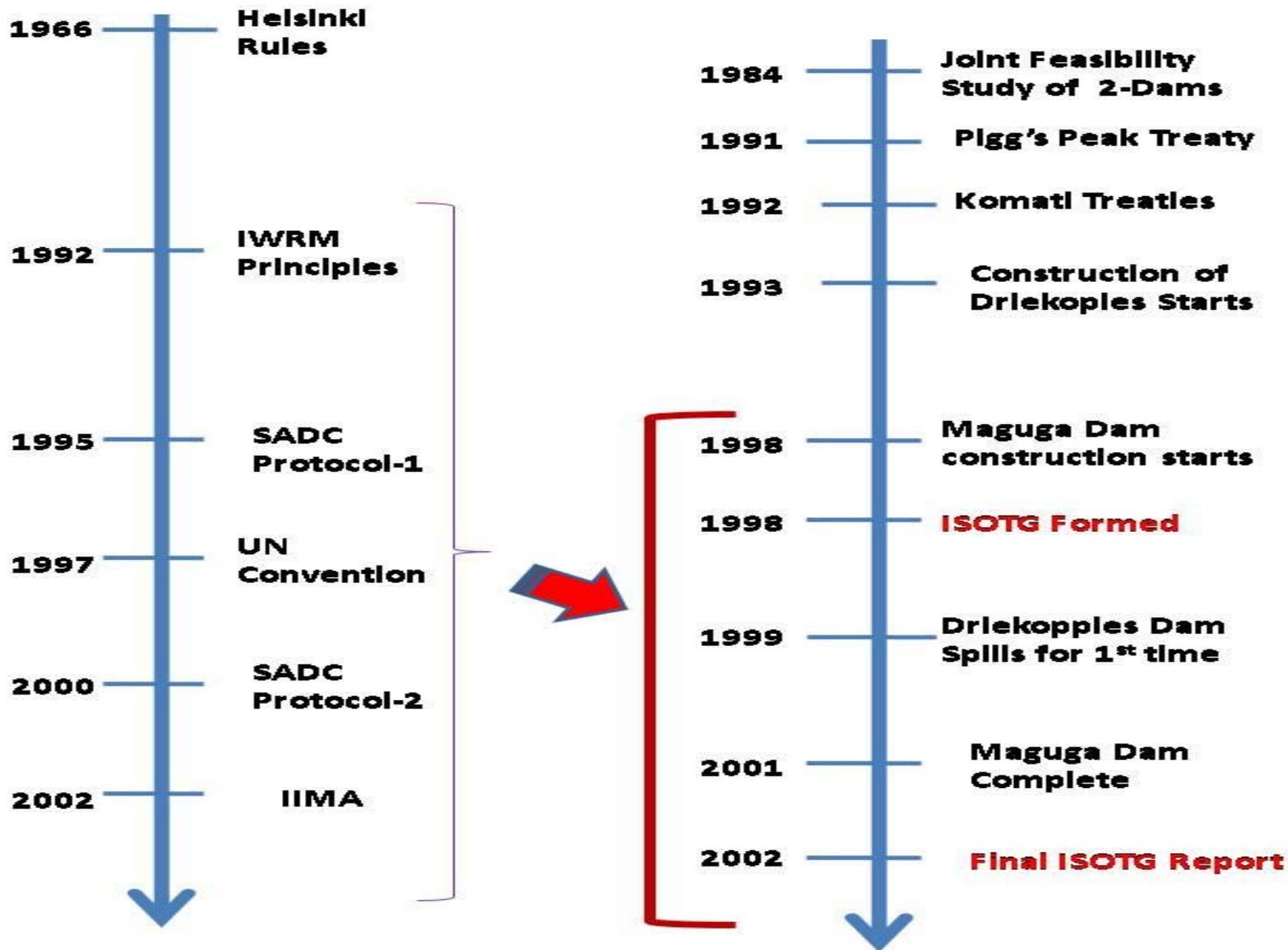


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4. Swaziland Water Act (2003)

- ▶ Section 19(1) recognizes under the “International Water Bodies”;
 - The bilateral Joint Water Commissions
 - Komati Basin Water Authority (KOBWA)
 - Trilateral Commissions Involving South Africa, Swaziland and Mozambique.”

Influence of International Law...



Overview of the Evolution of KOBWA

Period	Phase	Functions	Tasks
1948 - 1992	Pre - KOBWA	Member states' function – co-operation	Development of Treaties
1992 – 2001/2	Project Management	Contracts Management <ul style="list-style-type: none"> • Design • Construction 	Monitor Control
		Corporate Support	Service Loans Develop personnel management systems
		Resettlement Management	
		Preparation for Post –Construction Phase	ISOTG Rules Water Management Plan
2002 – Present	System Operation & Maintenance	Infrastructure Management <ul style="list-style-type: none"> • Operate • Maintain 	Plans, Procedures & Tools <ul style="list-style-type: none"> • Develop • Implement
		Water Resource Management	Plans, Procedures & Tools <ul style="list-style-type: none"> • Develop • Implement
		Resettlement Management	Plans, Procedures & Tools <ul style="list-style-type: none"> • Develop • Implement
		Corporate Support	Service Loans Develop personnel management systems
2015/16		Commence Review of Treaty	Initiate process to Review /Amend Treaty

PERIOD BEFORE START OF JOINT STUDY OF KOMATI RIVER BASIN

- 1962 – South Africa completes Nooitgedacht Dam
- 1966 – Swaziland completes Sand River Dam
- 1969 – Technical meetings start between Mozambique, South Africa & Swaziland
- 1972 – South Africa completes Vygeboom Dam
- 1978 – Swaziland and South Africa form the JPTC
- 1981 – JPTC cannot agree on minimum flow in Komati River on western border of Swaziland
- 1981 – At meeting of Ministers in Cape Town agreed to appoint consultant to perform joint reconnaissance study of water related issues in Basin

PERFORMING THE JOINT RECONNAISSANCE AND FEASIBILITY STUDIES

- 1981 – JPTC appoints a single consultant to perform Joint Reconnaissance Study
- 1983 – JPTC approves Reconnaissance Study &:
 - » *Study quantifies water requirements for 1981 land use and the water requirements that were agreed to by JPTC*
 - » *Study confirms that water shortages already existed in 1981*
 - » *Study finds that potential water requirements exceed the potential water supplies by far*
 - » *Adopts a phased approach to develop water resources to provide for increasing water requirements*

PERFORMING THE JOINT RECONNAISSANCE AND FEASIBILITY STUDIES

Continued....

- 1983 – JPTC approves Reconnaissance Study &:
 - » *Recommends a joint first phase consisting of Driekoppies and Maguga Dams*
 - » *Recommends proceeding with Feasibility Study for Driekoppies and Maguga Dams*
 - » *Recommends principles for water use allocations*
 - » *Develops preliminary criteria for possible cost apportionment*

CONCURRENT & SUBSEQUENT EVENTS TO DRAFT KOMATI RIVER BASIN TREATY

- 1983 – Mozambique, South Africa and Swaziland form TPTC
 - 1985 – TPTC meetings are suspended
 - 1986 – JPTC prepares Draft Memorandum of Agreement between South Africa and Swaziland for phased development and utilisation of water resources of Komati River Basin
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PERFORMING THE JOINT RECONNAISSANCE AND FEASIBILITY STUDIES

Continued...

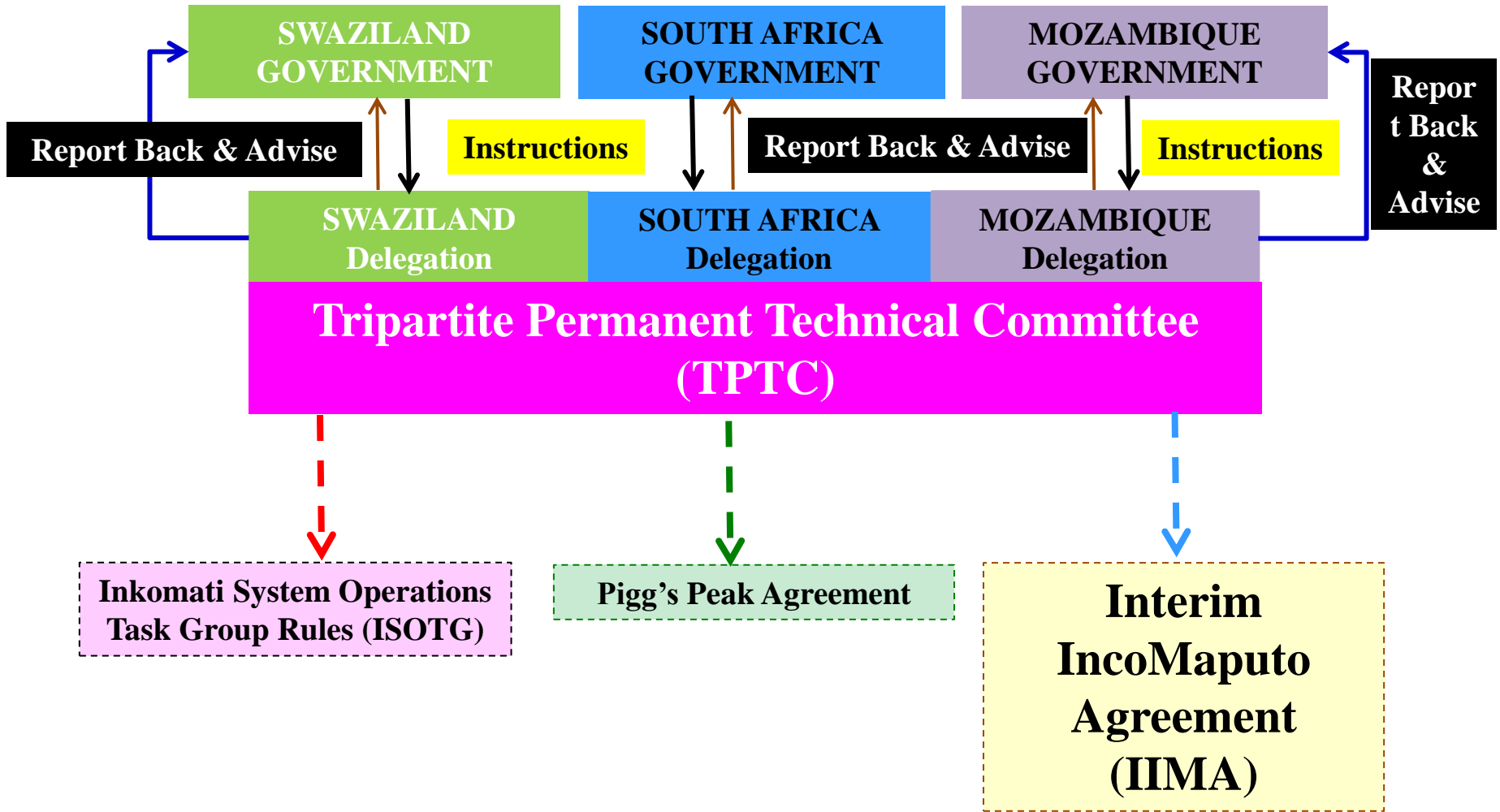
- ▶ 1984 – Feasibility Study commenced
- ▶ 1985 – Feasibility Study completed
- ▶ 1986 – JPTC approves Feasibility Study &:
 - *Recommends to proceed immediately with Driekoppies and Maguga Dams as a joint single first phase project*
 - *Recommends water use allocations*
 - *Agrees on principles for water allocation and cost apportionment*

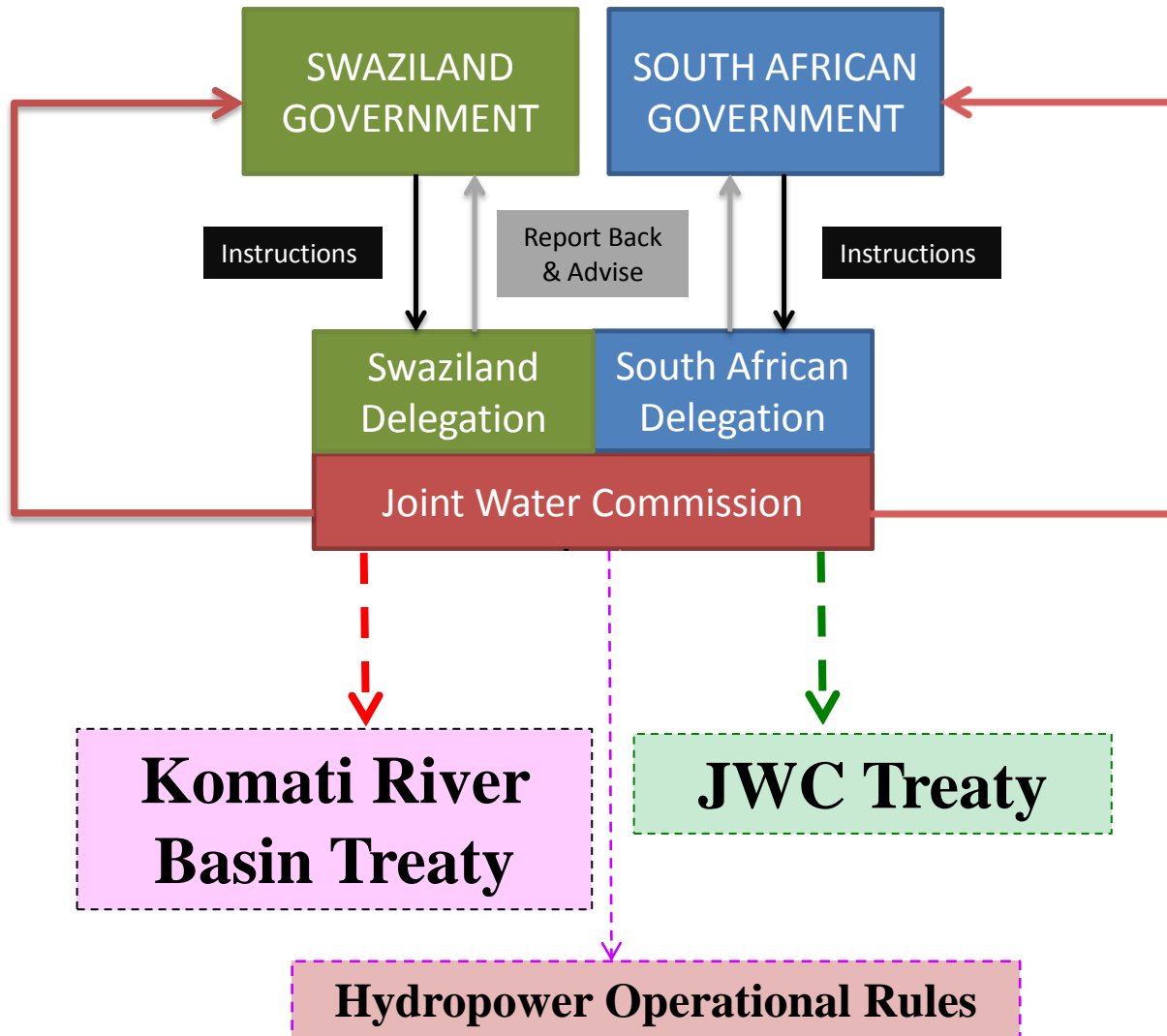
CONCURRENT & SUBSEQUENT EVENTS TO PREPARE JWC & KOMATI RIVER BASIN TREATIES continued...

- 1989– TPTC meetings resume
- 1989 – JPTC completes draft Bilateral Komati Basin and
JWC Treaties &:
 - » *Agrees to Project consisting of two Sub-phases:*
 - » *Sub-phase 1A – Driekoppies Dam*
 - » *Sub-phase 1B – Maguga Dam*
 - » *Ancillary Works*
- 1990 – Swaziland performs independent feasibility study of Maguga Dam and the intended use of water, and to review both draft Treaties

CONCURRENT & SUBSEQUENT EVENTS TO PREPARE JWC & KOMATI RIVER BASIN TREATIES continued...

- 1991 – Trilateral Piggs Peak Agreement signed
 - » *Mozambique agrees to construction of Project*
 - » *Parties agree to interim minimum cross-border flow at Komatipoort*
 - » *Parties agree to perform joint study of Incomati Basin*
 - » *South Africa agrees in interim to consult at TPTC if wanting to exceeding certain new water abstraction and storage limits*





Overview of Treaties

- a. Drought of 1981 Exposed Lack of Assurance of Irrig. Water**
- b. “Pigg’s Peak Agreement” (1991)**
 - Mozambique Agreed to RSA/GOS Bi-national Developments with Condition of Minimum Flow in Ressano Garcia
- c. Joint Water Commission (JWC) Treaty between South Africa and Swaziland (1992)**
 - Technical advisor to Parties on Matters Relating to Development and Utilization of Water Resources of Common Interest
- d. Treaty on the Development and Utilization of Water Resources of the Komati Basin (1992)**
 - Provides in principle for the joint development of the Water Resources of the Komati River by South Africa and Swaziland
 - Establishment of KOBWA to implement phase 1

2. MAIN OBJECTIVES OF THE PROJECT

- ▶ To optimize the utilization of the water resources from the system recognizing the rights of Mozambique
- ▶ To reduce the risk to prior existing farming by increasing the assurance of water supply
- ▶ To provide water for new developments with particular focus on the beneficiation of emerging PDI farmers, settlements and entrepreneurs

3. The Mandate and Legal Status



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a. 1. Legal status

- Established in terms of the Treaty.
- Legal status in both countries through Government gazettes.

b. 2. Mandate

Implement Phase 1 of the Komati River Basin Development Project Comprising the **Design, Construction, Operation and Maintenance** of Driekoppies Dam (1a) on the Lomati River in South Africa and Maguga Dam (1b) on the Komati River in Swaziland.

4. The Functions Of KOBWA



- ▶ **Design, Construction, Operation and Maintenance of Dams and Accessory Infrastructure – Core Function**

- b. **Project Finance**

- c. **Equitable Water Distribution between Parties (RSA & Swaziland)**

- d. **Implementing Relocation, Compensation and Beneficiation Programs in both Countries**
(Maguga Dam CMP 1998 and Lake Matsamo CMP 2003 / Driekoppies Dam RAP 2004)

- e. **Environmental Impact Monitoring and Mitigation in Project Area**

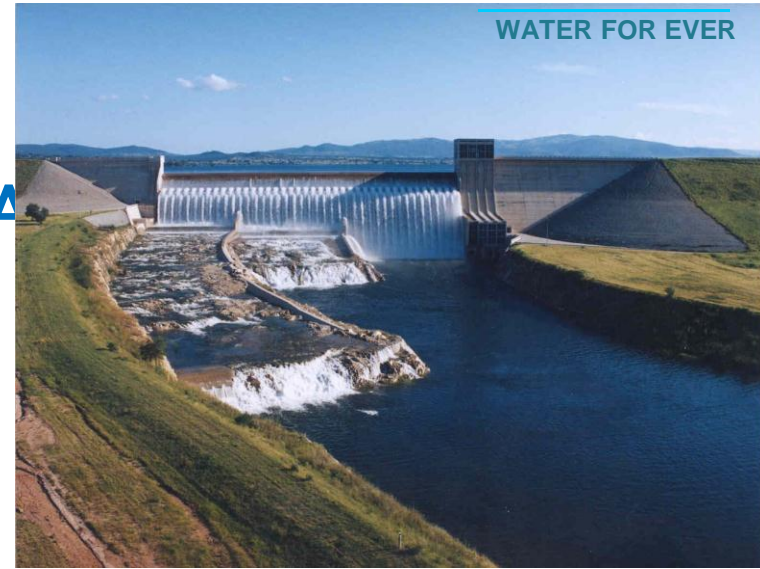
5. Managed Dam Infrastructure



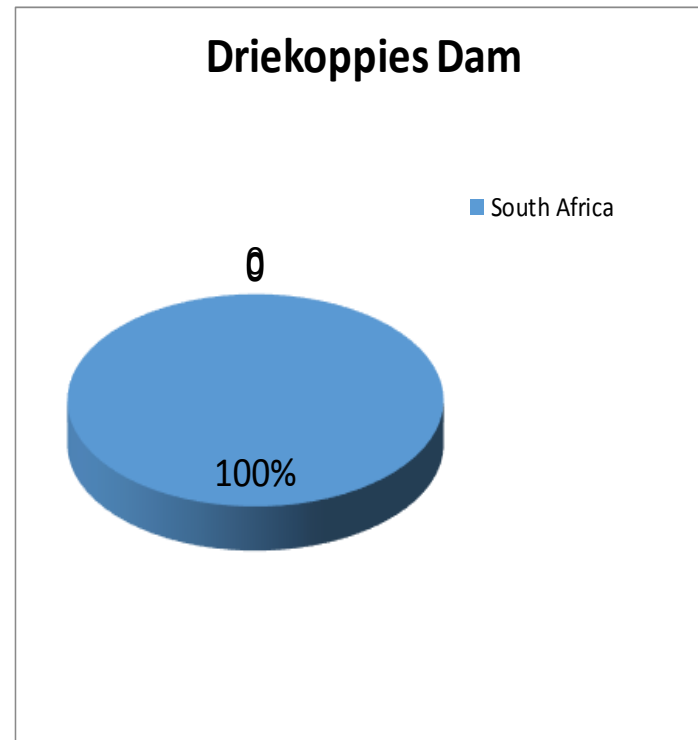
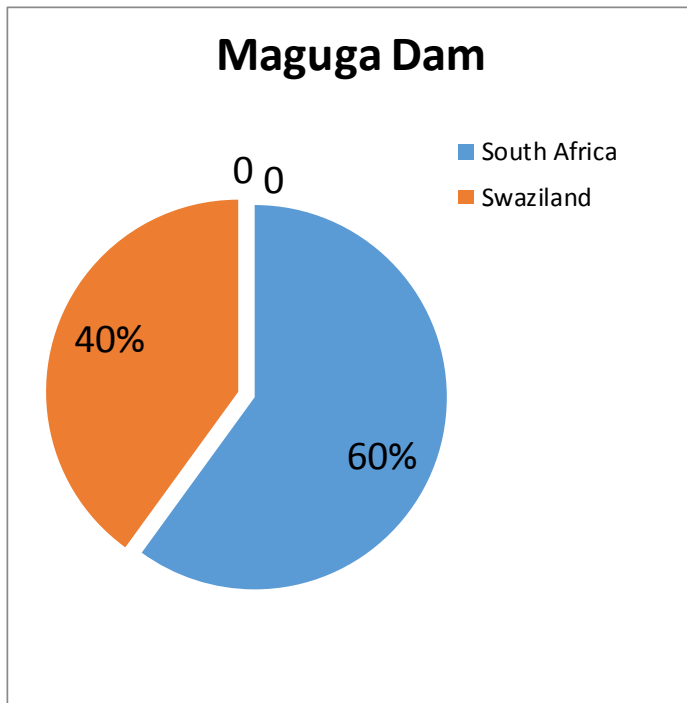
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- ▶ Phase 1a: Driekoppies Dam (RSA)
 - Capacity => 250 mcm

- ▶ Phase 1b: Maguga Dam(SD)
 - Capacity => 332 mcm



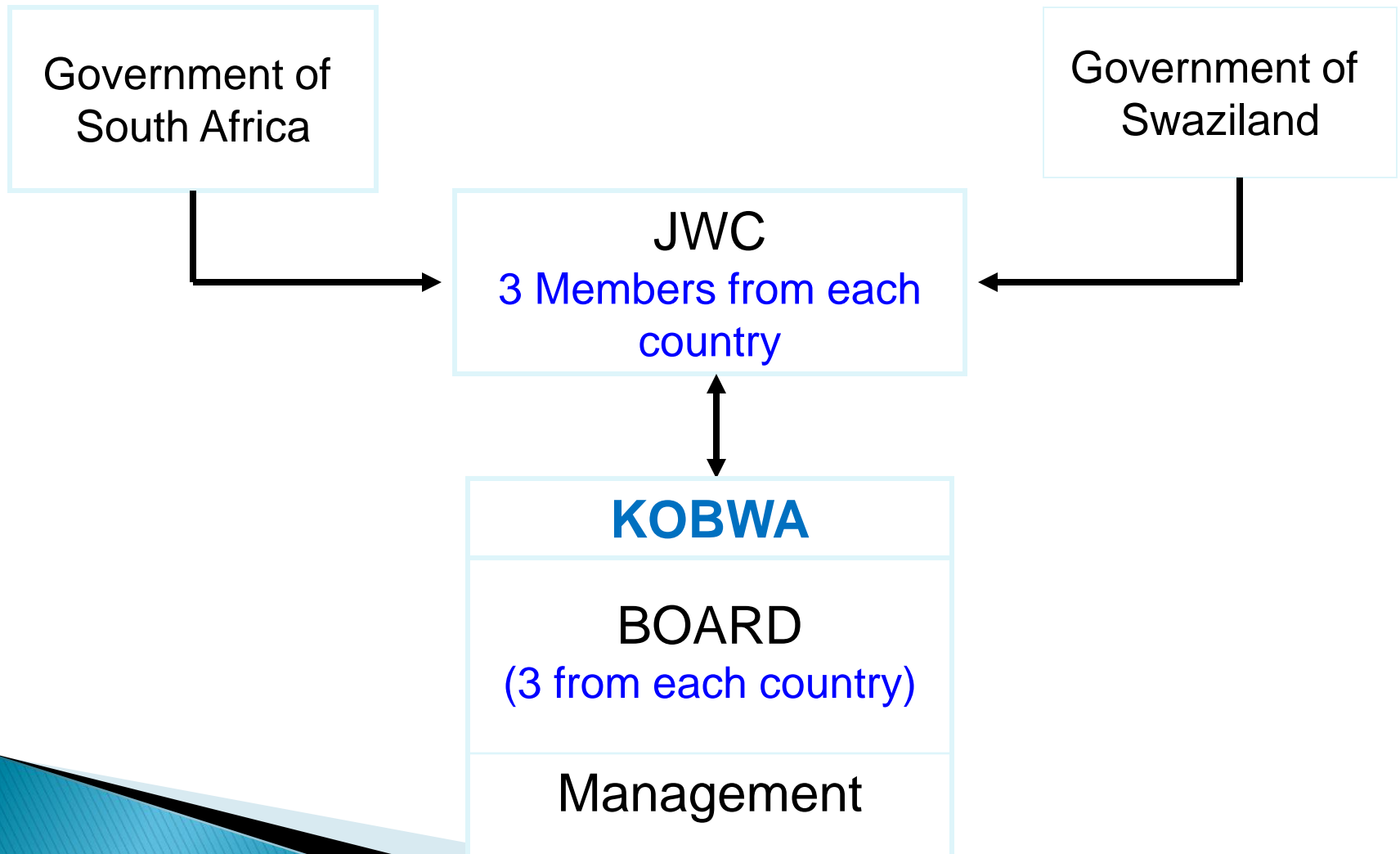
6. PROJECT COST AND BENEFIT SHARING



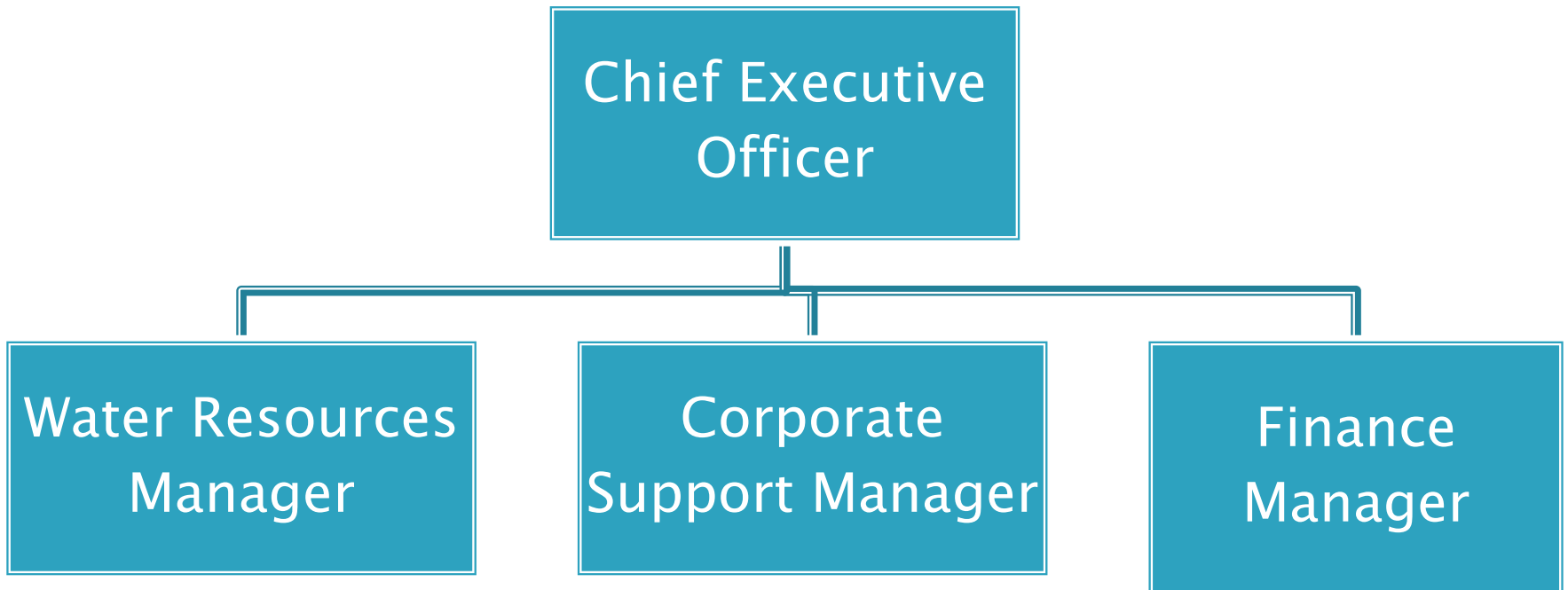
PROJECT LOAN FUNDING R/E

DBSA (Dec 2020)	488,401,000
Nedcor Bank (Sept 2019)	233,000,000
Gensec Bank (Dec 2016)	165,000,000
Hambros Merchant Bank (Bulk payment Oct 2027)	380,000,000
Rand Merchant Bank (Aug 2019)	380,000,000
TOTAL LOAN FUNDING	1,646,401,000

7. Governance and Reporting Framework



8. Executive Management Structure



WATER MANAGEMENT

KOMATI TREATY

PIGG's PEAK
AGREEMENT

ISOTG RULES

HYDROPOWER
OPERATIONAL RULES

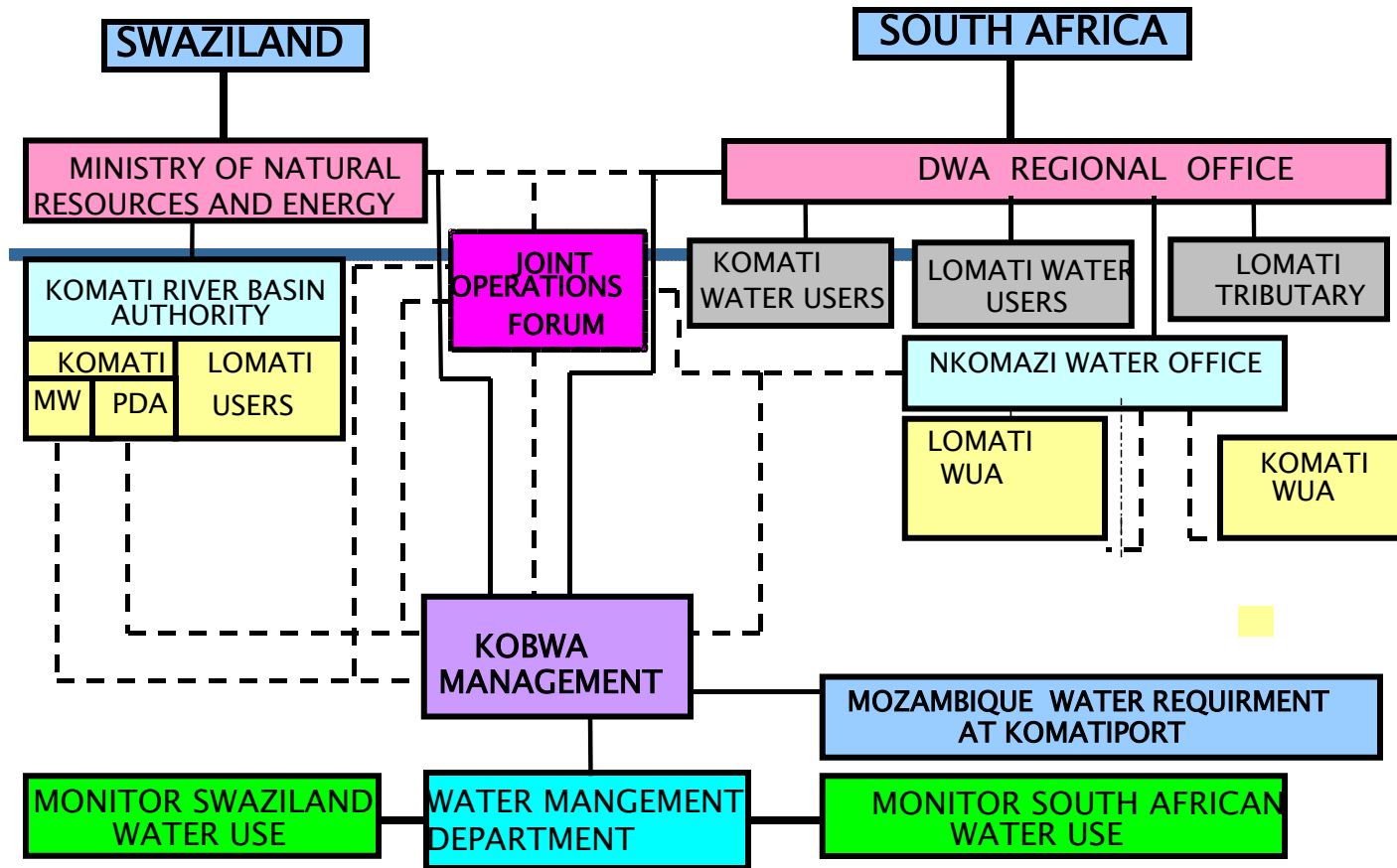
WATER MANAGEMENT PLAN

DECISION SUPPORT TOOLS

- Allocation models
- Curtailment (rationing) models
- Release (hydraulic/hydrodynamic) models
- Water use and storage reconciliation
- Data analysis software, etc.

WATER RESOURCES STUDIES REPORTS

- Water availability assessment reports
- Ecological water requirements studies
- Climate change and vulnerability assessments (floods and droughts)
- Emergency preparedness plans
- Dam safety inspection reports, etc.



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9. EXAMPLES OF HISTORICAL POVERTY ALLEVIATION PROJECTS



D. PROJECT SOCIO- ECONOMIC BENEFITS

A. INCREASED UTILIZABLE WATER SUPPLY BY 312- MILLION CUBIC METERS PER ANNUM AT HIGHER ASSURANCE



i. Increased Irrigated Land (hectare)

	SA	SD	TOTAL (Ha)
◦ Existing irrigation	20 000	13 500	33 500
◦ New irrigation	10 000	6 000	16 000

ii. Increased Productivity of Existing Irrigated Agriculture:

US 14,5 million (R/E 102 million) p.a.

iii. Value of production on new land

US 45,0 million (R/E 315 million) p.a.

b. New Domestic Water Supply Facilities in Mpumalanga and Pigg's Peak

Driekoppies Domestic Water Supply



Pigg's Peak Domestic Water (E20-m)



C. Job and Business Opportunities



- ▶ Employment and Procurement Policy of Regional Preferences

- ▶ Employment

Driekoppies 1993/1997 - Max 800

Maguga 1998/2003 - Max 1500

- ▶ Use of local and emerging contractors during construction
- ▶ Community involvement: Project vs. Community savings

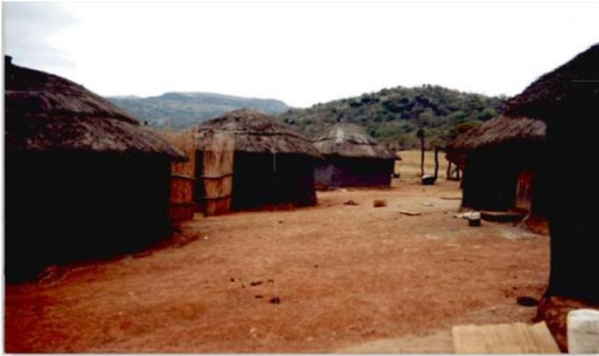
D. Community Development



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Before

After



Medicinal Plants Nursery

F. Eco-tourism development



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• **Maguga View Point handicraft stall**



• **Maguga viewpoint (E1.4-m**



Maguga Lodge



• **Masibambisane Game Park**

9. G. New Commercial Farms Owned by PDIs using Water Made Available by Project



10. Beacon of Success in Trans-boundary Water Sharing, Multipurpose Function & Perception of Water as an Instrument for Peace



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11. SUCCESS FACTORS

1. Gaining the confidence of the Parties in our ability to manage the infrastructure and water resources
2. Contributing towards the achievement of some of the objectives of the project
 - I. Alleviating water shortages
 - II. Compliance with trans-boundary flow obligations
3. **Technical Rather than Political Focus**



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12. SUCCESS FACTORS – contd

1. Support from the Parties (Countries)
2. Transparency and non-partisan
3. Recruitment and retention of competent and committed staff from both countries
4. Continuous development
 - Personnel training
 - State of the art systems and tools
5. Informed stakeholder participation
6. Self-help Approach to Compensation and Beneficiation – Skills transfer

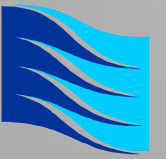


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13. Challenges

1. Land Claims in RSA
2. Some Illegal Activities e.g. net fishing, vandalism
3. Lack of Understanding of Bi-national Status of Entity by Some Individuals in Party States (e.g xenophobia)
4. Mozambique Involvement and Beneficiation



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*Ngdiyabonga
Thank You*