

INTERMEDIATE RESERVE DETERMINATION STUDY FOR SELECTED WATER RESOURCES IN THE CROCODILE WEST AND MARICO MANAGEMENT AREA

Progress



water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

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Acknowledgements

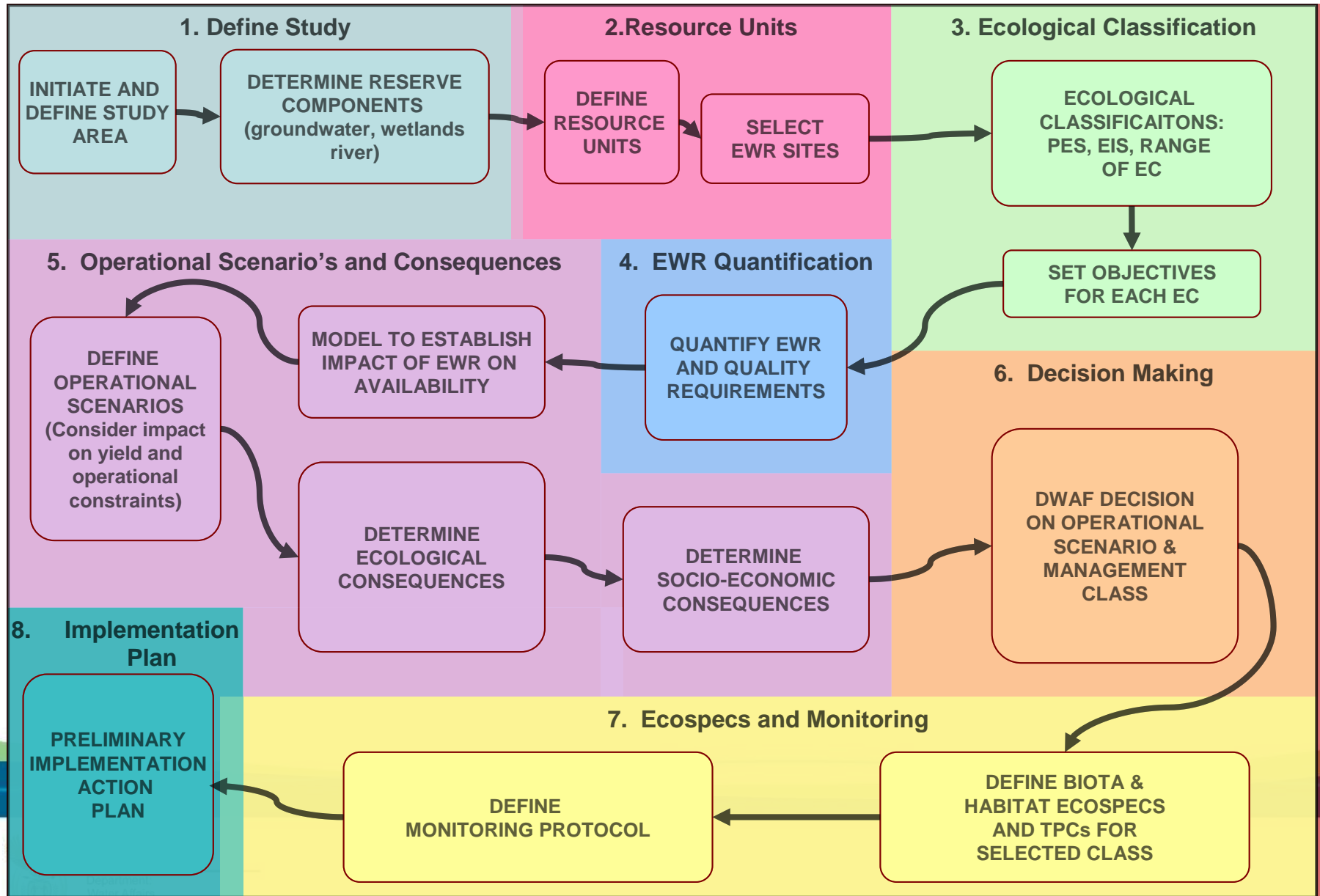
- Other directorates
- Regional Offices
- Other Provincial Departments
- Teams of experts that carried out the study
 - Golder
 - BKS
 - Sub consultants



Aims of study

- Determining Ecological Water Requirement (EWR) (quantity and quality) at intermediate level of detail
- Assess wetlands in terms of their type, distribution, health, function, importance, sensitivity and present state and determine the Reserve for the priority wetlands
- Groundwater scoping assessment
- Outline the socio-economic water use situation in the study area
- Determine the Basic Human Needs Reserve
- Capacity building

Study Procedure



EWR 1: Crocodile River



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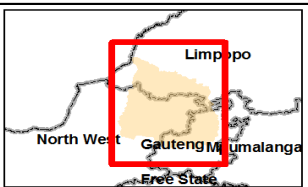
Capacity building



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ECOCLASSIFICATION

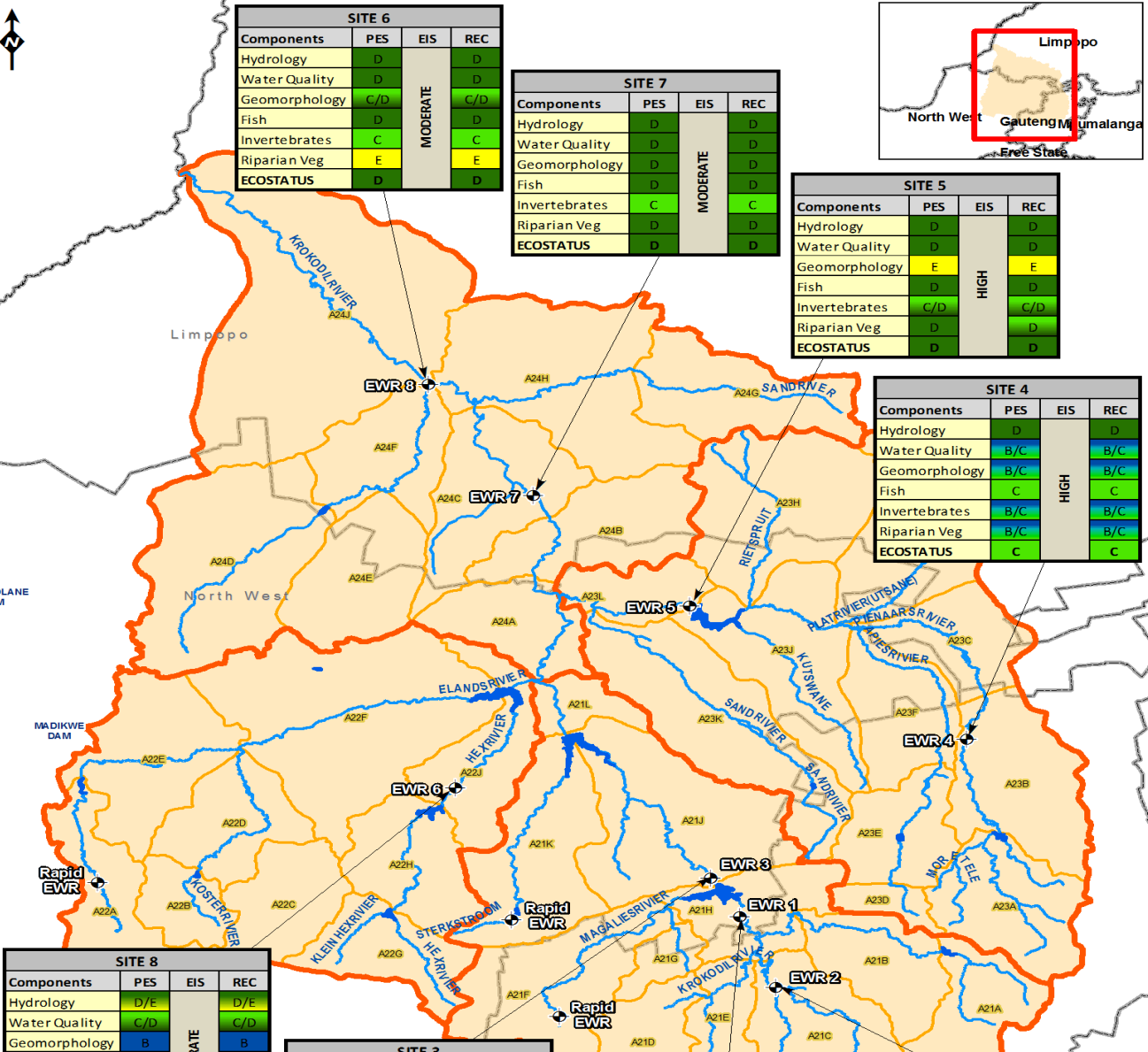


SITE 6			
Components	PES	EIS	REC
Hydrology	D	MODERATE	D
Water Quality	D		D
Geomorphology	C/D		C/D
Fish	D		C
Invertebrates	C		C
Riparian Veg	E		E
ECOSTATUS	D		D

SITE 7			
Components	PES	EIS	REC
Hydrology	D	MODERATE	D
Water Quality	D		D
Geomorphology	D		D
Fish	D		D
Invertebrates	C		C
Riparian Veg	D		D
ECOSTATUS	D		D

SITE 5			
Components	PES	EIS	REC
Hydrology	D	HIGH	D
Water Quality	D		D
Geomorphology	F		F
Fish	D		D
Invertebrates	C/D		C/D
Riparian Veg	D		D
ECOSTATUS	D		D

SITE 4			
Components	PES	EIS	REC
Hydrology	D	HIGH	D
Water Quality	B/C		B/C
Geomorphology	B/C		B/C
Fish	C		C
Invertebrates	B/C		B/C
Riparian Veg	B/C		B/C
ECOSTATUS	C		C



SITE 8			
Components	PES	EIS	REC
Hydrology	D/E	MODERATE	D/E
Water Quality	C/D		C/D
Geomorphology	B		B
Fish	D/E		D/E
Invertebrates	C		C
Riparian Veg	B		B
ECOSTATUS	C		C

SITE 3			
Components	PES	EIS	REC
Hydrology	D	HIGH	D
Water Quality	D/E		D/E
Geomorphology	E		E
Fish	E		E
Invertebrates	D		D
Riparian Veg	B/C		B/C
ECOSTATUS	C/D		C/D

SITE 1			
Components	PES	EIS	REC
Hydrology	D	MODERATE	D
Water Quality	D/E		D/E
Geomorphology	C		C
Fish	D		D
Invertebrates	D		D
Riparian Veg	D		D
ECOSTATUS	D		D

SITE 2			
Components	PES	EIS	REC
Hydrology	F	MODERATE	D
Water Quality	E		D
Geomorphology	D		D
Fish	E/F		D
Invertebrates	D/E		D
Riparian Veg	E		D
ECOSTATUS	E		D

Eco-classification - Summary

Site	PES	Importance	Ecological Category		
		EIS	REC	Alternatives	
				AEC up	AEC down
Crocodile (West) catchment					
1	D	Moderate	D	D	N/A
2	E	Moderate	D	D/E	N/A
3	C/D	High	C/D	C	D
4	C	High	C	C	C
5	D	High	D	C	N/A
6	D	Moderate	D	C/D	N/A
7	D	Moderate	D	D	N/A
8	C	Moderate	C	C	D

Recommendations (1)

- Water quality management of the discharges in the catchment is the only way of improving the ecological status (more stringent source control)
- The proposed transfer from the Vaal River needs stringent water quality requirements so as not to deteriorate the receiving water quality
- Detail water availability assessment in the Maloney's Eye dolomitic compartment

Recommendations (2)

- Validate and Verify water use in the Middle and Lower Crocodile River upstream of EWR 8
- Implement the ecological Reserve monitoring programme
- More detailed study required for identified wetlands to be affected by licence applications