



DEPARTMENT: WATER AND SANITATION
Directorate: National Water Resource Development Planning

CROCODILE EAST WATER PROJECT (CEWP) MODULE 1: TECHNICAL FEASIBILITY STUDY

Project Steering Committee (PSC) Meeting Meeting No. 1

MINUTES OF PROJECT STEERING COMMITTEE MEETING NO 1.
MEETING HELD AT THE DWS REGIONAL OFFICE (PROROM BUILDING) IN MBOMBELA, AT 09H00 ON 04 AUGUST 2023.

Item	Description	Action															
1.	OPENING																
1.1	Welcome																
	<p>Mr Silo Kheva (DWS: WRDP Mpumalanga) welcomed all attendees to the meeting. The objective of the meeting will be to report on progress with respect to the CEWP Study and to inform the attendees on the way forward. Regular enquiries are received regarding the progress of the CEWP Study and that it will be good to provide feedback to respective authorities/entities.</p> <p>A round of introductions followed.</p> <p>Mr Zakhele Mkobane (DWS: Health & Safety Officer) presented the following information in the case of an emergency/evacuation and other general information:</p> <ul style="list-style-type: none">• Identified the Assembly Point (open area in front of the building).• Route to the Assembly Point.• Use stairs and not the lifts.• Route to ablution facilities.• The building is a smokefree building.																
2	ATTENDANCE AND APPOLOGIES																
2.1	Attendance																
	<p><i>Refer to the Attendance Register included in Appendix A.</i></p> <table><tr><td>Kobus Bester</td><td>DWS: WRDP (Project Manager)</td><td>KB</td></tr><tr><td>Silo Kheva</td><td>DWS: WRDP (Chairperson)</td><td>SK</td></tr><tr><td>Zakhele Mkobane</td><td>DWS: Mpumalanga: H&S Officer</td><td>ZM</td></tr><tr><td>Lilene Louw</td><td>iX engineers (Study Leader)</td><td>LL</td></tr><tr><td>Evert Serfontein</td><td>iX engineers (Deputy Study Leader)</td><td>ES</td></tr></table>	Kobus Bester	DWS: WRDP (Project Manager)	KB	Silo Kheva	DWS: WRDP (Chairperson)	SK	Zakhele Mkobane	DWS: Mpumalanga: H&S Officer	ZM	Lilene Louw	iX engineers (Study Leader)	LL	Evert Serfontein	iX engineers (Deputy Study Leader)	ES	
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Item	Description			Action
	Tendai Sawunyama	IUCMA	TS	
	Tolmay Hopkins	iX engineers (Environmental)	TH	
	Frank Khumalo	CoGTA Mpumalanga (Water Services)	FK	
	Angel Mgwenya	CoGTA Mpumalanga (Water Services)	AM	
	André vd Merwe	Crocodile River Irrigation Board	AvdM	
	Happy Mushwana	City of Mbombela	HM	
	DL Turner	White River Valley Conservation Board	DLT	
		White Waters Major Irrigation Board		
	Coetzee Barnard	Silulumanzi	CB	
	Walter Visser	CRMIB	WV	
	Nancy O'Farrell	CRMIB	NO	
	Ndumiso Dlamini	DFFE	ND	
	Maré le Roux	KRVMB	MIR	
	Notes: KRVMB: Kaap River Valley Major Irrigation Board CRMIB: Crocodile River Major Irrigation Board DFFE: Department of Forestry, Fisheries and the Environment			
2.2	Apologies			
	Louis Klapprott	Sembocorp:Silulumanzi		
	Benard Chirende	DWS: NWRP		
	Willie du Toit			
3	ACCEPTANCE OF THE AGENDA			
	The agenda was accepted without modifications.			
4	PURPOSE OF THE MEETING			
	SK noted that the purpose of the meeting was as follows: <ul style="list-style-type: none"> ▪ Presentation of the DWS Planning to Implementation methodology. ▪ Introduction of the Study to Stakeholders. ▪ Provision of an overview of the CEWP Study. ▪ Reporting on the progress of the CEWP Study. ▪ Establishment of a Project Steering Committee (PSC). 			
5	DWS PLANNING TO IMPLEMENTATION METHODOLOGY			
	KB presented the DWS Planning to Implementation Methodology. Refer to the Presentation included in Appendix B. The following was presented: <ul style="list-style-type: none"> ▪ Planning to Implementation Phases for new infrastructure. 			

Item	Description	Action
	<ul style="list-style-type: none"> ▪ Areas identified for fast tracking the Planning Process. ▪ Components of the Technical Feasibility Investigation. ▪ Components of the Environmental Impact Assessment. ▪ Undertaking an environmental impact assessment as per the legislative process. ▪ Implementation support. <p>The following comments and or queries were made during the presentation:</p> <p>KB: The Study initially started with ±50 dam options during the Reconnaissance Phase and it has been reduced through the execution of other studies to 4 dam options for evaluation during this Pre-Feasibility Study.</p> <p>WV: In terms of the timeframes provided (refer to slides 7 to 9 in Appendix B) are there any other constraints that will have an impact on the durations?</p> <p>KB: The three slides addressing the Areas identified for fast tracking the Planning Process (refer to slides 7 to 9 in Appendix B) were prepared for the Minister. The duration/timeframe depends on the complexity of a project. The availability of funding from Treasury also has an impact on the duration of a project. Previously the environmental process had an impact on the timeframe, however availability of funding is now a constraint. If a project is financially viable (consumers can pay) it can be used as motivation to Treasury.</p> <p>WV: Some members (Crocodile River Major Irrigation Board (CRMIB)) will be prepared to enter into a public private partnership, however affordability may be a problem. The CRMIB is available for discussions to try and resolve/minimize the constraints.</p> <p>KB: The new dam(s) will be very expensive.</p> <p>AvdM: The pressure for a new dam is escalating. More than one dam will be required in a phased approach.</p> <p>KB: In terms of a reconciliation perspective the Crocodile (East) River Catchment is in the worst condition.</p> <p>KB: All assessments/evaluation for the Pre-Feasibility Study have been completed and the respective Reports are currently being finalized.</p>	
6	OVERVIEW OF THE STUDY	
	<p>KB presented an Overview of the Study.</p> <p><i>Refer to the Presentation included in Appendix B.</i></p> <p>The following was presented:</p> <ul style="list-style-type: none"> ▪ Motivation for the Study: <ul style="list-style-type: none"> Water shortages in the Crocodile (East) River Catchment. Based on previous work four dams were recommended for further study: <ul style="list-style-type: none"> - Mountain View Dam on the Kaap River - Montrose Dam on the Crocodile East River 	

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	<ul style="list-style-type: none"> - Boschjeskop Dam on the Nels River - Strathmore Dam (Off-Channel), near the confluence of the Kaap and Crocodile Rivers ▪ Study Area: <ul style="list-style-type: none"> - Crocodile East River Catchment ▪ Scope of Study: <ul style="list-style-type: none"> - Objective of Feasibility Study: undertake and finalise the planning of a raw water supply scheme comprising a dam(s) and related conveyance infrastructure in the Crocodile (East) River Catchment. - Feasibility Study divided in two separate interactive and concurrently running modules, i.e. Module 1: Technical Feasibility Study and Module 2: Environmental Impact Assessment. ▪ Study Approach: <ul style="list-style-type: none"> - Phase 1: Pre-Feasibility Study followed by Phase 2: Feasibility Study. - Phase 1: Pre-Feasibility Study: investigate four dam options and recommend one dam option for investigation in Phase 2. - Phase 2: Feasibility Study: Investigate recommended dam (one option) and development thereof to a feasibility level of detail. ▪ Methodology, Tasks and Deliverables. ▪ Public Relations/Study Management. ▪ Study Programme. <ul style="list-style-type: none"> - Study duration of 36 months. <p>The following comments and or queries were made during the presentation:</p> <p>KB: It is not possible to determine at desktop level if a dam is fatally flawed, therefore pre-feasibility and feasibility studies are required.</p> <p>KB: No budget was available to conduct geotechnical investigations during the Pre-Feasibility Study and will be conducted during the Phase 2: Feasibility Study. A tender process will be followed to appoint a PSP for the geotechnical investigations, since the amount will exceed 15% of the Contract Value and this is a requirement of National Treasury.</p> <p>MIR: Geotechnical investigations were conducted during the previous studies.</p> <p>KB: Approximately 4 boreholes were drilled, however at least 20 will be required for the Phase 2: Feasibility Study.</p> <p>KB: If one dam, for example Mountain View is not feasible, 2 smaller dams may be considered.</p> <p>WV: Any dam in the catchment will affect all the users.</p>	
8	PROGRESS OF THE STUDY	
	<p>KB: All assessments/evaluations for the Pre-Feasibility Study have been completed and the respective Reports are currently being finalized.</p>	

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	<p>KB: The tasks of the Phase 1: Pre-Feasibility Study will be conducted in more detail during the Phase 2: Feasibility Study. It is possible that the Environmental task will trigger listed activities.</p> <p>KB: About a month and a half behind programme (due to Covid and delayed site visit). Study duration of 36 months.</p>	
9	PRE-FEASIBILITY STUDY: ENVIRONMENTAL SCREENING	
	<p>TH presented an overview of the environmental screening that was done with respect to the four dams being investigated in the Pre-Feasibility Study.</p> <p><i>Refer to the Presentation included in Appendix C.</i></p> <p>It was a desktop study and use was made of available information. Main objective of the study was to identify potential fatal flaws and to prepare a high level ranking of the dams with respect to the environmental impact. The ranking informed the decision matrix set up to select one dam for further study in the Phase 2: Feasibility Study.</p> <p>Potential fatal flaws were identified for :</p> <ul style="list-style-type: none"> ▪ Montrose Dam <ul style="list-style-type: none"> - Negative impact on downstream river ecology. - Flooding of Montrose Falls. ▪ Boschjeskop Dam <ul style="list-style-type: none"> - Negative impact on downstream river ecology. <p>Comparative rating for the four dams as follows:</p> <ul style="list-style-type: none"> ▪ Strathmore Dam 43 ▪ Boschjeskop Dam 33 ▪ Mountain View Dam 32 ▪ Montrose Dam 18 <p>Note: The higher the score the smaller (or less) the environmental impact.</p> <p>The following comments and or queries were made during the presentation:</p> <p>KB: The weir and pump station on the Crocodile River that will be required for the Strathmore Dam were not included in the environmental assessment of the Strathmore Dam. Little environmental impact is expected. The costs of the weir and pump line were included in the costing analyses.</p> <p>KB: A number of parameters (yield, costs, engineering aspects, environmental impact, etc.) were used in the decision matrix for the selection of the dam for further study. The results (scoring) currently indicate that the best dam (highest scoring) is the Mountain View Dam. The Mountain View Dam is a large dam.</p> <p>SK: What is the estimated cost of the Mountain View Dam?</p> <p>KB: Cost of the Mountain View Dam is ± 3 – 4 billion Rand.</p> <p>KB: Due to the large deficits a large dam will be required, since it will have the greatest impact in terms of yield. Possibly build a smaller Montrose Dam later that will</p>	

Item	Description	Action
	<p>trigger less environmental issues.</p> <p>WV: The CRMIB appointed consultants to investigate a dam for the catchment.</p> <p>KB: A feasibility study of the second highest scoring dam option should start as soon as possible.</p> <p>SK: What is the Environmental Authorities' view about the proposed dams?</p> <p>TH: Liaised with NTPA and no definite statements were made and it appears if their preferred option is Boschjeskop Dam. The current engagement was scientific and a wider engagement process during the Phase 2: Feasibility Study still needs to take place.</p> <p>SK: What is the possibility of the generation of hydro power?</p> <p>KB: The purpose of the dams is storage and not hydro power. However the possibility of hydro power will be investigated during the Phase 2: Feasibility Study.</p> <p>ND: Did the pre-feasibility address tourism?</p> <p>TH: No, it will form part of the socio-economic assessment, which will be executed the Phase 2: Feasibility Study.</p> <p>AM: What is meant by a large dam, i.e. volume?</p> <p>KB: A dam with a height of ± 90 metres and 110 million m³/a.</p>	
10	Establishment of the PSC for the CEWP	
	<p>The purpose of the Project Steering Committee (PSC) is for members to give feedback to the relevant Authorities. Provision has been made for three PSC meetings.</p> <p>SK: The attendees of this meeting included representatives from the following:</p> <ul style="list-style-type: none"> ▪ Irrigation Boards ▪ IUCMA ▪ CoGTA ▪ DFFE ▪ City of Mbombela ▪ Silulumanzi <p>KB: The group is representative and the CEWP: Project Steering Committee consists of all attendees of this meeting. Members can be added in future if necessary.</p> <p>Representation from the following Authorities is required:</p> <ul style="list-style-type: none"> ▪ Premier's Office ▪ District Municipalities ▪ Local Municipalities ▪ Provincial Treasury 	

Item	Description	Action
	Public participation for the selected dam option will be conducted during the environmental process in the Phase 2: Feasibility Study.	
11	Way Forward / Key Decisions	
	SK: A programme is required.	
	LL: An updated programme will be provided upon completion of the Pre-Feasibility Study.	LL
	WV: Agri Protocol needs to be followed for site access.	All
	LL: A Stakeholder Engagement Meeting will be scheduled to present the results of the Phase 1: Pre-Feasibility Study.	LL
12	GENERAL / OTHER	
	None	
13	NEXT MEETING	
	Stakeholder Engagement Meeting No. 1 in Mbombela: Date to be confirmed.	LL
	PSC Meeting No. 2 in Mbombela: Date to be confirmed.	LL
14	CLOSURE	
	SK expressed his appreciation for the attendance of the meeting and closed PSC Meeting No. 1.	
	Minuted By: Evert Serfontein/Lilene Louw	

APPENDICES

APPENDIX A: ATTENDANCE REGISTER

APPENDIX B: CEWP PRESENTATION

APPENDIX C: ENVIRONMENTAL PRESENTATION
