

Directorate: National Water Resource Planning

VAAL RIVER SYSTEM

Strategy Steering Committee (SSC) for the Continuation of the Integrated Vaal River System Reconciliation Strategy Study – Phase 2 (Contract WP11182)

MINUTES OF MEETING 1

Date: Tuesday, 27 February 2018

Time: 09:00 . 14:00

Venue: Motsweding Conference Room, 16th Floor, Gauteng Regional Office, Department of Water and Sanitation, Bothongo Plaza East, 285 Francis Baard Street, Pretoria

		ACTION
1.	WELCOME AND INTRODUCTION OF MEMBERS	
	The Chairman, Mr Livhuwani Mabuda (Department of Water and Sanitation, Chief Director Integrated Water Resource Planning) welcomed everyone at the 1 st Strategy Steering Committee (SSC) meeting for the Continuation of the Integrated Vaal River System Reconciliation Strategy Study . Phase 2.	
	He invited members to participate in all the agenda items which highlight the risks and ongoing interventions in managing the Vaal River System for optimal functioning. He added that the DWS has to make decisions and the SSC needs to make good recommendations to the Department.	
	The members were given an opportunity to introduce themselves.	
2.	ATTENDANCE AND APOLOGIES	Attendance Register: Appendix A
	The attendance register is included as Appendix A . The following apologies were received at the meeting: Nandha Govender, Eskom Ian Midgley, Eskom Philip van der Walt, Consultant Thebe Olebogeng, DWS Johan Burger, DWS Jackey Jay, DWS Wandile Nomguphu, WRC Maureen Lane, landowner Frederick Boshoff, Sedibeng Water Frans Matfield, Sappi Louis Erasmus, Rand Water Gideon Dippenaar, Sedibeng Water Kobus Streuders and colleagues from the Northern Cape, DWS Jones Mnisi, Johannesburg Water Leon Tromp, LHWC Bashan Govender, DWS 	

3.	ACCEPTANCE OF AGENDA	
	The agenda was accepted with the request from Mr Mike Muller (SAICE / University of Witwatersrand) to discuss water quality as a separate item under 8.1 of the agenda.	
4.	PURPOSE OF THE MEETING	
	The Chairperson, Mr Mabuda commented that SSC members have to reacquaint themselves with the challenges of the Vaal River System. This study is the second phase for the continuation of the integrated Vaal River System Reconciliation Strategy and will be conducted over a three-year period. He stated the purpose of the meeting as follows:	
	 To introduce the study to all stakeholders; To establish and define the role of the SSC; To receive an overview of study activities and the water balance status; To obtain feedback on strategy interventions; and To confirm SSC membership. 	
	Discussion	
4a	Ms Mariette Liefferink (Federation for a Sustainable Environment - FSE), stated that she represents a number of civil society organisations and asked if the information discussed at the SSC meetings may be disclosed to those she represents and at other forums in which she participates such as the Rietspruit Catchment Management Forum. The Chairperson and Mr Seef Rademeyer (DWS) responded that the information shared at the meeting is public information and could be shared. The information presented will also be published on the DWS website.	
4b	Mr Jurgo van Wyk (DWS) said that he recently attended the Blesbokspruit Catchment Management Forum meeting and that the stakeholders present at the meeting expressed their distrust in the DWS to manage water security in the country. He said that he reported at the meeting on the work done by DWS and the SSC with regards to the Vaal River System. He believes the activities of the SSC should be communicated more effectively to a wider audience.	
4c	Mr Seef Rademeyer (DWS) commented that previously all the DWS Catchment Management forums in the study area were visited and feedback was presented on progress made with the Reconciliation Strategy Study, however due to capacity constraints it no longer happens. He suggested that the Chairpersons of all the Catchment Management Forums in the study area be invited to the next SSC meeting.	PSP team to invite Chairpersons of the Catchment Management Forums in the study area.
4d	Mr Kobie Maré (Rand Water) reminded SSC members that after each SSC meeting a Status Quo Report and a media release will be compiled and distributed to all members for the purpose of communicating information discussed at the SSC meeting with members of the organisation that they represent.	
5.	ROLE OF THE STRATEGY STEERING COMMITTEE (SSC)	Presentation: Appendix B

	The Chairperson presented the role of the SSC as per the Terms of Reference (ToR) which was distributed to all members before the meeting. He requested SSC members to review the ToR and to provide their comments before the next meeting.	SSC members to review the ToR and provide their comments.
6.	BACKGROUND AND INTRODUCTION OF THE STUDY	Presentation: Appendix B
	Mr Rademeyer provided the background and an introduction of the study and highlighted the following points:	
	 What is a reconciliation strategy? The history of the management of the Vaal water resource since the early 1970¢ to date; Outcomes of previous assignments, including Water Conservation and Water Demand Management (WC/WDM) and Project 15%, eradication of unlawful water use in the irrigation sector, desalination of mine water, re-use on water in Tshwane and the Lesotho Highlands Water Project Phase 2; Why the continuation of the reconciliation strategy for the integrated Vaal River System is required; and The Professional Services Provider (PSP) appointed for the continuation of the strategy. 	
	Discussion	
6a	Ms Liefferink asked what the legal standing of the Vaal River System Reconciliation Strategy is? She mentioned that recommendations such as the desalination of AMD and the commencement of the Lesotho Highlands Water Project Phase 2 were delayed and asked whether the Strategy is just a guideline document?	
	She also enquired whether the Strategy will influence decisions with regards to the granting of water use licences?	
	Mr Muller added that the SSC and the process whereby the Strategy is updated provides for a consultative process and not a process that binds.	
	Mr Patrick Mlilo (DWS) added that the Minister gives effect to the Strategy and that provides some degree of legal standing, however the study should be seen as a planning process.	
	Ms Liefferink asked what is the legal standing of the published Strategy?	
	Mr Martin Ginster (Sasol) added that the value of the process is getting the work done as recommended by the Strategy and to do it properly. In his opinion the consultative approach is the better approach.	
	Mr Kobie Maré (Rand Water) said that the Strategy will remain a strategy document which each member will follow-up in engagements with their principals to give effect to the Strategy recommendations. The SSC and the process provides comfort that planning is taking place towards ensuring water security.	
	Mr Van Wyk added that the Strategy has to influence other planning processes within the DWS and elsewhere, such as at municipal level and that water use licences provides a way of implementing the Strategy.	
7.	OVERVIEW OF STUDY ACTIVITIES	Presentation: Appendix B
	Mr Colin Talanda (PSP) provided an overview of the proposed study activities and highlighted the study area, the organisational structure in which the study will be	

	conducted and the tasks to be performed as part of the study. He provided a summary of the purpose, activities and deliverables of each of the nine tasks as well as an overall study programme which will be followed.	
	Discussion	
7a	Ms Judith Taylor (Earthlife Africa) said waste water and how such water can be used for irrigation and other uses should be investigated. She also added that the DWS has to work with the Department of Agriculture, Forestry and Fisheries (DAFF) to ensure improved irrigation and farming practices.	
7b	Mr Rendani Ndou (DWS) commented that Tasks 3 and 4 will consider water conservation and water demand management for other sectors, but why not for agriculture and irrigation? Mr Talanda responded that there is a specific intervention as part of the implementation of the Strategy on the eradication of unlawful irrigation. Mr Rademeyer commented that in South Africa, approximately 60% of water is allocated to irrigation, however in the Vaal River system it was approximately 35% and the allocation is diminishing as a result of the eradication of unlawful irrigation and increased water use in the other sectors. The DWS has a specific directorate that is responsible for the promotion of WC/WDM and together with the DAFF, also investigates the WC/WDM practices in the irrigation sector. He added that irrigation receives water at a lower assurance of supply than other water users.	
7c	Ms Taylor mentioned the challenges with broken infrastructure, especially waste water treatment works and pipe leakages as major challenges, which require interventions as part of the implementation of the Strategy.	
7d	Mr Rivash Panday (Sasol) asked that the SSC review the implementation of the interventions and tasks which were part of the previous study. A critical review should be done on why certain targets were not met and lessons should be learnt from that for this new study.	
7e	Ms Thembi Matjokama (Emfuleni Municipality) asked how the DWS interacts with municipalities. She commented that there are many opportunities for the DWS and municipalities to work together for the improvement of the Vaal River system and she asked whether an approach to do that is part of this study? She concluded that this study should make a difference, and it should have an impact on the Vaal River System.	
7f	Mr Fanus Fourie (DWS) said that the study area is huge and asked whether this study will integrate with the results of the All Towns Reconciliation Strategy? Mr Talanda responded that information from the All Towns study is integrated into the models used for the Vaal Strategy.	
7g	Mr Maré asked whether there will be a fresh look at the potential impact of climate change in terms of this study? Mr Rademeyer said the best way to investigate the potential of climate change is to update the models. He commented that the study area spans different climatic zones, thus different impacts may occur.	Study Team
	Mr Muller asked when last the models and hydrology were updated? The PSP responded that models were updated in 2001 and Mr Muller asked if the models can be updated as part of this study. Mr Pieter van Rooyen (PSP) explained that the PSP team ensures that they stay abreast of the latest research in terms of climate change and how it may impact the models developed. In summary he	

	 explained that climate change remains an uncertainty and is dealt with as a risk factor in the models. He said that hydrology is updated in the event of severe drought as was experience in the 1980s, otherwise the models are updated about every 15 years. The hydrology was extended in 2004 as part of an ORASECOM study. He commented that, should dam yields be lower (as was mentioned by Mr Maré), it is recommended that the occurrence be investigated, since it may not be the inflow which is the reason for lower yield. Mr Muller said that it is expected of the SSC to convey how climate change is incorporated into this study. What do we say . why do we not update the hydrology? We need to look at the changing parameters as it is not convincing to say that the models were last updated more than ten years ago. This is not politically and publicly correct. Mr Muller requested that the updating of the models become an agenda item for the SSC to receive feedback on the matter. He commented that if the models are to be updated every 15 years, the next round for updating the information is in 2019 and that is during this study term. The SSC has to discuss on how best to approach the matter. 	
7h	Ms Liefferink commented that the presenter mentioned the possible change in the thresholds of the dilution rule, making it more lenient and she asked whether the impact will be given through to the users? Mr Talanda responded that the study would do a sensitivity analysis, that the impact of change will be considered and that it is not a certainty that the thresholds will be changed.	
7i	Mr Anthony Els (Rand Water) commented that it is the responsibility of the SSC to investigate the situation of water security between droughts and floods. Mr Van Rooyen explained that the models used for the study have always included a complete hydrological cycle. He said that the understanding of climate change also changes and that methods are employed to calculate for variants, such as the impact and risk of climate change, which may occur.	
7j	Ms Matjokama asked for more information about groundwater use in the Vaal River System. She mentioned that the DWS planned on using old boreholes in Sharpville and Everton, but she has not received feedback on the plans and would like to be informed. Mr Seef Rademeyer commented that Rand Water is already using around 30 million m ³ /annum from Zuurbekom dolomites, but being dolomitic water, the management thereof is very critical because of the possibility of sink hole formation. This is a challenge for most of the Witwaters Rand area.	
8.	WATER QUALITY	
	A formal presentation was not made, because this item was included for discussion at the request of the SSC members.	
8.1	Mr Muller commented that many interventions of the Strategy, since its compilation, are driven by water quality considerations. The question however is, where is the water quality monitoring done? Do we have information to know the sources of pollution and what exactly is impacted by those sources? He asked, can the SSC say for certain that the interventions currently undertaken (e.g. AMD that represents only 15% of the polluted water in the system) are still the best to undertake in terms of the water quality challenges experienced? Can the SSC identify the drivers of the pollution problems and is the cost to rectify such challenges known? Users pay a lot for their water and if every drop of water has to be treated before it can be used, water will cost even more. Why are we just	

	reluctant to pay more, and less focussed on doing pro-active planning to ensure that users will not pay more?	
8.2	Ms Liefferink said that water quality monitoring in the Vaal River System has not been done for many years (August 2013 to April 2016), except for some ad hoc monitoring. She pleaded for regular monitoring (not only monthly or weekly and not on the same day or time) in the Vaal River System, including the monitoring of the broad spectrum of metals found in mine water and explained that E.coli is very high in the System and that it seems there is a dis-connect between the DWS and the Department of Housing, who merely just develop more houses without taking the capacity of the sewerage infrastructure into account. She mentioned that a report was compiled by the SA Water Caucus on the state of the DWS and she requested that it be circulated to the SSC members since it contains a summary of the concerns of civil society organisations. She concluded that in her opinion the contents of the report have relevance to the Reconciliation Strategy and the possible interventions.	Study Team to circulate SA Water Caucus Report to all SSC members
8.3	Mr Van Wyk informed the meeting that the National Water and Sanitation Master Plan is in the process of being finalised and that it will be submitted to Cabinet by mid-March 2018. He explained that the chapter in the Master Plan that deals with the improvement of raw water quality sets three high level targets, namely that- (1) by 2030, water in, or from water resources shall be fit for use; (2) by 2030, all waste or water containing waste shall be disposed of, or discharged both lawfully and safely; and (3) by 2030, integrated water quality management (IWQM) shall be implemented at all levels. He informed the meeting that IWQM should be cognisant of the catchment context and that the development and implementation of the necessary strategies and plans are key to good planning and the execution of appropriate interventions. He said that the Master Plan calls for <i>"staying ahead of the curve"</i> and that it supports a pro-active approach to the management of water quality.	
	Mr Van Wyk further explained that the 2009 process followed to develop the water quality management strategy for the Vaal River System recognised that water quality and water quantity goes together, and that the water quality management strategy for the Vaal River System had been developed in parallel with the development of the Reconciliation Strategies at the time. Four specific areas were highlighted: salinisation, nutrient loading of the middle Vaal, microbial pollution (mostly from sewerage treatment works) and institutional strengthening in the strategy, to receive attention. Pertinently mentioned in the strategy was the management of return-flows, also dealing with acid mine drainage (AMD) and the re-use of waste water from effluent plants. The strategy also mentioned potential future impacts such as mining in the Upper Vaal. Before the Grootdraai Dam develops the same problem as the Witbank Dam, due to the impact of mining, the necessary plans should be developed and implemented to address matters. It was also recommended that a plan must be developed and implemented to address the eutrophication problems in the middle Vaal. The linking of strategies to address water quality management between the Orange and Vaal River Systems in an integrated manner was also a recommendation.	
	There is a number of gaps that require attention, e.g. the anticipated effects of climate change on water quality, the extent of the presence of endocrine disrupting chemicals (EDCs) in the water resources, the benefit of ecological infrastructure, such as wetlands, for the maintenance of water quality, the potential impact of renewable energy, information on relative waste loads that report to receiving water resources, such as dams, etc.	

	The Chairperson said that water quality is a priority that has to be followed up and suggested that it becomes a standard item for feedback on the agenda.	
	Ms Liefferink commented that water quality is as important as water quality and she concluded to say that water users cannot drink plans and strategies and that implementation is urgently required. She also mentioned that the FSE is against the amalgamation of the Catchment Management Agencies and the discontinuation of the Water Tribunal.	
	Mr Maré asked if SSC members could receive the sub-parts of the Water and Sanitation Master Plan. the information that was used to arrive at the national information. The Chairperson responded that the first two volumes of the plan are completed, however the DWS is working on volume three of the plan which will include implementation actions and that it will be shared with SSC members.	
	The Chairperson suggested that the team responsible to compile the Master Plan should be invited to the next SSC meeting to present information on the plan and their proposed way forward.	
9.	WATER BALANCE STATUS	
	Mr Talanda provided an overview of the water balance status and highlighted the following:	
	 Rand Water supply area scenarios as developed in 2015; The net system water requirements as in 2015; The 2015 overall water balance for the Vaal River System; The 2015 reconciliation perspectives and strategic interventions; A current (February 2018) preliminary revised water balance and how it compares to the 2015 water balance; and Key observations and activities planned to refine the water balance. 	
	Discussion	
9a	Mr Dan Govender (Eskom) commented that extensive dilution is required for the AMD intervention and he asked if that is a requirement even after the implementation of the softening plants. Mr Talanda responded the softening plants do not remove the salinity and hence dilution is still required until a desalination plant is in place.	
9b	Mr Govender observed that the targets set for 2015 as per the presentation were not met. He asked what measures will be taken to meet the new targets? He urged SSC members to ask why the previous targets were not met. He asked what measures the SSC members will take this time to ensure that targets are met?	
9c	Mr Anthony Els (Rand Water) suggested that improved legislation is required as some organisations / water users comply with their allocations and some dond, and it seems there are no consequences. He added that Rand Water has to comply, however, it seems that the municipalities do not have to. Ms Moloko Raletjena (DWS) said that municipalities do not meet their targets unless they are forced through restrictions, so the question is indeed how best to enforce compliance?	
	Mr Els added the latest information shows that the average volume of water per capita per day in South Africa is higher than the world average . thus there is room for improvement.	

	Mr Willem Wegelin (PSP) presented the latest information received from municipalities with regards to the WC/WDM intervention. He concluded his presentation with the following points:	
10.1	WATER CONSERVATION / WATER DEMAND MANAGEMENT (WC/WDM)	Presentation: Appendix B
10.	STRATEGY INTERVENTIONS	
9i	Ms Nomvuzo Mjack (DAFF) noted that the Water Research Commission and the DAFF is working together on an irrigation intervention for the sector.	
9h	A SSC member commented that evaporation of the Vaal Dam is very high and suggested that measures for evaporation suppression be investigated. Mr Van Rooyen responded that due to the size of the dam, it is very difficult to use evaporation suppression technologies. He added that the best solution is to further refine the operating rules of the Vaal Dam to ensure that water is not wasted.	
9g	Ms Liefferink asked why has the long term treatment of AMD been delayed to 2022 since in terms of the Feasibility Study for the Long Term Treatment of AMD, and the 2014 Reconciliation Strategy for the Integrated Vaal River System, it was recommended that the long term treatment of AMD (desalination) be implemented by 2014/2015 to address the high salinity in the Vaal and the growing water deficit.	
9f	Mr Van Rooyen explained that the %dis-benefit+to calculate restrictions can be done, also the calculation in loss in GDP can be done. He added that due to the water scarcity situation in Cape Town, many research projects are implemented, and the information should be used to reflect on the different scenarios in the Vaal River System. Mr Van Rooyen added that in his experience WC/WDM can only be successfully implemented if it is legislative or if it has economic value.	
9e	Mr Beason Mwaka (DWS) commented that the DWS should accept their limited capacity to manage WC/WDM and the same applies to Rand Water that has limited capacity to enforce municipalities to comply. He suggested the solution is to target the users as it should not be seen to only be a DWS challenge . users should take responsibility for their water use. He added that the DAFF should be part of the solution to ensure WC/WDM measures are successfully implemented for the irrigation sector. The Chairperson asked what would be the best approach to ensure DAFF contributes to the SSC meeting? He requested the PSPs to make sure items are included on the agenda for DAFF to report on at the next SSC meeting.	Study Team
9d	Mr Govender asked when the proposed Tshwane water augmentation project for the re-use of water will commence? Mr Rademeyer commented that if WC/WDM measures are pushed by Tshwane, less water will be available for return flows in the Crocodile Catchment but that at the same time, the use from the Vaal River System will be less.	
	Mr Muller said that SSC members are commenting as if legislation for water use is not available. He reminded members of the available water allocation legislation and said that water can also be reallocated in the Vaal River System as the National Water Act allows for it to be done.	

	 Updated water balance information is required to assess the status quo; 	
	 It is expected that the demand will return to previous levels once the water restrictions are lifted; 	
	 It is unlikely that municipalities in the Vaal River System have been able to reduce their consumption by 112 million m³/a or 9% to achieve the 2017 target; and 	
	 Most municipalities are tracking the High demand . the proposed WC/WDM scenario is not realizing. 	
10.2	RAND WATER PROJECT 1600	Presentation: Appendix B
	Ms Shuntelle Gow (Sasol) presented the key initiative . Project 1600 . of Rand Water to the meeting. In her presentation she provided the background and need for the project, the approach Rand Water has taken to manage their customersq demands, their assessment of water use efficiency, the interventions which were designed and the results achieved.	
10.3	CITY OF TSHWANE WATER RESOURCES MASTER PLAN IMPLEMENTATION	
	Mr Frans Mouton (City of Tshwane) has not made a formal presentation; however he provided a short history of the background and need for the re-use of waste water, however he concluded to say that due to several reasons, (e.g. new political dispensation, expiry of contracts) the proposed project is not on track and it will not be delivering the return flow as expected before 2022. Several SSC members commented that impacts on the presented water balance as it was expected for this project to be operational by 2019.	
10.4	ERADICATION OF UNLAWFUL IRRIGATION	
	A presentation was not delivered. The item will stand over.	
10.5	IMPLEMENTATION OF INFRASTRUCTURAL AUGMENTATION OPTION (LHWP PHASE 2)	Presentation: Appendix B
	Mr Leon Tromp apologised for his absence at the SSC meeting, however Mr Rademeyer presented on his behalf.	
	An overview was provided in terms of the procurement strategy for the project and the presentation was concluded with the proposed project milestones estimations. Water delivery from the LHWP Phase 2 is expected from the end of 2025.	
10.5a	Ms Liefferink commented that the delays with the LHWP Phase 2 is due to irregularities and said all has to be done to keep the project on schedule.	
10.5b	Mr Muller commented that the main consultancy contracts were awarded by the Lesotho government to reputable teams with relevant experience.	
10.5c	Mr Maré asked what is the estimated project cost for the LHWP Phase 2? The Chairperson responded that it does not have the latest figures, however it was estimated to be in the order of R22. R23 billion.	
10.5d	Mr Maré asked whether the flow from the Phase 2 project will be continuous as Phase 1? The Chairperson responded that the operating regime of Phase 2 will be different to Phase 1 and added that the RSA and Lesotho governments are	

	finalising negotiations in terms of the operational requirements of the Phase 2 project.	
10.6	IMPLEMENTATION OF THE AMD LONG-TERM SOLUTION	Presentation: Appendix B
	Mr Van Wyk provided an overview of the implementation of the AMD Long-term solution project.	
10.6a	Ms Liefferink asked a) whether the Environmental Impact Assessment (EIA) for the long-term solution will include brine disposal b) what the cost would be of the water to be sold c) whether innovative projects are considered to assess the best solution for treatment (reverse osmosis or ion exchange) and d) whether the rehabilitation of the receptor dams, rivers and spruits are included in the EIA as the raw AMD and the precipitated metals (%ellow boy-) had a negative impact on the systems.	
	Mr Jurgo van Wyk (DWS) responded that the EIA will apply to the entire long-term solution, that the brine disposal options will be investigated as part of the EIA, that DWS is likely to select the reverse osmosis technology as the preferred option with the lowest risk to Government (however, it is possible that other technology maybe investigated in future), that the rehabilitation of the rivers / spruits will be investigated and that only indicative cost figures of the treated water has been determined, as contained in the Feasibility Study for a long-term solution to address the AMD associated with the East, Central and West Rand underground mining basins.	
	Ms Liefferink further added that the deposition of iron in spruits / river remains a problem as the metals stay in the river systems. She also added that civil society supports the polluter pays principle. Mr Van Wyk concluded that the DWS is undertaking a full investigation as to who should be paying at what price and that it is required to come to a fair payment option as in many cases the polluters are no longer traceable.	
10.7	NOORDOEWER / VIOOLSDRIFT DAM FEASIBILITY STUDY	
	Mr Rademeyer presented an overview of the status of the Noordoewer / Vioolsdrift Dam feasibility study. He summarised his presentation by concluding the following:	
	• Study to be finalised regarding the best option with regards to the size of the Noordoewer / Vioolsdrift Dam size for implementation;	
	Engagement currently underway between South Africa and Namibia on the optimum development option; and	
	An EIA to be conducted as per chosen best development option.	
10.7a	Mr Maré asked whether the dam is a yield replacement dam for Polihali Dam. Mr Rademeyer responded that it is indeed so.	
11.	COMMUNICATION AND CONFIRMATION OF SSC MEMBERSHIP	
	The Chairman requested SSC members to review the Term of Reference which was distributed to them before the meeting and asked them to return their comments before the next SSC meeting.	
	The minutes of the meeting will be compiled and distributed to all members of the SSC. A Status Quo Report, as well as a news release will be compiled and	

	circulated to SSC members for their further communication to their constituents and within the organisation which they represent at the SSC.	
12.	DATE OF NEXT MEETING	
	The next meeting will be on 23 October 2018 from 10:00. 15:00.	
13.	WAY FORWARD AND CLOSURE	
	The Chairman thanked all members of the SSC who attended the meeting and confirmed that an invitation to the next meeting will be send to all in due course.	
	(Presentations area available on http://www.dwa.gov.za/Projects/VaalWRMS/documents.aspx)	

Attendance Record

List of Attendance: SSC Meeting #1, 27 February 2018