

CHIEF DIRECTORATE: INTEGRATED WATER RESOURCE PLANNING DIRECTORATE: NATIONAL WATER RESOURCE PLANNING

DEVELOPMENT OF A RECONCILIATION STRATEGY FOR THE OLIFANTS RIVER WATER SUPPLY SYSTEM

MINUTES OF THE 4th STUDY STEERING COMMITTEE MEETING HELD AT NKANGALA DISTRICT MUNICIPALITY ON 16 NOVEMBER 2011 FROM 09:00 – 13:00

In Attendance:

NATIONAL DWA

Nditwani, Tendani (TN) - Chair

Jezewski, Witek (WJ)

Van den Berg, Ockie (OvdB)

Van Rooyen, Johan (JvR)

Nyamande, Tovho (TNy)

Moabelo, Koena (KM)

Naidoo, Shane (SN)

Herbst, Paul (PH)

Mosoa, Lebo (LM)

REGIONAL DWA

Van Aswegen, Johann (JvA)Mpumalanga RegionKroon, Jaap (JK)Gauteng RegionBadenhorst, Bernie (BB)Limpopo Region

NATIONAL DEPARTMENTS

Gyedu-Ababio, Thomas (Dr) (TGA) SANPARKS

PROVINCIAL DEPARTMENTS

Raschke, A (AR)

Dept. Human Settlements, Engineering Services
Bhengu, Michael T (TMB)

Provincial House of Traditional Leadership

Ngdasheng, Tlhagala (TN)

Dept. Environmental & Tourism, Limpopo

Schettens, Marco (MS)

Dept. Agriculture, Mpumalanga

LOCAL GOVERNMENT

Mahlangu, Vusi (VM) Nkangala District Municipality

Makola, Charles (CM) Nkangala District Municipality (Partial Attendance)

Rankwe, Donald (DR) Ephraim Mogale Local Municipality
De Jongh, Koos (KdJ) Sekhukune District Municipality

Burger, Alwyn (AB) City of Tshwane
Chewe, Victor (VC) City of Tshwane
Van der Walt, Philip (PVdW) City of Tshwane

Bouwer, Rudolph (RB) Steve Tshwete Local Municipality

WATER BOARDS

Le Roux, Roelf (RL) Magalies Water
Nokeri, Norman (NN) Lepelle Water
Netshiblaulu, Ahuiwi (AN) Lepelle Water

ASSOCIATIONS

Parrott, Brenton (BP)

Van der Merwe, Alwyn (AvdM)

ESKOM

Van Stryp, Johan (JVS)

Collett, Bill (BC)

Burger, Jaco (Jaco B)

Loskop Irrigation Board

Collifants River Irrigation Board

Schmahl, Kobie (KS) Farmer

CONSULTANT TEAM

Beumer, Johnny (JB) Aurecon
Tanner, Andrew (AT) Aurecon
Versfeld, Dirk (DV) Facilitator
Van Zyl, Janette (JvZ) Aurecon

Mallory, Stephen (SM)

Van Veelen, Martin (Dr) (MvV)

IWR Water Resources

Iliso Consulting

Apologies

NATIONAL DWA

Mabuda, Solly (SM) Van Jaarsveld, Sanet (SvJ)

REGIONAL DWA

Macevele, Stanford (SM)

LOCAL GOVERNMENT

Warambwa, Edson (EW) Steve Tshwete Local Municipality

ASSOCIATIONS

WATER BOARDS

Rossouw, Ossie (HR) Lebalelo WUA

AURECON

Timm, Dale (DT) Aurecon Levin, Mannie (Dr) (ML) Aurecon

ACRONYMS

AMD Acid Mine Drainage

CMA Catchment Management Agency

CSIR Council for Scientific and Industrial Research

DWA Department of Water Affairs

EC Ecological Category

EWR	Environmental Water Requirements
IDP	Integrated Development Plan
IWRMP	Integrated Water Resource Management Plan
OWAAS	Olifants Water Availability Assessment Study
PES	Present Ecological State
REC	Recommended Ecological State
RSA	Republic of South Africa
SADC	Southern African Development Community
SSC	Study Steering Committee
WC/WDM	Water Conservation and Water Demand Management

Agenda	Subject	Action
point		
1	OPENING AND WELCOME	
	Mr Tendani Nditwani of DWA chaired the meeting. He opened the meeting and welcomed all present. Mr Charles Makola, Municipal Manager of the Nkangala District Municipality addressed the meeting with a special word of welcome to all present. He reiterated the importance of preserving South Africa's water resources and added that everyone should raise awareness amongst their communities.	
	INTRODUCTION OF ATTENDEES The attendees were given the opportunity to introduce themselves.	
	STUDY OBJECTIVES	
	 The study objectives were explained to the audience. They are: To address growing water demands; To address serious water quality problems; To identify resource development options; To provide reconciliation interventions; Structural; Administrative / regulatory. 	
	MEETING OBJECTIVES	
	 The objectives of this meeting were tabled and accepted by everyone. They are: To facilitate communication and strengthen the partnership between DWA and key stakeholders; To present the draft Final Reconciliation Strategy; To receive comments and suggestions as to how the Final Reconciliation Strategy can be improved; To determine a way forward for the implementation of the Reconciliation Strategy. 	
	ADOPTION OF AGENDA	
	The proposed agenda was accepted without changes. The agenda is attached (Appendix 1).	
2	MINUTES OF THE MEETING HELD ON 25 MAY 2011 Approval The minutes were approved with the following corrections to be noted:	

Agenda point	Subject	Action
pome	 Page 1: Messrs P De Witt and KCM Mannya are from the Provincial Department of Agriculture (Limpopo). Page 3: The Agenda was not attached as Appendix 1 as per the minutes. 	
	 Matters Arising Cognisance was taken of the Growth and Development strategy as presented by the Premier of Limpopo and as per Point 7.5 arising out of the previous minutes. J Van Aswegen informed the meeting that the establishment of more CMAs forms part of the departmental institutional realignment process that proposals are currently on the table and that approval will hopefully be given during this financial year for more CMAs to be established. Mr A Van der Merwe of ESKOM pointed out that the statement made under Point 7.5, Page 9, that ESKOM should halve its water use by 2020, was a statement made at the previous meeting, but is not something that ESKOM either promised to do, or actually can do. The minutes reflect what was said but ESKOM was not present to debate the statement. Note was taken of ESKOM's viewpoint. All other matters arising from the previous minutes will be dealt with during the course of the meeting. 	
3	STATUS OF STUDY AND RECAP SINCE PREVIOUS MEETING The previous meeting was held on 25 May 2011 at the Forever Resort, Loskop Dam. The matters out of the minutes of the previous meeting, and progress of the study will be dealt with under the technical presentations.	
4	PRESENTATIONS ON THE DRAFT FINAL RECONCILIATION STRATEGY The Chairman requested Mr Dirk Versfeld to facilitate the proceedings of the meeting from this point onwards. DV expressed the hope that attendees would contribute positively towards the strategy and would put forward valuable inputs to ensure a viable strategy as an outcome. He added that although the draft strategy reached an advanced stage, there is still room for improvement and comments would be welcomed. He requested that attendees should think widely, and should refrain from only representing their respective institutions/organisations.	
	4.1 The Reserve Presented by Dr Martin van Veelen (MvV)	
	MvV pointed out that since a comprehensive Reserve study was undertaken early in 2000's for the Olifants Catchment, two things have happened, i.e. the methodology improved, and certain changes took place in the river. The objective of this study was thus not to redo the Reserve determinations but rather to check whether the ecological status of the chosen sites has changed over the intervening period.	
	Apart from the upper catchment, ecological categories (ECs) remained the same and in certain instances even improved slightly. A slight change observed in the lower part of the KNP will not necessarily mean that that part will require more water.	
	MvV explained why the flood component of the Reserve will not be operationalised but expressed his assurance that the removal of special releases from dams for floods will not affect the achievement of the recommended ecological category.	
	AR asked whether the removal of the flood component from the Reserve quantum will not exacerbate the problem of crocodiles dying? MvV replied that the water allocation for the Reserve will not be reduced. The release of small floods from the dams is not implementable with the current infrastructure but the low flows for the survival of the crocodiles (and other	

Agenda **Action** Subject point fauna and flora) will be maintained. The exact cause of the crocodile deaths could not be established thus far. The question was raised on how the Reserve will be maintained in the whole catchment. MvV replied that that the operationalisation of the Reserve will certainly be a challenge to the DWA. They will have to ensure that no water is extracted from the Reserve under low flow conditions. Compliance monitoring and enforcement will also have to be strictly implemented and maintained. JvR pointed out that it would not be the responsibility of DWA alone, and that all water users/stakeholders and institutions will have to work together. 4.2 Water Quality Presented by Dr Martin van Veelen (MvV) MvV continued with the next presentation on Water Quality and he pointed out the following: The death of crocodiles a while back was not due to the water quality of the Reserve but due to a yet unknown illness which the crocodiles contracted. Water quality concerns can mainly be associated with point sources and water users not complying to water use licences. In terms of normal water quality indicators, e.g. salinity, the water quality is acceptable for use by most water users. The treatment of acid mine drainage water in the upper catchment is essential. Immediate attention should also be given to the upward trends, especially EC, CL- and SO4 A water quality management strategy should be developed and implemented as soon as possible. OvdB inquired about the impact of irrigation practices on water quality. MvV replied that this study did not investigate individual contaminators. Dr TGA added that a water quality strategy will also have to be implemented urgently, otherwise this study's findings will not serve its purpose. LM informed the meeting that Mr Pieter Viljoen of DWA has just established a task team to look at the water quality of the Olifants River. It is envisaged that short- and long term action plans will be implemented. The Olifants River Forum (ORF) has been involved with a study on water quality for the past two years. DWA should work with the Forum, as opposed to starting a totally new task team. LM replied that all the existing initiatives will be considered and that the DWA Task Team will try to get the broader picture. She added that DWA will work in collaboration with the ORF as well as municipalities and other water institutions. DV concluded the discussion in pointing out that the key message is that compliance in the catchment must be achieved by all rather than the DWA having to monitor the situation alone, although it will be the DWA's responsibility to monitor users that were issued with water licences to ensure that they comply. 4.3 Current water use and projected water requirements Presented by Stephen Mallory (SM) The study is divided into three management zones, i.e. the Upper, Middle and Lower Olifants catchment areas.

Agenda point	Subject	Action
	SM presented the current water use in each of the water management zones as well as the projected future water requirements. He pointed out that no increase in mining requirements was projected by the mining sector from approx. 2027 and onwards. It appears that either no further development is planned, or that the mining industry cannot project that far ahead.	
	OvdB asked whether the return flows from Polokwane and Mokopane were taken into account for possible reuse by the water users that receive water out of the transfer pipelines to the two towns. The reuse of sewage effluent can eventually lead to a smaller water requirement and reduce the size of the transfer pipelines.	
	SM confirmed that the return flows have not been taken into account and that the strategy should in fact adopt reduced water requirements as a result of the return flows from Polokwane and Mokopane. The strategy will be updated accordingly.	
	AR commented that she foresees a problem with the assumption of no growth in the irrigation sector. She mentioned that there are expectations among politicians for small agricultural farming which need more water. She asked whether these water requirements have been registered.	
	JvR replied that one of the key points in the National Water Resource Strategy is that water will be made the centre of planning for any development. Many politicians seem to think that water is easy to supply, but increased irrigation will be very costly. It should be pointed out to stakeholders that with this strategy study it was found that there is not enough water for the planned developments. Any new mining development leads to a concentration of people, larger expectations for service delivery, and an increase in water requirements.	
	4.4 Surface and groundwater resource availability Presented by Stephen Mallory (SM)	
	SM explained how the yield from the surface and groundwater resources is made up. Large dams contribute approximately 624 million m³/a (including De Hoop Dam), diffuse water sources (e.g. farm dams) contribute approximately 199 million m³/a to the available yield from surface water, and water transfers approximately 249 million m³/a.	
	It is expected that approx. 22 million m³/a of decanting mine water will become available for use in 2035. This additional water decant can be considered as utilisable yield. The water is however very acidic and has to be treated before use or discharge into rivers.	
	4.5 Current and future water balance without further interventions ("do nothing scenario") Presented by Stephen Mallory (SM)	
	SM continued by comparing water requirements with water availability.	
	There is currently a small surplus in the catchment, however, with the ecological Reserve that has to be operationalized soon there will be a water deficit.	
	On a question from Jaco B, SM replied that irrigation requirements were based on information received from the Irrigation Boards, as well as information from the OWAAS study which was done in 2006. All the irrigation schemes that operated in the past are still being taken into account.	

Agenda point	Subject	Action
	SM confirmed that when looking at Groundwater, attention was also given to water quality, and not only the yield. These findings have been presented at previous meetings. It was found that in certain areas the groundwater has a high fluoride content, but it is possible to blend this groundwater with surface water to achieve an acceptable quality.	
	TGA raised the possibility of transferring water from the Letaba WMA. JvR replied that this is not a viable option and that he does not foresee that the Olifants Catchment will ever receive water from Levubu/Letaba catchment as that catchment has its own problems i.t.o. achieving a water balance.	
	4.6 Possible reconciliation interventions Presented by Andrew Tanner (AT)	
	AT explained that the reconciliation options can be divided into two groups, i.e.: Options that will reduce water requirements, and Options that will increase the water supply.	
	He then explained the process of selecting options and how this SSC meeting served as part of this process.	
	4.7 Consideration for selecting the most appropriate reconciliation options Presented by Andrew Tanner (AT)	
	AT listed the selection criteria which were used for deciding on the recommended reconciliation options. He then indicated which reconciliation options are recommended for the final strategy. A discussion ensued and the following points were raised:	
	• Irrigation increased from 1998 to 2004 by 105 km². Some of this area will be unlawful water use, which has to be eliminated. A remark was made that some mines also irrigate land with their effluent as a method of disposing of this effluent. The question was then asked whether this irrigation by mines is included under the 105 km² irrigation increase. AT replied that this may well be the case and that, if mines can dispose of the water safely, it is acceptable and that the water use will then not necessarily be unlawful. This is an important point to be investigated.	AT/JB
	• The periods over which water trading takes place was questioned, i.e. in times of drought, when water users are restricted to say 50% of allowed quota — under such circumstances farmers will not have enough water to trade. It was however pointed out that trades need to be secured in advance and on a permanent basis. A distinction must be made between temporary and permanent transfer of water. The NWA makes provision for both. Emergency, temporary trades could be planned for times of crisis. JvA replied that temporary transfer of water normally takes place on a 12-month basis. Water trading as a reconciliation option however aims at the permanent transfer of water.	
	 AR added that the compulsory licensing process was envisaged almost 15 years ago when the NWA was promulgated and that this process should be intensified. The matter has not been concluded and it is important that the process gets on track. AT replied that the validation and verification of water use is part of that process and should be accelerated as other reconciliation options are also dependent on it. JvR mentioned that compulsory licensing is instituted for the following 3 reasons: To correct water imbalances, Ensure adequate water allocation reform, and 	

Agenda point	Subject	Action
	To ensure adequate water for the Reserve.	
	Compulsory licensing was not designed to support growth of towns or further economic development. The use of compulsory licensing needs to be fully understood and carefully expressed. AR then commented that the compulsory licensing process should perhaps be revisited to ascertain whether it still serves its purpose.	
	 Water Conservation and Water Demand Management (WC/WDM) require a special effort. A huge back-log exists and politicians do not want to hear about it or understand that this is a very important initiative when planning new infrastructure. Some changes in this mindset are already being observed. JvR mentioned that there is currently not enough money in state coffers to continue with all the infrastructure projects that are needed and WC/WDM cannot be deferred. PH added that DWA is working closely with National Treasury, and that a directive went out to all Mayors and CEOs advising them to start prioritising WC/WDM as well as to allocate money towards WC/WDM. 	
	AT added that it is good practice to publicise successes in order to raise public awareness.	
	OvdB pointed out that it is important to benchmark reasonable water use by towns, and also that Eskom should very seriously take into account how much water will be needed when planning new plants.	
	4.8 Reconciling the water requirements with the water resource Presented by Johnny Beumer (JB)	
	JB highlighted a number of principles that formed the basis of water reconciliation. Amongst these is the obligation on South Africa to not negatively affect a neighbouring country by any actions.	
	Starting with the water balance for the whole catchment, JB also showed how the water balance can be achieved in each of the three water management zones.	
	Whole Catchment: A water balance can be achieved by eliminating unlawful water use, applying WC/WDM in the irrigation, urban and mining water use sectors, removing invasive alien plants (IAPs), developing and utilising groundwater, and treating and using decanting mine water.	
	Upper Olifants: Surplus conditions exist in the Upper Olifants Water Management zone, which will increase by implementing the interventions mentioned above under whole catchment. The surplus is needed to augment water shortages in the Middle Olifants.	
	Middle Olifants: There is a significant deficit in the Middle Olifants. The De Hoop Dam will alleviate the deficit to some extent, although not completely. If the recommended reconciliation options are implemented it will just be possible to achieve a water balance. The excess flow from the Upper Olifants is however also needed.	
	JB explained that separate analyses were done for the water balances in the Steelpoort River and the Middle Olifants main stem. It was found that the Steelpoort River cannot supply all the water requirements envisaged by the Olifants River Water Resources Development Project (ORWRDP), but a water balance in the Middle Olifants River main stem can still be achieved if the deficits of the Steelpoort River as a result of the ORWRDP distribution pipelines are added	

Agenda point	Subject	Action
pome	as water requirements. The conjunctive use of the two water resources needs to be synchronised carefully.	
	A temporary deficit in the first years can be expected, but these can be overcome with temporary water restrictions. OvdB commented that the lack of infrastructure means that temporary deficits in the Middle Olifants in the first number of years will have to be accepted.	
	Lower Olifants: The Lower Olifants currently has a slight surplus, but as soon as the Reserve is operationalised the surplus will turn into a deficit. The deficit will however be too small to justify the building of a new dam. Once again, monitoring of water licence conditions and water trading, if necessary, can be considered.	
	RECONCILIATION STRATEGY IN A NUTSHELL Presented by Johnny Beumer (JB)	
	 JB concluded his presentation by summarising the recommended reconciliation strategy, i.e. The Reserve will be Operationalised as soon as practical. Water required to supply the current and future social and economic activities in the Olifants River basin will be supplied from the resources of the basin except for the power stations which will continue to be supplied from the Vaal system. Water required to supply the current and future social and economic activities in the Polokwane and Mokopane supply area will continue to be supplied from the Olifants. 	
	 A water balance will be achieved with the resources of the Olifants by: Introducing WC/WDM in all sectors Implementing Water Trading to supplement WC/WDM Treating Acid Mine Drainage Removing Invasive Alien Plants Developing groundwater resources as a priority Buying out water entitlements in addition to savings from WC/WDM 	
	 The following discussion ensued: JVR pointed out that the high demand scenarios were used in water balance calculations. The lower demand scenario could in all cases be met. It might turn out that the low water demand scenarios were more realistic. JK commented that terms such as water trading, water licensing, etc., should be used consistently so that everyone can understand their meaning properly. He added that a lot of actions needs to be put into place. If not done timeously there could be serious shortages. OvdB added it is also very important that the right persons be identified to put these actions into place. AR commented that huge development planning is currently taking place on regional level and it is a concern that water is not taken into consideration at the level it should be. This should be linked to an urgent and decisive action plan. JvR added that South Africa cannot afford to continue to build large dams and transfer schemes. The exchange of irrigation water is one option to consider. OvdB commented that the cost of water is so high for new beneficiaries that projects will not easily be financially sustainable. DWA is currently preparing a motivation to rather recover costs on a system/catchment basis, since the problem of water shortages that have to be augmented cannot only be assigned to new users. 	

Agenda point	Subject	Action
Politic	4.9 Implementation arrangements Presented by Dr Martin Van Veelen (MvV)	
	MvV presented a list of involved institutions and tables indicating the responsible Institution and target dates for the recommended interventions.	
	The following points were raised:	
	• In the absence of an established CMA, DWA is the de facto leader to take charge of the implementation process. However full cooperation is needed from the water users and other institutions.	
	 JvA –The Dept. of Environmental Affairs (DEA) should also be added to the Implementing Institutions since Working for Water now falls under them. And also Municipalities and the Provinces. 	
	4.10 Recommendations for further work Represented by Dr Martin Van Veelen (MvV)	
	MvV concluded the presentations by tabling the recommendations for implementing the strategy and the recommendations for further work. The following points by the stakeholders were recorded:	
	 De Hoop Dam should be added and should form part of the operating rules. This was agreed. Local dams and smaller dams should also be included in the WC/WDM strategy. AR reiterated the importance that these recommendations be included in a detailed plan for DWA. An institutional review is currently also in the process of ascertaining who is doing what in the water sector to try and achieve synergy in the industry. The validation and verification process should also be resumed as soon as possible. BC assured the study team and DWA that from the Irrigation Sector's side, they will do everything in their power to ensure that the objectives of this study are met. He pledged the Irrigation Sector's cooperation and congratulated the team on a job well done. 	
	DV concluded the discussion and reiterated the importance to implement the strategy. It should not be allowed to end up on a shelf.	
5	COMMUNICATION TN opened the discussion on communication.	
	 Membership It is noted as a concern that a "full-house" attendance at SSC meetings of all the sectors has never been achieved. AR added that more delegates from Provincial Departments should be invited, to ensure that DWA might gain a better understanding of what Provincial Departments are trying to achieve. JvR mentioned that, although the study is coming to an end, it is really also starting with the next phase and everyone must work together to achieve the strategies and plans identified by the study team. Everyone present is welcome to still submit the names of people/institutions/stakeholders to whom they think the Reconciliation Strategy should be sent once it is finalised. 	
	• Report back by members to organisations / institutions Everyone is requested to distribute the newsletter and any information they may deem	

Agenda point	Subject	Action
pome	necessary amongst their respective organisations/institutions to raise awareness and to ensure the successful implementation of the strategy.	
	Web site http://www.dwa.gov.za/Projects/OlifantsRecon/default.aspx All relevant information as well as the draft final Reconciliation Strategy will be posted on above website for comments/inputs/feedback, etc.	
	Comments are due by middle December 2011.	
	Newsletter The 2 nd Newsletter as distributed at the meeting will also be placed on the website.	
	The following general comments were made:	
	 RLR from Magalies Water thanked the study team for the work done. He commented that a lot of talk evolved around operationalizing the Reserve, and he would like to recommend that members of this SSC Committee becomes part of an "Operationalisation Committee" to ensure that the strategy is indeed implemented. VM reiterated the importance of ensuring that all the municipalities are represented on 	
	the implementing committee.	
6	WRAP-UP OF THE STUDY – WAY FORWARD	
	JvR thanked Mr T Nditwani and the team for concluding another successful study. He commented that much was learnt from this study and expressed the hope that it would not stop here and that the end of the study would be the beginning of many more positive things.	
	TN said that the wrapping up the study includes the finalisation of a suite of documents, some of which have already been signed off. The outstanding reports would be finalised and placed on the website soon as possible.	
	TN thanked JvR for his support and guidance throughout the study and also thanked the team for their efforts in a study well done.	
7	DATE OF NEXT MEETING TN will circulate a date for a next meeting as part of a Strategy Steering Committee. That meeting will fall outside of the scope of this project. JvR is already in the process of appointing the Strategy Management Committee team to assist DWA in implementing the strategy and to keep it updated.	
	CLOSURE The Chairman thanked everyone for their attendance and participation in the proceedings of the meeting, and adjourned the meeting at 13:30.	