

## Minutes of the Komati Joint Operations Forum Meeting

25/05/2009

Far East Country Lodge Board Room

### Stakeholder Participation

Organisation	Organisation Abbreviation	Represented by	Apologies
Department of Agriculture & Land Administration	DALA	-	Marius van Rooyen
Department of Water and Environmental Affairs – Mpumalanga Region	DWEA-MP	Johann van Aswegen	Cai Rongqiu
Emandla Ekuphila Water Users Association	EEWUA	Anne Kruger	Paulos Methule
Inkomati Catchment Management Agency	ICMA	-	Brian Jackson Marcus Selepe
Komati River Irrigation Board / Lomati River Irrigation Board	KRIB / LRIB	Richard Granville Petros Khombisa Cornelius Mhlabane Titus Methula Andre van der Merwe	Martin Slabbert
Komati Basin Water Authority	KOBWA	Sidney Dhlamini Dennis Dlamini Mathokoza Manana Mfundi Mathunjwa Nonceba Noqayi Sampie Shabangu	-
Mhlume Water / Royal Swaziland Sugar Corporation	MW/RSSC	Leonard Ndlovu	Bernard Shongwe
Swaziland Electricity Company	SEC	Seluleko Fakudze	Samson Thwala
The Ministry of Natural Resources and Energy – Department of Water Affairs in Swaziland	MNRE-DWA	Sipho Fakude Petros Simelane	Sakhiwe Nkomo

## Agenda

1. Welcome and Attendance
2. Adoption of the Agenda
3. Approval of minutes of the last meeting
4. Matters Arising (otherwise not on the agenda)
  - Action Items
5. PRIMA Presentation
6. Water Use and Storage Reconciliation Statements
  - Report back from Joint Water Commission (JWC)
7. Information exchange and drought issues
  - KOBWA Studies
8. Any Other Business
  - Water quality
9. Closure

## Adoption of Previous Minutes

The minutes of the meeting of 21 April 2009 were approved with the following corrections:

On Page 4, under 'Clarity on the 16 Mm<sup>3</sup> held at Driekoppies Dam for the Crocodile River', the following remark was added 'The continuous accumulation of the Crocodile River water held at Driekoppies Dam will at some point reduce the yield of the system, more particularly with respect to allocation to South Africa.'

On Page 11, under 'Interim Water Allocation for 2009/10', line 1 was corrected to read, 'The meeting concurred that the full Treaty water allocations should be recommended to the Joint Water Commission (JWC) for the 2009/10 water year'.

## Matters Arising

### Conversion of Treaty allocation for Nooitgedacht and Vygeboom

This concerns the conversion of the Treaty allocation for Nooitgedacht and Vygeboom from 98% to 99.5%.

DWEA  
&  
ICMA

The meeting was advised by Mr. van Aswegen that he had communicated with Neil van Wyk and Walter van Westhuizen of the Department of Water and Environmental Affairs (DWEA, formerly Department of Water Affairs and Forestry (DWAF)) National and Gauteng Regional offices respectively on this issue.

ESKOM's water is classified by DWEA as strategic water. Consequently, DWEA's etiquette to allocate strategic water is at a 99.5% level of assurance. The DWEA used complex scientific models to derive the 99.5% allocation for ESKOM to be pragmatically comparable to the ESKOM Treaty allocation of 98%. It was reported that the 99.5% for ESKOM does not negatively impact on the volume of water for downstream users as it considered the Treaty allocation to ESKOM.

The following discussion and queries were raised in response to the feedback provided:

- A KRIB/LRIB representative, Mr. van der Merwe, recommended that KOBWA should assess and ration ESKOM water consumption. This was practised on low assurance water users within KOBWA's area of operation. The meeting was advised by KOBWA that they do not have a mandate to evaluate water users outside its area of operation. KOBWA advised the meeting that ESKOM high assurance water was rationed from approximately 158 to 152 Mm<sup>3</sup>. This was due to inadequate infrastructure upstream of the Maguga and Driekoppies Dams. It was noted by KOBWA that supply failure to ESKOM was possible if the High Assurance Treaty volume was drawn down at 99.5% level of assurance.

- Petros Simelane, a MNRE-DWA representative, enquired which institutions were obliged to monitor ESKOM's compliance to the Treaty allocations. KOBWA advised the KJOF that DWEA should monitor and inform KOBWA and subsequently the KJOF.
- KRIB enquired about the appropriate authorities and / or institutions that allocate water to users. The meeting was informed by KOBWA that the national water departments of the governments of the Kingdom of Swaziland and the Republic of South Africa allocate water in their respective countries. The Joint Water Commission (JWC) allocates water to the Parties within the framework of the Treaty.
- Mr. P. Khombisa noted the lack of domestic water services provision in his area. In response the meeting was informed that the Treaty allocates a certain volume of High Assurance water to the Parties. In South Africa the local government institutions and municipalities are mandated to render domestic water services to communities. If dissatisfied with the poor delivery of water services, it was possible to communicate this to the DWEA Regional office in Nelspruit.

#### *Recommendations & Decisions Taken*

1. Dr. L. Ndlovu suggested that local government institutions and municipalities be invited to attend KJOF meetings. They were in a better position to shed light on domestic water services provisions.

### **Early Warning Communication Workshop**

KOBWA advised the meeting that they would commission an external facilitator to deliver the early warning presentation to stakeholders from Swaziland and South who are involved in disaster management.

A query was raised as to whether the workshop would cover drought. The meeting was advised that the primary focus of the workshop was flooding.

#### *Recommendations & Decisions Taken*

1. Dr. D. Dlamini committed to supply the date for the Early Warning Communication Workshop, at the latest by the next KJOF meeting.

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### **Investigation of the Komatipoort and Tenbosch gauging stations observed river flow data integrity**

KOBWA reported that a crude estimate of the volume of water passing across the Komatipoort gauging station should be the sum of Tenbosch and Lebombo gauging stations. Recently the observed volume of water passing across Komatipoort gauging station did not correlate with the sum of the Tenbosch and Lebombo gauging stations. KOBWA requested DWEA to investigate the issue as Mr. Jackson from the Inkomati Management Catchment Agency (ICMA) was not at the meeting to report on the issue.

A KRIB representative raised a concern about the incorrect measurement of the volume of water passing across the Komatipoort gauging station. It was stated that if this was not urgently attended to, it would have a negative impact on the required minimum cross border flows to Mozambique. This would be exacerbated during the low flow season.

*Recommendations & Decisions Taken*

1. Mr. J. van Aswegen committed to communicate the issue with Mr. D. Joubert regarding these discrepancies and to provide feedback at the following KJOF meeting.

ICMA  
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DWEA

## PRIMA Presentation

The KJOF meeting was advised by Mr. P. Simelane that the Ministry of Natural Resources and Energy – Department of Water Affairs (MNRE-DWA) did not have the mandate to deliver the Progressive Realisation of the Inco-Maputo Agreement (PRIMA) presentation to the KJOF. The meeting was advised that the MNRE-DWA has requested that the Joint Water Commission (JWC) delegate a representative to deliver the presentation to the KJOF. The MNRE-DWA is awaiting feedback from the JWC.

MNRE-  
DWA

*Recommendations & Decisions Taken*

1. It was recommended that the KOBWA CEO office request the PRIMA office to deliver the presentation to the KJOF. Mr. S. Dhlamini committed to follow the issue to realise the delivery of the presentation.

KOBWA

## Water Usage and Storage Reconciliation Statements

The presentation that appears below was presented by KOBWA. The following was noted by KOBWA in their presentation:

KOBWA

- The data custodians were thanked for the timely submission of water use data in March 2009. Water users were encouraged to maintain this level of cooperation.
- The water use was above the expected use on April 2009, with 0.6 million cubic metres for South Africa and 3.5 million cubic metres recorded for Swaziland.

The following was raised in discussion:

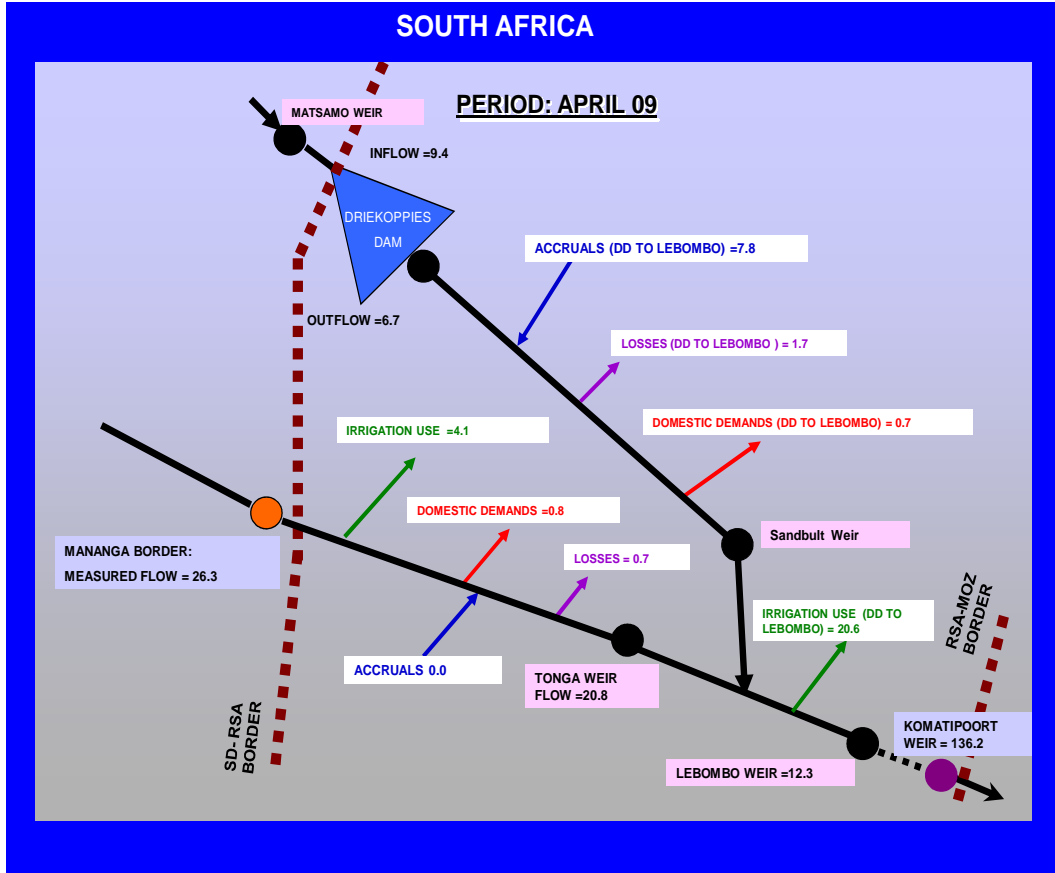
- A concern was raised by a KRIB/LRIB representative regarding the combination of the transmission losses with the annual allocations. KOBWA responded that regarding the ISOTG rules on banking water principles, the Maguga dam was spilling during April 2009 without space to bank the transmission losses. KRIB/LRIB was not

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satisfied and recommended that they meet with KOBWA on this issue. KOBWA suggested that the issue be deliberated further at the meeting as the practice is applied impartially to all water users.

- An enquiry regarding the installation of water meters in the Middle Komati stretch was raised. The meeting was advised that water users in the middle Komati stretch met with the Inkomati Catchment Agency (ICMA) and DWEA in order to establish a Water Users Association (WUA) that would work with other water institutions to manage the water resources. ICMA was in a better position to respond on this issue.

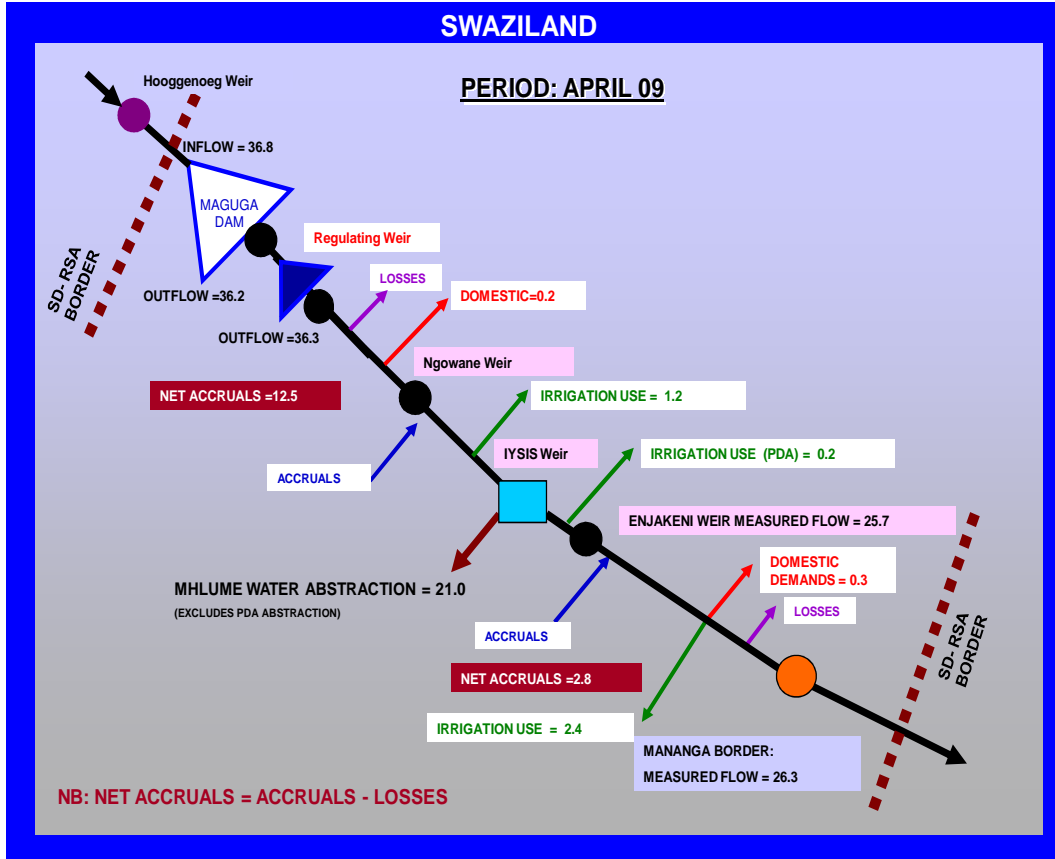
<b>WATER USE DOWNSTREAM OF DRIEKOPPIES DAM AND MANANGA IN SOUTH AFRICA</b>		
<b>April 2009</b>		
	<b>AMOUNT</b> (million m <sup>3</sup> )	<b>BALANCE</b> (million m <sup>3</sup> )
Water use from Driekoppies Dam	6.7	
Add flow across Mananga Border	26.3	
		<b>33.0</b>
Subtract releases for Mozambique	12.3	
		<b>20.7</b>
Subtract riverine losses	2.3	
		<b>18.3</b>
Subtract domestic and industrial use	1.5	
		<b>16.8</b>
Add gross accruals from:		
Driekoppies to Lebombo	7.8	
Mananga to Tonga	0.0	
		<b>24.7</b>
Add water used from storage in the weirs (assumed)	0.0	
<b>Irrigation water use in 2009/10*</b>		<b>24.7</b>
<b>*Remaining Irrigation Water downstream of Mananga and Driekoppies Dam on April 30:</b>		
- South Africa:	=	286.1 Mm <sup>3</sup>
<b>Actual booked irrigation water use in 2009/10</b>	=	<b>24.7** Mm<sup>3</sup></b>
** Expected use which is:		24.1 Mm <sup>3</sup>
<b>Actual booked irrigation use = 7.9% of 310.8 Mm<sup>3</sup>/a non-rationed low assurance water.</b>		
<small>KOBWA\ Water recon monthly summaries -April 2009 pg-1</small>		



### WATER USE DOWNSTREAM OF MAGUGA DAM IN SWAZILAND April 2009

	AMOUNT (million m <sup>3</sup> )	BALANCE (million m <sup>3</sup> )
Releases from Maguga Dam and Hydropower weir	37.1	37.1
Subtract stored volume in Hydropower Regulating Weir on April 30	0.8	36.3
Subtract riverine losses	0.9	35.3
Subtract domestic and industrial use	1.5	33.9
Add gross accruals from Maguga to Mananga	16.2	50.1
Subtract flow at Mananga Border	26.3	23.7
<b>Irrigation water use in 2009/10*</b>		<b>23.7</b>
<b>*Remaining Irrigation Water Downstream of Maguga Dam on April 30:</b>		
- Swaziland:		236.1 Mm <sup>3</sup>
<b>Actual booked irrigation water use in 2009/10</b>	<b>=</b>	<b>23.7** Mm<sup>3</sup></b>
** Expected use which is:		20.2 Mm <sup>3</sup>
<b>Actual irrigation use = 9.1% of 259.9 Mm<sup>3</sup>/a non-rationed low assurance water.</b>		

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MAGUGA DAM STORAGE RECONCILIATION ON 1 May 2009		
	AMOUNT (million m <sup>3</sup> )	BALANCE (million m <sup>3</sup> )
Total stored volume at start of water year	335.1	
Add Inflow for water year	36.8	
Add stored volume in Hydropower Regulating Weir on April 30	0.8	372.7
<b>Subtract:</b>		
Net evaporation losses	1.0	
Releases from storage	37.1	
Total stored volume at end of month	38.1	334.6
<b>Subtract Water in Reserve</b>		
Brought forward from 2008/09	0.9	
Cumulative for 2009/10	0.0	
	0.9	333.7
<b>Subtract commitments from storage from 2008/09 water year to:</b>		
South Africa	0.0	
Swaziland	0.0	
	0.0	333.7
<b>Add water use above average use and/or from banking for 2009/10:</b>		
South Africa along Middle and part of Lower Komati*	0.4	
Swaziland	3.5	
	3.9	337.6
<b>Reference Storage Available in Maguga Dam from 1 May 2009</b>		337.6

**Notes:**

\* Overuse and/or use from banking of 0.1Mm<sup>3</sup> is added to Driekoppies Dam

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DRIEKOPPIES DAM STORAGE RECONCILIATION ON 1 May 2009		
	AMOUNT (million m <sup>3</sup> )	BALANCE (million m <sup>3</sup> )
Total stored volume at start of water year	194.4	
Add Inflow for water year	9.4	
		<b>203.8</b>
Subtract:		
Net evaporation losses	2.1	
Releases from dam	6.7	
Total stored volume at end of month		<b>195.0</b>
Subtract share of water supplied for Mozambique from Komati river that was used by South Africa but replaced from Crocodile River:		
Brought forward from 2008/09	16.1	
Cumulative for 2009/10	0.0	
	<b>16.1</b>	<b>178.9</b>
Subtract water in Reserve:		
Brought forward from 2008/09	2.0	
Cumulative for 2009/10	0.0	
	<b>2.0</b>	<b>176.9</b>
Subtract commitments from storage from 2008/09 water year to South Africa	0.0	
		<b>176.9</b>
Add water use above average use and/or from banking for 2009/10 along Lomati and Lower Komati*	0.1	
<b>Reference Storage Available in Driekoppies Dam on 1 May 2009</b>		<b>177.1</b>

\* Balance of South African overuse not held in Maguga

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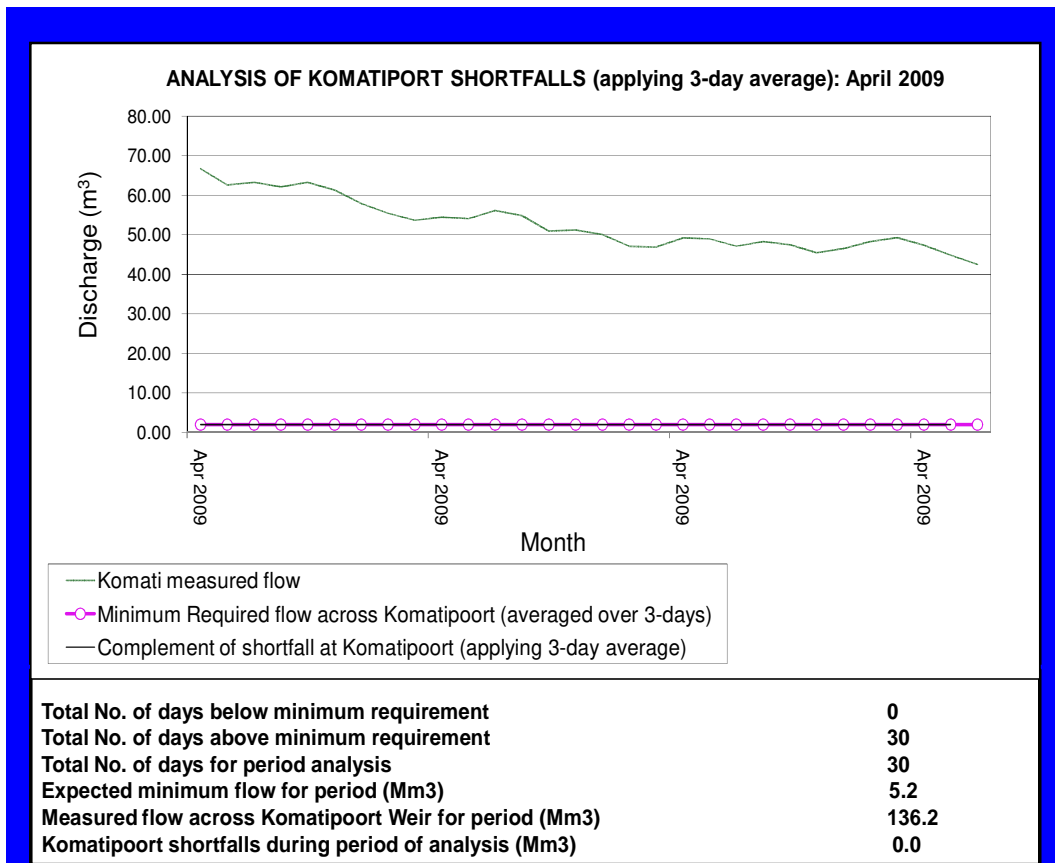
HIGH ASSURANCE WATER DEMAND DOWNSTREAM OF DRIEKOPPIES DAM AND MANANGA IN SOUTH AFRICA April 2009				
	Lomati	Middle Komati	Lower Komati	Total
Non- rationed High Assurance Annual Allocation	8.6	9.3	0.3	18.2
Cumulative demand in 2009/10	0.7	0.8	0.0	1.5
Remaining High Assurance water downstream of Mananga and Driekoppies Dam on April 30	7.9	8.5	0.3	16.7

NB: Quantities in million m<sup>3</sup>

HIGH ASSURANCE WATER DEMAND DOWNSTREAM OF MAGUGA DAM IN SWAZILAND April 2009				
	Maguga to IYSIS	IYSIS	IYSIS to Mananga	Total
Non- rationed High Assurance Annual Allocation	1.9	11.8	3.8	17.5
Cumulative demand in 2009/10	0.2	1.0	0.3	1.5
Remaining High Assurance water downstream of Maguga Dam on April 30	1.7	10.8	3.5	16.0

NB: Quantities in million m<sup>3</sup>

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## Information Exchange and Drought Issues

KOBWA advised the meeting that the Joint Project Management Steering Committee for the Ecological Water Requirement study (EWR) and Future Development Studies (FDS) met on the 30<sup>th</sup> April 2009 at the Ninham Shand offices in Centurion, Pretoria. The completion date for both studies has been extended to November / December 2009. This is to accommodate the EWR study that is behind schedule. Components of the FDS are dependent on some of the outcomes to be generated from the EWR study.

The following joint stakeholder meeting is tentatively scheduled for October 2009.

## Any Other Business

### Water quality

The meeting was advised by the DWEA representative that information regarding the deterioration of water quality in certain catchment areas in South Africa. This had become a concern to water users. It was

recommended that the KJOF report on the state of the Komati River basin water quality. The meeting concurred.

The following was reported by Mr. Shabangu of KOBWA:

- In terms of the South African water quality classification system, the water quality fitness for use of the Komati River basin ranged from ideal to fair. This was dependent on the intended water use within the different river reaches;
- The water quality deterioration trend of the basin is from West to East. High conductivity concentrations have been observed in the lower section of the basin;
- In most cases the observed microbiological water quality is above the required limits for the categorised and classified microbiological water quality classes.

The following was reported by Dr. L. Ndlovu of Mhlume Water:

- Occasionally Mhlume Water experiences a buildup of foreign plants in the water supply system. This has not been thoroughly investigated in terms of the origin and identity of the plants.

*Recommendations & Decisions Taken*

1. Water quality status of the basin to be reported on a quarterly basis. KOBWA to coordinate this activity.
2. Comprehensive and coordinated programme by all water stakeholders to monitor and report on water quality within the Komati river system

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<b>Next Meeting</b>
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The dates for the meetings for 2009 are as follows:

Date	Venue
18 <sup>th</sup> June	Mhlume Water
23 <sup>rd</sup> July	Host Area
20 <sup>th</sup> August	Driekoppies Dam
30 <sup>th</sup> September	Tshaneni Club
22 <sup>nd</sup> October	Maguga Dam
19 <sup>th</sup> November	Komati Irrigation Board (Komatidraai)
17 <sup>th</sup> December	Driekoppies Dam