

WATER NEWS

2021/22 2ND EDITION



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INKOMATI-USUTHU
CATCHMENT MANAGEMENT AGENCY



VISION

Sufficient, equitable and quality water resources for all in the Inkomati-Usuthu Water Management Area

MISSION

To efficiently manage water resources by empowering our stakeholders in our quest to contribute towards transformation by promoting equal access to water and protecting the environment

VALUES

Integrity
Batho Pele (Stakeholders Orientation)
Accountability
Diversity
Transparency

SLOGAN:

“INKOMATI-USUTHU CMA, YOUR PARTNER IN WATER MANAGEMENT”

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INKOMATI-USUTHU WATER MANAGEMENT AREA



IUCMA GOVERNING BOARD



Mr M.S. Mthembu
Chairperson



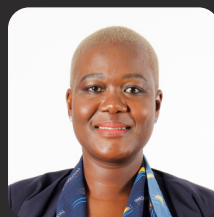
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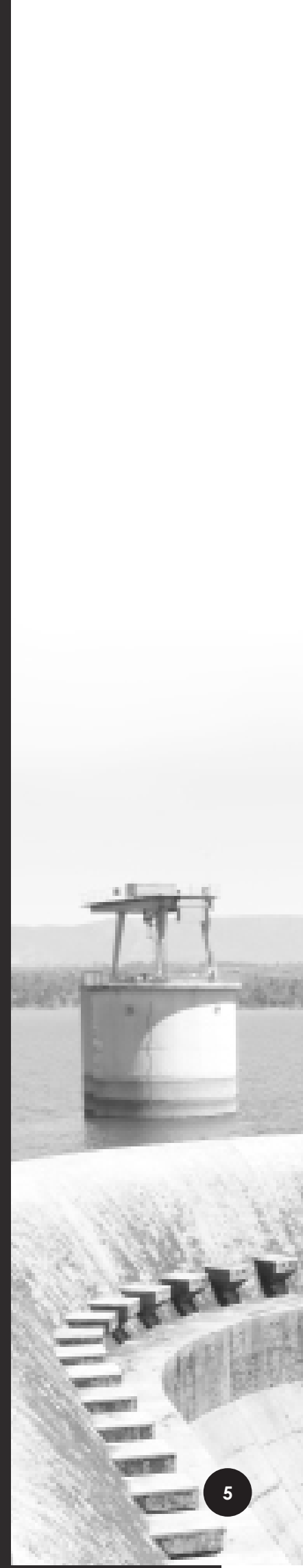
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Mr L.C. Mohabala
Ex officio

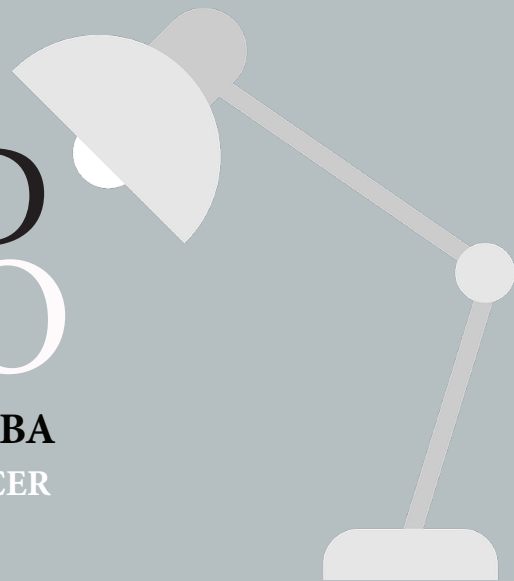


Mr T. Mathebula
Board Secretary



FOREWORD BY THE CEO

MR LUCKY CHARLES MOHALABA
CHIEF EXECUTIVE OFFICER



Dear Stakeholders

I am truly honoured to have been appointed as CEO of the Inkomati-Usuthu Catchment Management Agency. My professional skills are varied. I am an admitted attorney and have served at executive level in national government departments and entities such as Magalies Water, State Security, Mpumalanga Department of Education, and Mpumalanga Housing Finance Company. In addition, I have also recently served as the Chief Operating Officer of the Office of the Public Protector. I would like to assure the IUCMA Board, the Minister of Water and Sanitation, Hon. S. Mchunu and our stakeholders of my commitment to this important role. My primary objective is to lead the Agency to achieve its strategic outcomes that would translate into additional transformation in the water sector.

The Deputy Minister of the Department of Water and Sanitation, Hon. Dikeledi Magadzi, opened the third Incomati Basin Women in Water Conference and the River and Environment Management Cooperation which took place in the City of Mbombela. This was a momentous occasion since it was the first time, after being prevented by the COVID-19 pandemic, where the three riparian State representatives from the Kingdom of eSwatini and the Republics of South Africa and Mozambique as well as their partners from the Netherlands and Germany came together. She reiterated that compliance to the treaty is critical and

that discussions and sharing of data and information between the three riparian States should continue to focus on the protection of people and the environment. In this regard, she explained that it is the responsibility of the delegates to tackle the challenges that climate change represent and to find innovative ways to combat the associated risks.

In addition, Deputy Minister Magadzi reminded the congregation of their obligation to ensure sufficient quality of water for all and emphasised the relevance of the DWS slogan of “Water is Life, Sanitation is Dignity” during this challenging time. She appealed to the riparian states to honour their International Obligations as contained in the key mandate of the IncoMaputo Agreement (IIUMA) treaty.

Deputy Minister Magadzi lauded the interaction between SADC and European counterparts by sharing their knowledge, skills and data through programmes such as King Fisher, among others. She also advised participants that 4IR necessitates that technical innovation should be at the forefront to assist governments in all areas including water resource management. And finally, Deputy Minister Magadzi stressed the importance of transformation in the water sector, especially with regard to the role of women and girls in science and technology and urged Government to prioritise them.



The IUCMA will continue to honour its mandate to its stakeholders by ensuring compliance to the Water Act, Act 36 of 1998 in order to deal swiftly with transgressors. On 14 October 2021, a pollution incident was reported at Sabie Falls, 200m downstream of R532 Bridge. On further investigation it was established that a broken sewer pipeline was responsible for the pollution. IUCMA officials issued a verbal directive to the Thaba Chweu Local Municipality in terms of section 20(4)(d) of the Act and the repair to the damaged sewage system was swiftly completed to the satisfaction of the IUCMA.

Rural communities using river water are vulnerable to microbial pollution. Hence the IUCMA conducts resource water quality assessments in the area at regular intervals. The latest assessment reveals that South Africa, the Kingdom of eSwatini and the Republic of Mozambique have complied with water quality guideline limits, except for faecal streptococci. Information about 17 critical water-borne diseases are included in this newsletter.

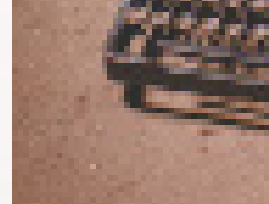
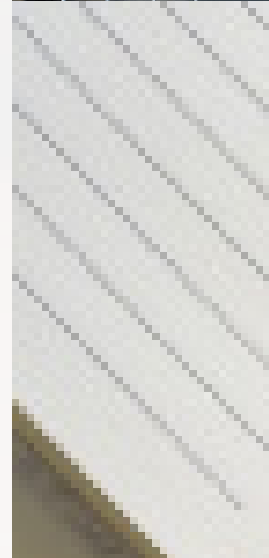
The monitoring of groundwater levels is a means to assess groundwater storage dynamics within the Usuthu and Komati sub-catchments. The measured groundwater levels were examined at boreholes at Mayflower (Usuthu sub-catchment) and Mbejele (Komati sub-catchment). Findings showed that groundwater levels at Usuthu sub-catchment was stable. However, some groundwater units were found to be unstable at Komati sub-catchment. In this regard, more robust groundwater restoration policies, regulation and management mechanisms were recommended.

The Inkomati-Usuthu Water Management Area recorded one of the wettest hydrological years (2021-2022) in the last 10 years since 2015-16. The IUCMA also insures that the future of Groundwater remains positive as it celebrated National Water Week 2022 by tasking learners in the water management area to create groundwater models.

The water resource status of the IUCMA was classified moderately low to very low in January 2021 but due to heavy rains it is classified high this year. The heavy rains resulted in all dams being currently above 80%, which has seen the Kwena Dam in the Nkomazi Municipality overflowing for two consecutive years. Water users and the public should avoid crossing rivers because of the high overflow levels.

Environmental Management Inspectors (EMIs) or "Blue Scorpions" represent a network of environmental management and enforcement officials across all spheres of government. Stakeholders are reminded that their mandate is to investigate any possible contravention of section 151 of the National Water Act, Act 36 of 1998.

I conclude by thanking all our stakeholders for their contributions towards water resource management in our water management area. I hope that 2022 will bring with it hope and joy, and that you will prosper now that the lockdown has somewhat been eased.



The first newsletter of 2022 provides plenty insightful information about a host of topics. The year kicks off with the appointment of the new Chief Executive Officer of the Inkomati-Usuthu Catchment Management Agency. Advocate Lucky Charles Mohalaba is an admitted attorney and has taken up the reigns at IUCMA. The advocate brings with him many years of executive experience that he has gained in top positions at various National Government Departments and Entities, including having recently held the post of Chief Operating Officer at the Office of the Public Protector. The Governing Board joins the Minister of Water and Sanitation, Hon S. Mchunu, in welcoming Advocate Mohalaba on board.

The third Incomati Basin Women in Water Conference and the River and Environment Management Cooperation took place in the City of Mbombela. Deputy Minister of Water and Sanitation, Hon. Dikeledi Magadzi, addressed the conference. It was the first time after two years that the three riparian State representatives from the Kingdom of eSwatini and the Republics of South Africa and Mozambique together with international partners from the Netherlands and Germany met. Deputy Minister Magadzi highlighted the importance of sustainable water resource management and that water serves as the first defence against the coronavirus, as initiated by the World Health Organisation.

Furthermore, she made an impassionate plea to technocrats and stakeholders to share data and information and scientific knowledge so that the Reserve could be met. She urged all participants to prioritise transformation in the water sector, especially of women and girls who play a pivotal role in science and technology. Turn to page 22 through page 27 to read the key points made by the Deputy Minister in her address.

On page 12 , you will find an overview of the groundwater quantity status and groundwater levels within the Usuthu and Komati sub-catchments including recommendations in this regard. In addition on page 34 through page 37 you will find information about how the National Science Schools Competitions played out in hopes to tackle the theme: "Groundwater: making the invisible, visible".

As is customary, the IUCMA conducts water quality assessments to determine whether South Africa is in compliance with the Interim IncoMaputo Agreement. Based on the assessment, South Africa, the Kingdom of eSwatini and the Republic of Mozambique complied with the water quality guideline limits, except for faecal streptococci.. More detail about water quality compliance can be found on page 18 through page 20.



Page 13 through page 14 and further will provide an overview of the surface water resource status issued by the Inkomati-Usuthu Catchment Management Agency. Some catchments remained under severe restrictions despite some heavy rainfalls over the assessment period. Heavy rains resulted in dams being more than 80% to capacity, most of them spilling. Notwithstanding the high availability of water and the above normal summer rain, the IUCMA urges water users to continue using water frugally.

On 14 October 2021, IUCMA officials were informed about an alleged pollution incident at Sabie Falls, 200m downstream of R532 Bridge. The incident involved a massive leakage from a broken sewer pipeline. A verbal directive was issued to the Chweu Local Municipality in terms of section 20(4)(d) of the National Water Act, Act 36 of 1998 and the matter was resolved. (See page 16)

Environmental Management Inspectors (EMIs) or "Blue Scorpions" represent a network of environmental management

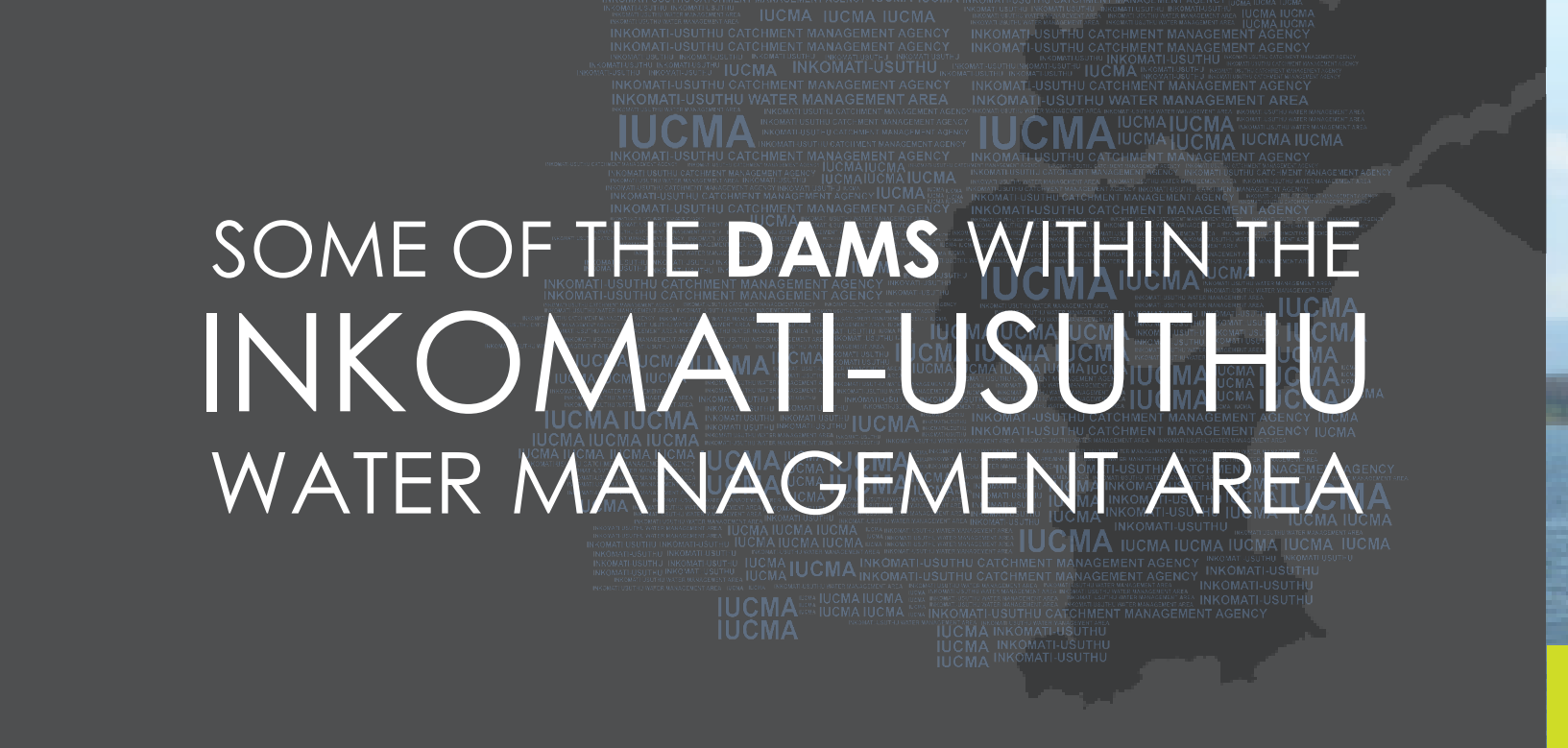
and enforcement officials across all spheres of government. A description of their duties and scope of work can be found on page 28 through page 30. Furthermore, Frequently asked questions (page 31) provide guidance with regard to offences and penalties and what action to take when an individual is deemed to be in contravention of section 151 of the National Water Act, Act 36 of 1998.

Let's renew our commitment in 2022 to protect our precious water resources.

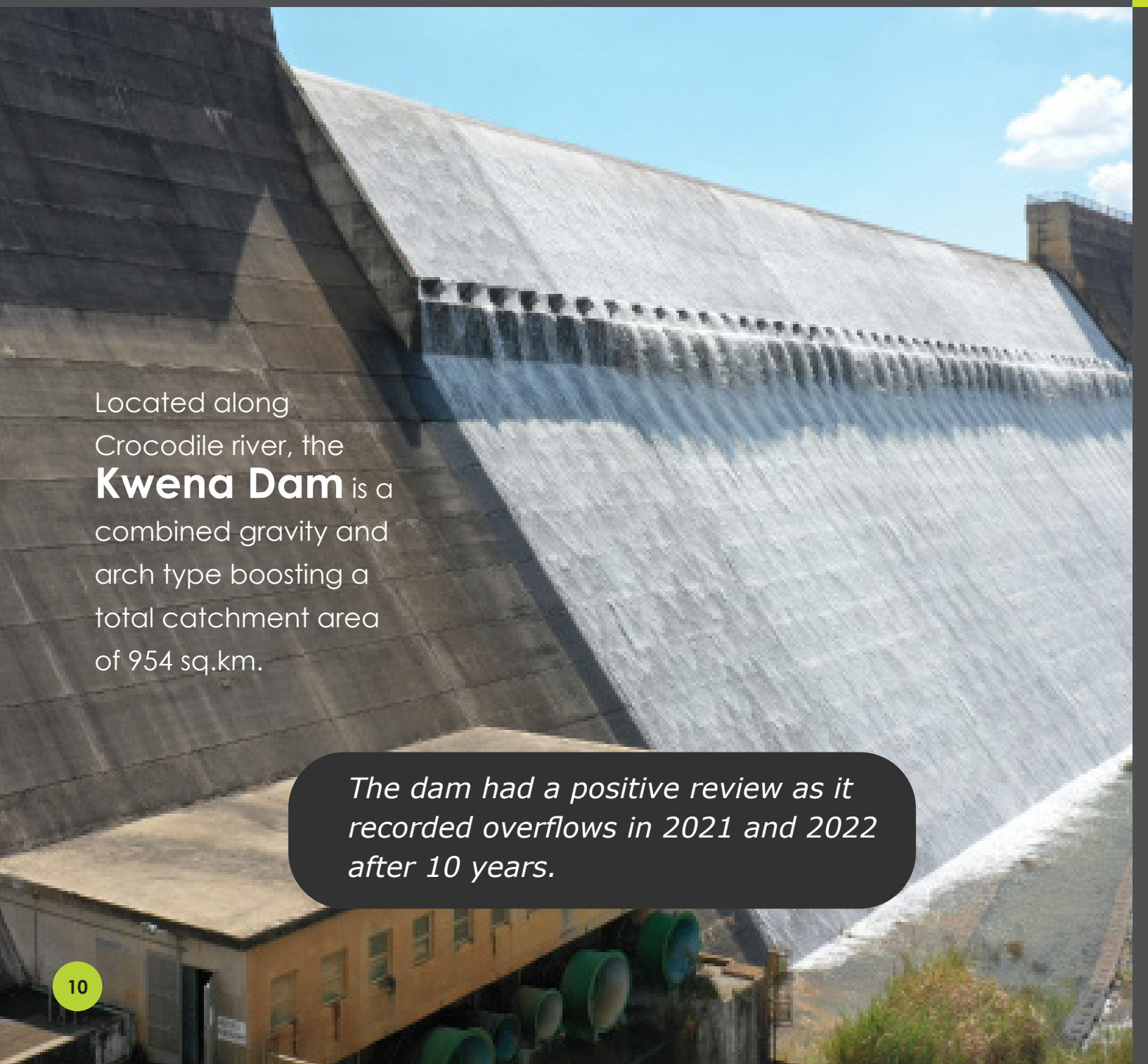
Ms Sylvia Machimana



**QR CODE FOR THE
IUCMA WEBSITE**



SOME OF THE DAMS WITHIN THE INKOMATI-USUTHU WATER MANAGEMENT AREA



Located along
Crocodile river, the
Kwena Dam is a
combined gravity and
arch type boosting a
total catchment area
of 954 sq.km.

*The dam had a positive review as it
recorded overflows in 2021 and 2022
after 10 years.*

Injaka Dam along the Marite river boost a full capacity of 124 mil.cub.m.



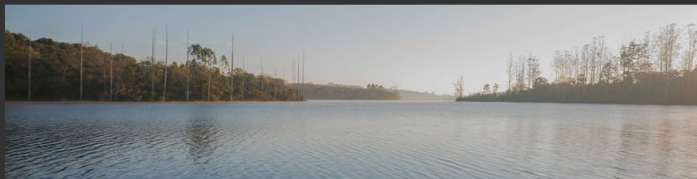
The **Jericho Dam** in Mpama river was built in 1966/68 with a full capacity of 59.5 mil.cub.m.



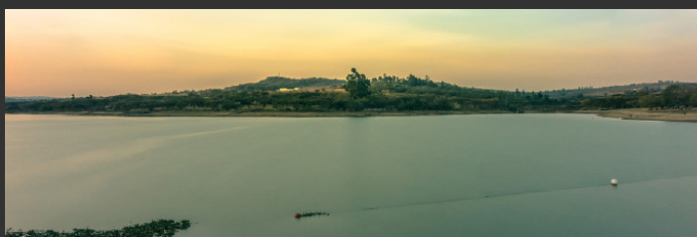
The **Driekoppies Dam** along the Lomati river boost a full capacity of 251 Mm³ and was opened in 1998.



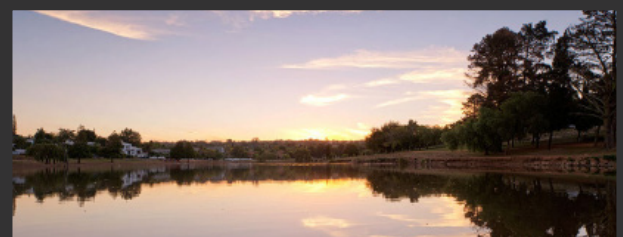
Witklip dam along the Sand river near Sabie was opened in 1969 boosting a full capacity of 12.97 mil.



Da Gama Dam was established in 1977 along the Witwaters river and boost a full capacity of 13.58 mil.cub.m.



The **Primkop dam** has a total length of 5.88 km



The **Vygeboom Dam** built in 1969 along the Komati river boost a full capacity of 78 mil.cub.m.

HYDROLOGICAL STATUS

OF THE INKOMATI-USUTHU WATER MANAGEMENT AREA



By (from left to right) Dr Tendai Sawunyama and Mr Siphon Magagula from Resource Planning and Operation

Issued: 21 January 2022

An overview of the surface water resource status issued by the Inkomati-Usuthu Catchment Management Agency (IUCMA)

The 2021-22 hydrological year has been one of the wettest hydrological years over the last 10 years that saw the Inkomati-Usuthu Water Management Area (WMA) record one of the driest hydrological years since 2015-16. The heavy rains received since the

start of the 2021-22 hydrological year has significantly increased the water resource status of the Inkomati Usuthu WMA. The water resource status of the Inkomati-Usuthu WMA was classified moderately low in January 2021 but is classified high this year. In some catchments water users were placed under severe water use restrictions in 2021.

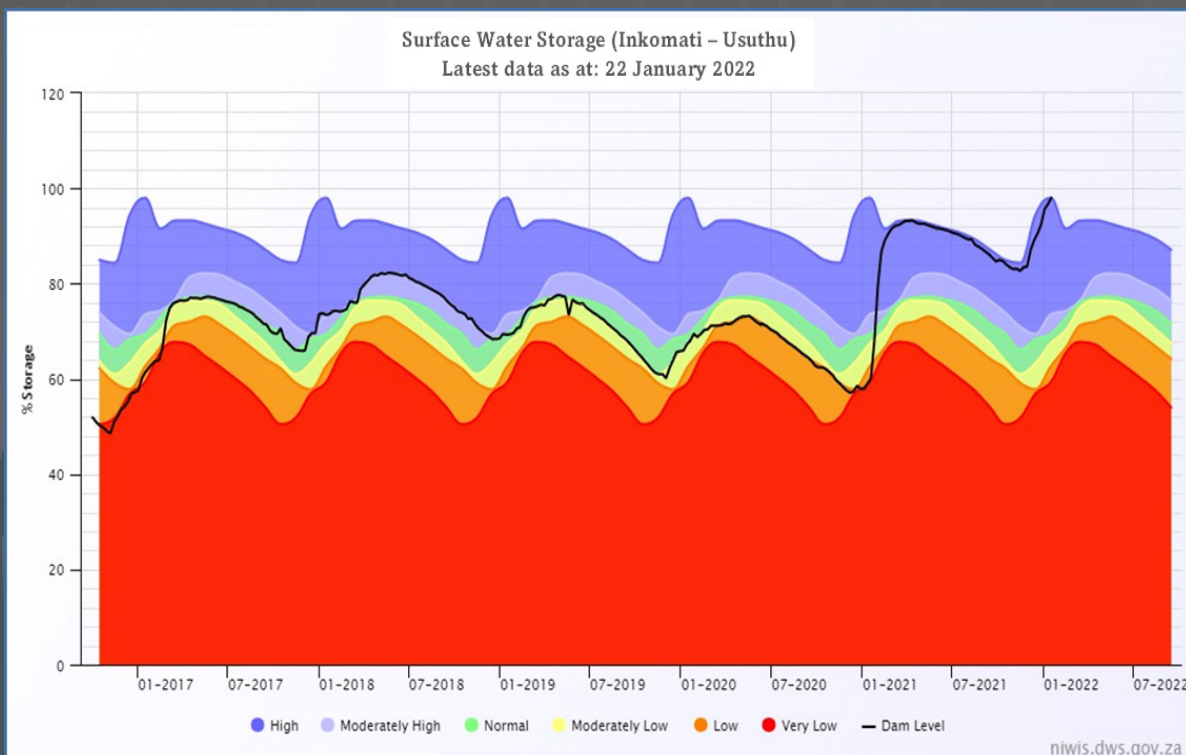


Figure 1: Inkomati-Usuthu WMA dams' storage level status.

HYDROLOGICAL STATUS

The recent rains have brought much-needed relief across the Inkomati Usuthu WMA, and all major dams are currently above 80.0%, with most already spilling. In the Crocodile catchment that supplies the City of Mbombela and Nkomazi Municipality, the Kwena Dam is overflowing for the first time in seven years for two consecutive years (Figure 2). This is a huge improvement for Kwena Dam when compared to the previous year as it stood at 30.9% during the same period.



Figure 2: Kwena Dam spilling

Information continues on Page 14

Table 1: Dam levels' status within the Inkomati Usuthu WMA as of 21 January 2022.

Dam Name	21 January 2022 - % FSC	Purpose/Towns
Da Gama Dam	100.3%	Irrigation
Inyaka Dam	80.6%	Irrigation, Domestic (Bushbuckridge)
Klipkopjes Dam	100.0%	Irrigation, domestic (White River)
Kwena Dam	101.5%	Irrigation, Domestic (Mbombela; Nkomazi)
Longmere Dam	89.3%	Irrigation, domestic (White River)
Nooitgedacht Dam	97.9%	ESKOM
Primkop Dam	101.0%	Irrigation, domestic (White River)
Heyshope Dam	100.7%	ESKOM
Jericho Dam	100.4%	ESKOM
Morgenstond Dam	99.6%	ESKOM
Westoe Dam	100.6%	ESKOM
Vygeboom Dam	101.0%	ESKOM
Witklip Dam	100.6%	Irrigation, domestic (White River)
Lomati Dam	81.9%	Domestic (Barberton)
Driekoppies Dam	101.5%	Irrigation, domestic (Nkomazi LM)

The heavy rainfall caused flash flooding in and across the WMA, and high river flow levels in all the major rivers. According to real-time unverified data, the highest recorded discharges for the Sand River at Exeter reached 66.2 m³/s and for the Sabie River at Lower Sabie reached 147 m³/s, on 3 January 2022. The Crocodile River at Tenbosch reached 309 m³/s, and the Komati River at Komatipoort reached 643 m³/s, both on 6 January 2022.

While the high riverflow levels have declined over the first two weeks of January, water users and the public in general are urged to avoid crossing rivers by wading or driving through the water. Additionally, they should also avoid the shores of rivers, especially at lower catchments.

Despite the high water availability in all main river systems and the forecasted above normal rainfall for late summer season, the IUCMA still encourages water users to continue using water sparingly and implement their water conservation and water demand management strategies. The IUCMA will continue to monitor usage and ensure compliance and enforcement where necessary.

Issued by the Inkomati-Usuthu CMA-Contact: IUCMA

Resource Planning and Operations Manager: Dr Tendai Sawunyama.

Contact: 013 753 9000 or sawunyamat@iucma.co.za

Senior Scientist: Hydrology Mr Siphon Magagula

Contact: magagulas@iucma.co.za

For latest river flow and dam levels visit:

<http://riverops.inkomaticma.co.za>

www.dws.gov.za/hydrology



Illegal Dumping
in a watercourse is an
offense and is prohibited



Illegal Damming
in a watercourse is an
offense and is prohibited

Report any water-related

illegal activities to the

Inkomati-Usuthu Catchment Management Agency

013 753 9000

ALLEGED POLLUTION INCIDENTS



By (from left to right) Mr Andrew Mbhalati
and Mr Thabiso Malemela from Compliance
Monitoring and Enforcement

On 14 October 2021, an alleged pollution incident was reported at Sabie Falls, 200m downstream of R532 Bridge. A site investigation was conducted on 15 October 2021 by officials from the Inkomati-Usuthu Catchment Management Agency (IUCMA) under Thaba Chweu Local Municipality and the following were observed:

- A massive leakage of sewage from a broken sewer pipeline at Sabie Falls, 200m downstream of R532 Bridge into the Sabie River.

On 15 October 2021, a verbal directive was issued on site by the IUCMA official to the Thaba Chweu Local Municipality officials in terms of section 20(4)(d) of the National Water Act, Act 36 of 1998 for the Municipality to immediately execute the following:

- Stop the flow of sewage from the broken sewer pipeline into the Sabie River within 24 hours;
- Provide the operation and maintenance plan for the broken sewer pipeline within seven (7) working days; and
- Clean the polluted areas within seven (7) working days.

On 17 October 2021, Thaba Chweu Local Municipality completed the repair to the damaged sewage system.

The matter was therefore resolved to the satisfaction of the IUCMA.

POLLUTED AREA PART A

Before



After



POLLUTED AREA PART B

Before



After



REPORT WATER POLLUTION INCIDENTS

The IUCMA is aware that pollution incidents occur occasionally in the the catchment. Therefore, for any water pollution incidents like sewage leakages and others, please report at water@iucma.co.za



OR CALL US AT
013 753 9000

OR ALTERNATIVELY DROP US A MESSAGE ON
THE "CONTACT US" BUTTON ON THE WEBSITE.

www.iucma.co.za

You can also report to the Catchment
Management Forum in your area.



WATER QUALITY COMPLIANCE TO INTERNATIONAL OBLIGATIONS



By (from left to right) Mr Marcus Selepe and Ms Caroline Tlowana from Resource Quality Monitoring

The Incomati-Maputo River Basin is a transboundary basin shared by three riparian countries, namely the Republics of South Africa and Mozambique and the Kingdom of eSwatini under the Interim IncoMaputo Agreement (IIMA) signed in August 2002 to foster sustainable protection and utilisation of shared watercourses.

The River Basin originates from eastern South Africa (Komati River) and flows into the Kingdom of eSwatini which later joins an estuary in the Republic of Mozambique as Incomati River (**Figure 1**) prior to flowing downstream into the Indian Ocean.

The governments of the three riparian states collaborate in the treaties that govern the use of the shared watercourse including the sharing of information, information on Early Warning Systems (EWS) related to floods and drought as well as pollution incidents, and conduct joint studies that are of mutual interest and benefit.

The basin water quality impacts result from both anthropogenic and naturally driven processes and this article reports on the water quality compliance of South Africa to the IIMA.

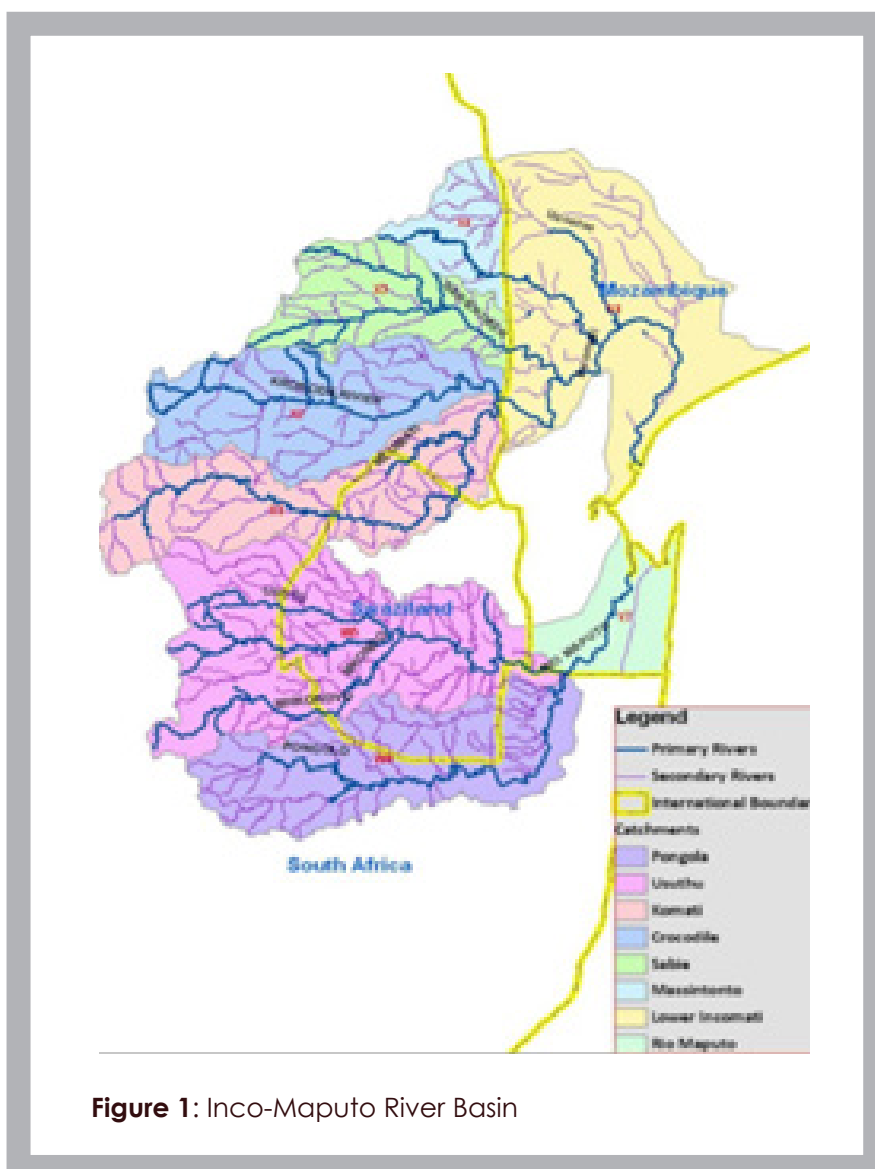


Figure 1: Inco-Maputo River Basin

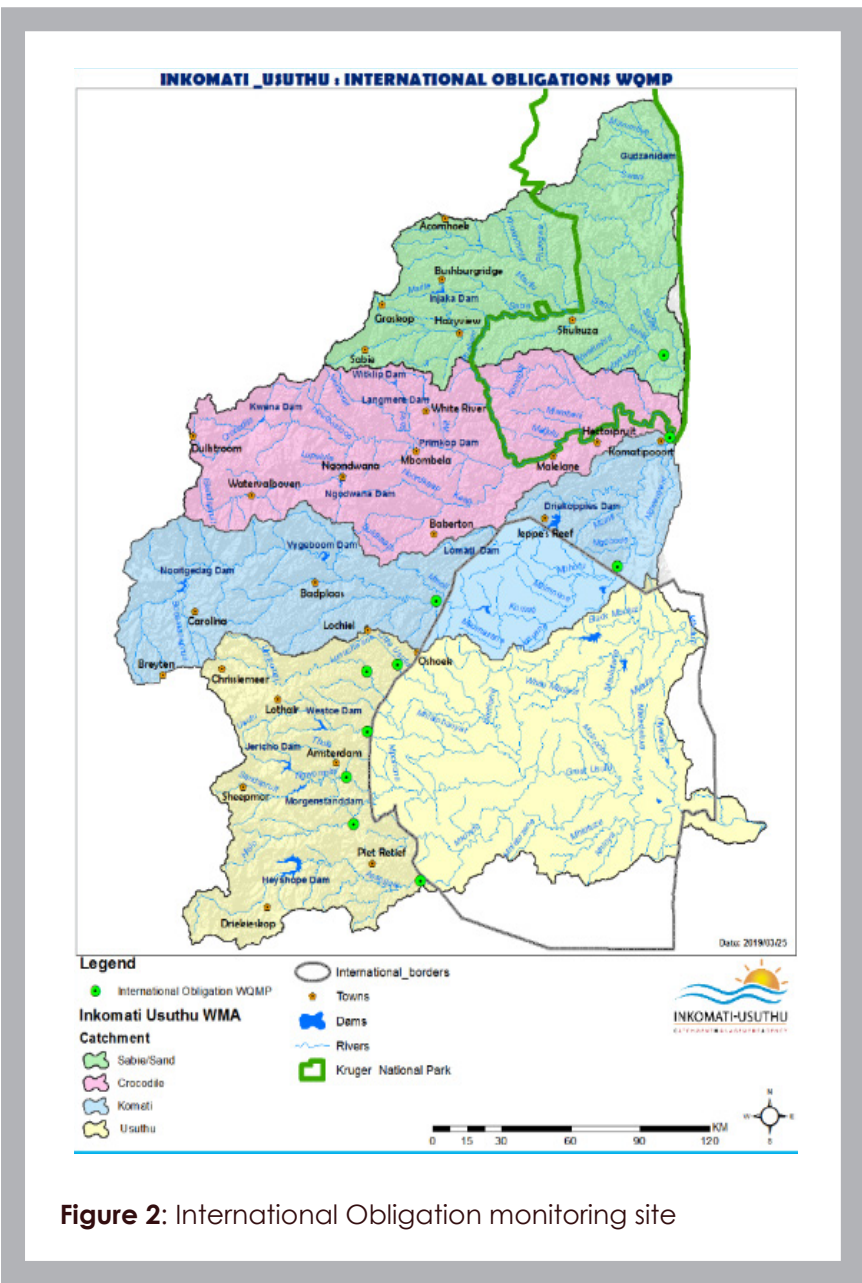


Figure 2: International Obligation River monitoring site

The resource quality assessment was conducted within the Inkomati-Usuthu Water Management Area (WMA) as depicted by the green points in **Figure 2** to determine resource quality compliance to the IIMA.

The assessed variables of concern in line with the IIMA include physico-chemical and microbiological characteristics, through the collection of monthly grab samples which are analysed according to the South African National Accreditation System (SANAS) accredited methods by an accredited external laboratory. The HydroNet system was used to display and interpret the average of water quality data for the assessed sites. The collected data was benchmarked against water quality guidelines resolution of the Tripartite Permanent Technical Committee (TPTC) on exchange of information and water quality in terms of article 8 of the IIMA.

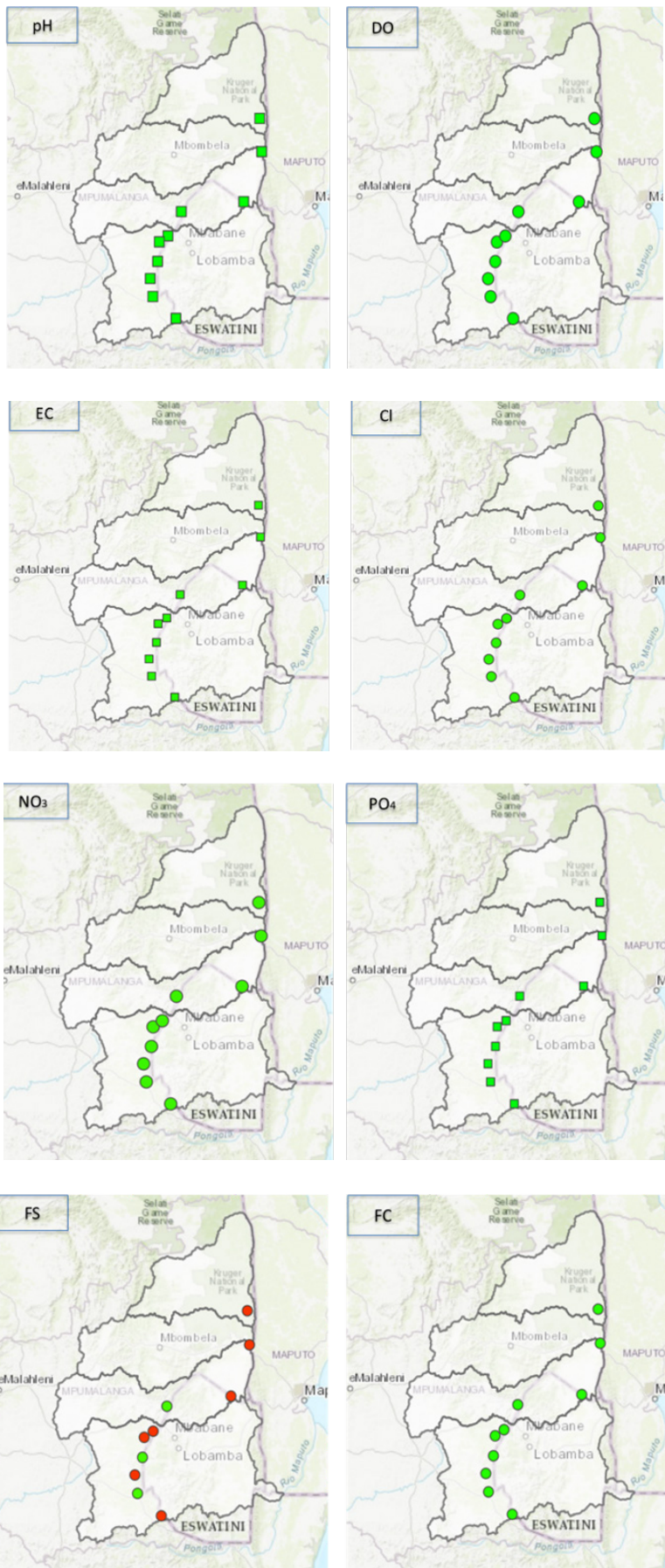


Figure 3: Visual display of the assessed water quality variables compared with the set IIMA standards

The data as depicted in **Figure 3** indicate compliance (green) to pH, dissolved oxygen, electrical conductivity, chlorine, phosphate, nitrates, faecal coliforms, and a non-compliance (red) to faecal streptococci. Based on the assessment, South Africa complied with water quality guideline limits allowed to flow into the Kingdom of eSwatini and the Republic of Mozambique, except for faecal streptococci. The flows from the Kingdom of eSwatini also complied with water quality guideline limits allowed to flow into the Komati River (in South Africa) on the Mananga border, except for faecal streptococci. Microbial pollution remains a human health risk, especially to the vulnerable rural communities that at times must use the river water for domestic, religious, cultural, and recreational purposes.



DON'T DISPOSE OF NAPPIES

IN RIVERS AND DAMS

*Dispose nappies in rubbish bins
and stop pollution*

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*Inkomati-Usuthu CMA, your
partner in water management*



IUCMA SUCCESSFULLY HOSTS THE IBWIWC AND REMCO



By *Dr Jennifer Molwantwa*
from *Executive Water Resource Management*



ENLIGHTING MOMENT: Deputy Minister of the Department of Water and Sanitation (DWS) Hon. Ms Dikeledi Magadzi, MEC Hon. Ms Busisiwe Shiba from the Department of Co-operative Governance and Traditional Affairs (COGTA) and The Inkomati-Usuthu Catchment Management Agency (IUCMA) Governing Board Chairperson Mr Sam Mthembu share a lighter moment with the IUCMA staff, Delegates and Speakers during the 6th International REMCO at Ingwenyama Sports and Conference Resort (White River) in the City of Mbombela Local Municipality.

The Minister of the Department of Water and Sanitation graced the third Incomati Basin Women in Water Conference and the River and Environment Management Cooperation which took place in the City of Mbombela by delegating Deputy Minister Dikeledi Magadzi. This was a significant occasion where the three riparian State representatives from the Kingdom of eSwatini and the Republics of South Africa and Mozambique together with international partners from the Netherlands and Germany came together after more than two years of immobility that was a result of the global COVID-19 pandemic.

In her welcome address, Deputy Minister Magadzi, indicated the importance of sustainable water resource management as a critical aspect to

ensuring sufficient quality water for all. In addition, it she emphasised that water serves as a primary intervention and was one of the first responses provided by the World Health Organisation (WHO) which is to wash hands with soap and water/sanitiser and cover the mouth and nose with a mask. These interventions are still relevant and significantly provide some relief while the world leadership, science and medicine are in search of solutions to the world crisis brought about by the COVID-19 pandemic. She reminded the meeting that the DWS slogan of "Water is Life, Sanitation is Dignity" was even more relevant during this time.

She called on technocrats and stakeholders to share knowledge and scientific advances in assisting up- and downstream countries to take better care of the



ACTION: (from left to right) DWS Deputy Minister Hon. Ms Magadzi, COGTA MEC Hon. Ms Shiba and the former IUCMA Acting CEO Dr Jennifer Molwantwa getting ready to take part in the 6th REMCO after a briefing session about the conference.



EXCITEMENT: IUCMA Governing Board Ms Carol Zulu excited as she attends the REMCO.

rivers so that the Reserve (Human Health and Ecological needs) are met; International Obligations in line with the signed 2002 Interim IncoMaputo Agreement (IIMA)/ treaty are met; and strategic water for the generation of power and water for socioeconomic development including poverty eradication are ensured. Some of the relevant treaties, the revised Southern African Development Community (SADC) Protocol on shared watercourses, the Africa Union, Agenda 2063, United Nations (2030) Sustainable Development Goals (SDG), UN Climate Change Conference of the Parties (COP26) are actioned to tackle climate change and find ways to reduce greenhouse gas emissions by 2030 globally.

She appealed to all not to forget the historical past of South Africa where the allocation of water was skewed towards the injustices in which the majority were left out. That as we do our work, we should prioritise the transformation so as to ensure the spirit of the National Water Act (Act 36 of 1998) of Equity, Efficiency and Sustainability. We further were called to be dynamic and implement adaptive management taking critical focus of climate change and its impact, innovation and technological advances and the mitigation of potential risks that may impact on us all.

Information continues on Page 24 and for more pictures view Page 25, 26 and Page 27



SITE VISIT: Mr Themba Khoza (blue T-shirt) from DWS and IUCMA's Mr Marcus Selepe (light blue shirt) join the REMCO delegates during the Kwena Dam site visit as part of the conference feature in the City of Mbombela Local Municipality.

In our pursuit of water resource management reforms, compliance to the treaties is critical. Furthermore, the role of stakeholders must never be undermined. This refers to the continuous discussion between the three riparian States and making sure that there is openness and trust fostered by the discussions on data and information, and that the best decisions are made in the protection of people and the environment. Thus, the role of universities, non-governmental organisations, and water users as key stakeholders is pivotal to all of us achieving the common vision.

The interaction of the SADC and European counterparts was commendable. Programmes such as Blue Deal, King Fisher, and use of HydroNET have yielded positive outcomes through peer-to-peer training and sharing of knowledge and skills. This is even more important due to the advent of 4IR which requires the automation of work and advances in science and technology to support governments in all areas of work including

water resource management. This can only be achieved through technical innovation resulting from research and development.

The role of women and youth in science and technology is a critical aspect of transformation across the basin and will yield economic benefit as women are known to carry the burden of society such as rearing children, subsistence farming and fetching water. The challenge of women as principal caregivers must be taken seriously. Additionally, the protection of women and young girls must be prioritised.

As Government, we must fast-track the delivery of services to make water more accessible to our people. The Deputy Minister wished participants a good conference and expressed her expectation for an action plan that could be implemented, and that could be reported on at the next conference.



SITE VISIT: IUCMA's Dr Tendai Sawunyama with the REMCO delegates in tour bus during the Kwena Dam site visit.



A LIGHTER MOMENT: IUCMA staff, Delegates and Speakers at the 3rd Incomati Basin Women in Water Conference (IBWiWC) at Ingwenyama Sports and Conference Resort, White River in the City of Mbombela Local Municipality.



INFORMATION SESSION: IUCMA's Governing Board Chairperson Mr Mthembu (grey suit) with a delagade during the REMCO.



EXCITEMENT: REMCO delagates excited during the Kwena dam site visit.



A LIGHTER MOMENT: IUCMA's Adv Bernard Shabangu shares a lighter moment with a REMCO speaker Dr Eddie Riddell from the South African National Parks.



GIFTS: IUCMA's Dr Sawunyama (right) and Dr Molwantwa (middle right) hand over gifts to REMCO Speakers during the conference.



FOCUS: Delegates and Speakers concentrate during the REMCO.



COMMUNICATION: Translators tackle translations during the REMCO.



REWARD: IUCMA's Dr Molwantwa (right) and IUCMA'S Governing Board Member Adv Geraldine Khoza (left) hand over a gift to an IBWiWC Speaker during the conference.



EXCITEMENT: IBWiWC Delegate excited during the conference.



A LIGHTER MOMENT: IBWiWC Delegates share a lighter moment during the conference.

ENVIRONMENTAL MANAGEMENT INSPECTORS (EMIs) (‘Blue Scorpions’)



*By Mr Andrew Mbhalati
from Compliance Monitoring and
Enforcement*



1. Environmental Management Inspectors (EMIs) (“Blue Scorpions”)

EMIs represent a network of environmental management and enforcement officials operating across all spheres of government. These officials are designated by the Minister in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA). EMIs can be easily identified by their uniform. This uniform has a specific logo or it can be an EMI badge. EMIs are required to monitor, investigate and enforce compliance with the NEMA and the Specific Environmental Management Acts (SEMAs) for which they have been designated.

2. SEMAs are the following Acts:

- National Water Act (Act 36 of 1998)(NWA)
- National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA)
- National Environmental Management: Protected Areas Act (Act 57 of 2004) (NEMPA)

- National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA)
- National Environmental Management: Integrated Coastal Management Act (Act 24 of 2008)
- World Heritage Convention Act (Act 49 of 1999)
- Environmental Conservation Act (Act. 73 of 1998)

National Water Act (Act of 1998) (NWA) Powers and duties of Authorised Persons (Section 125 of NWA):

(1) An authorised person may, at any reasonable time and without prior notice, enter or cross a property with the necessary persons, vehicle, equipment and material to carry out routine inspections of the use of water under any authorisation.



(2) An authorised person may enter a property with the necessary persons, vehicles, equipment and material

(a) After giving reasonable notice to the owner or occupier of the property, which notice must state the purpose of the proposed entry; and

(b) After obtaining the consent of the owner or occupier of that property,

In order to-

(i) Clean, repair, maintain, remove, or demolish any government water work operated by any water management institution.

(ii) Undertake any work necessary for cleaning, clearing, stabilising, and repairing the water resource and protecting the resource quality.

(iii) Establish the suitability of any water resource or site for constructing a water work.

(iv) Undertake any work necessary to comply with an obligation imposed on any person under this Act, where that person has failed to fulfil that obligation.

(v) Erect any structure and to install and operate any equipment on a temporary basis for monitoring and gathering information on water resources; or

(vi) Bring heavy equipment on to a property or occupy a property for any length of time.

(3) An authorised person may, at any reasonable time and without prior notice, on the authority of a warrant, enter a property with the necessary persons, vehicles, equipment and material, and perform any action necessary to-

(a) Investigate whether this Act, any condition attached to authorised water use by or under this Act or any notice or directive is being contravened.

(b) Investigate whether any information supplied in connection with the use of water is accurate; or

(c) Carry out any of the activities referred to in subsection (2) where the consent of the owner or occupier of that property has been withheld.

(4) A warrant referred to in subsection (3) must be issued by a judge or a magistrate who has jurisdiction in the area where the property in question is situated and must only be issued if it appears from information obtained on oath that-

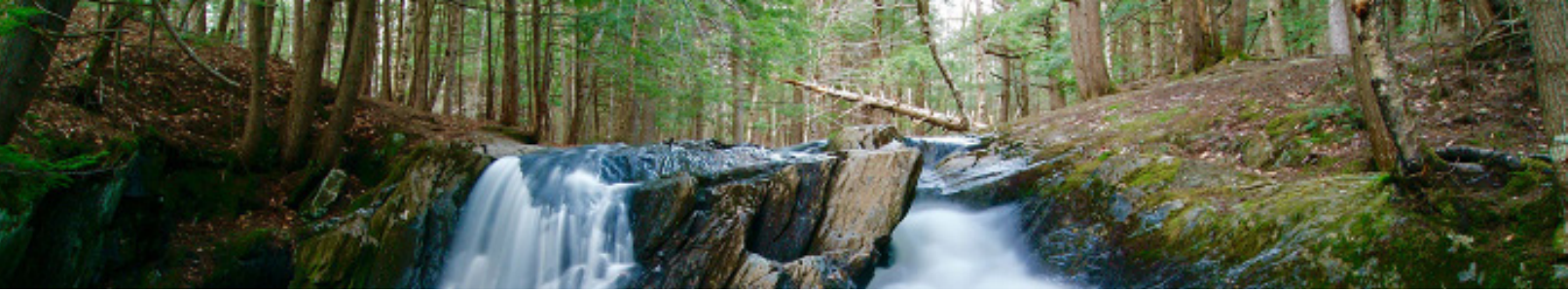
(a) There are reasonable grounds for believing that this Act, any condition attached to any authorised water uses by or under this Act or any notice or directive, is being contravened.

(b) There are reasonable grounds for believing that any information supplied in connection with the use of water is inaccurate; or

(c) It is necessary to carry out an activity mentioned in subsection (2) and access to that property has been denied.

(5) If a warrant is likely to be issued if applied for but the delay involved in obtaining a warrant is likely to defeat the object of an inspection in terms of subsection (3)(a) or (b), an authorised person may enter a property without a warrant.

**Information continues on
Page 30 and Page 31**



(6) An authorised person entering property in terms of this section must, at the request of any person on that property, identify himself or herself and present a certificate of appointment contemplated in section 124 (2).

(7) Notwithstanding any provision of this section an authorized person may not, under any circumstances, enter a dwelling without the consent of the occupier or without a warrant authorising entry.

3. Powers and Responsibilities of EMI's The range of powers given to EMI's to fulfil their mandate includes:

- Conducting routine inspections (entering premises to ascertain compliance, seizing evidence of non-compliance,
- Investigating (questioning witnesses, copying documents, removing articles or substances, taking photographs and video recordings, taking samples),
- Enforcing powers (search and seize establishing roadblocks and arrest) and
- Administrative powers (issuing compliance notices and directives).

4. Offences Relating to EMI's A person is guilty of an offence if that person:

- Hinders or interferes with an EMI's duties or
- Pretends to be an EMI,

- Gives false or misleading information to an EMI and/or
- Fails to comply with a request from an EMI.

ACT AND SECTION	OFFENCES	PENALTY
Section 151 of NWA	Use of water otherwise than as permitted under this Act.	Fine or imprisonment for a period not exceeding five years, or to both a fine and such imprisonment and, in the case of a second or subsequent conviction, to a fine or imprisonment for a period not exceeding ten years or both a fine and such imprisonment.
	Fail to provide access to any books, accounts, documents, or assets when required to do so under the Act.	
	Fail to comply with any condition attached to a permitted water use under this Act.	
	Fail to comply with a directive issued under section 19, 20, 53 or 118.	
	Unlawful and intentionally or negligently tamper or interfere with any water work or any seal or measuring device attached to a water work.	
	Fail to register an existing lawful water use when required by a responsible authority to do so.	
	Intentionally refuse to perform a duty, or obstruct any other person in the exercise of any power or performance of any of that person's duties in terms of this Act.	
	Unlawfully and intentionally or negligently commit any act or omission which pollutes or is likely to pollute a water resource.	
	Fail to register a dam with a safety risk.	
	Fail to comply with a temporary restriction on the use of water in terms of item 6 of Schedule 3.	
Commit contempt of the Water Tribunal.		



7. Frequently asked questions

What are environmental crimes?

Examples:

- Taking water from a water resource without authorisation
- Storing water without authorisation
- Impeding or diverting the flow of water in a watercourse without authorisation
- Engaging in a stream flow reduction activity contemplated in section 36 without authorisation.
- Engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1) without authorisation.
- Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or another conduit.
- Disposing of waste in a manner which may detrimentally impact on a water resource.
- Disposing in any manner of water which contains waste from, or which has been heated in, any. industrial or power generation process
- Altering the bed, banks, course, or characteristics of watercourse
- Removing, discharging, or disposing of water found underground if it is necessary

for the efficient continuation of an activity or for the safety of people; and

- Using water for recreational purposes

Will my name be disclosed after reporting an environmental crime?

The identity of every person who reports a crime is protected and will not be disclosed to any other party unless you give consent to have your name disclosed to any other party.

Where can I report environmental crimes?

- Inkomati-Usuthu Catchment Management Agency (IUCMA): 013 753 9000 or email: information@iucma.co.za
- Department of Water and Sanitation: 0800 200 200
- Nearest SAPS: 10111

What should I do when I witness an environmental crime?

Gather as much information about the crime and immediately report it as indicated above.

Such information may include:

- Nature of activity
- Photos, if possible
- Registration and make of the vehicle involved in the crime, if any e.g., in case of illegal dumping of wastewater.



Illegal Sand Mining in a watercourse is an offense and is prohibited

To report please call IUCMA @ 013 753 9000



WATER SAVING TIPS



Kettles should
not be filled

to the brim but with just enough water for your needs. This will reduce your electricity bill too.



Taking a bath can use between

80 and 150

litres of water per bath.



Do not overflow

containers like pots, as this may result in using more energy to heat the water.



Fix a **leaking toilet** otherwise it can waste up to

100 000 litres.



NATIONAL WATER WEEK CELEBRATED BY HOSTING

REGIONAL AND FINAL SCIENCE SCHOOLS COMPETITIONS



By Ms Gugu Motha from Institutions and Participation



EXCITEMENT: First prize winners Highfeld Secondary School celebrating their victory during the National Water Week Final Science Schools Competition at Lowveld National Botanical Garden in the City of Mbombela Local Municipality .

National Water Week is a calendar event that is celebrated by all in the water sector. The IUCMA in collaboration with its partners has been in the past eight (08) years coordinating the Science Schools competition which is hosted annually in celebration of the National Water Week/Month. The objective of the competition was to raise awareness in integrated water resource management (IWRM) and to showcase its role in socio-economic development of the country. This is also intended to spark the interest of the learners in the field of science and engineering with specific focus on water science. A total number of 30 schools participated in

the sub-catchment competitions which were a build up competition towards the Final Science Schools Competition that was held on the 22nd of March 2022. Eighteen (18) schools which were the top three (3) winning schools from the six sub-catchments participated to the Final Science Schools Competition which was held at the Lowveld National Botanical Garden in Mbombela.

The projects presented by learners in the competition was aligned to the United Nations (UN) theme which was "Ground Water, making the Invisible Visible", with the growing climate change we are experiencing challenges with water. We are seeing ground water as a source of water and rainwater harvesting to ensure we have sustainable water resources. This theme was also adopted by the Minister of Water and



Sanitation as the theme in South Africa. This event was graced by the presence of the IUCMA Governing Board, who acknowledged the collaboration between the IUCMA and other sector partners such as the Komati Basin Water Authority (KOBWA), Department of Water and Sanitation, Mpumalanga Provincial Department of Education, City of Mbombela, Silulumanzi, Sappi, South African National Biodiversity Institute (SANBI), Working on Fire (WoF), NEDBANK and others who supported the project financially and with human resources. Winning learners at the sub-catchment level competition were awarded with tablets for individual participating learner and trophies for the schools and at the final level competition they were awarded with laptops, cash vouchers for individual participating learner and trophies for the schools which were sponsored by the IUCMA and other partners.



EXCITEMENT: Second prize winners Sitintile Secondary School during the National Water Weeek Final Science Schools Competition.



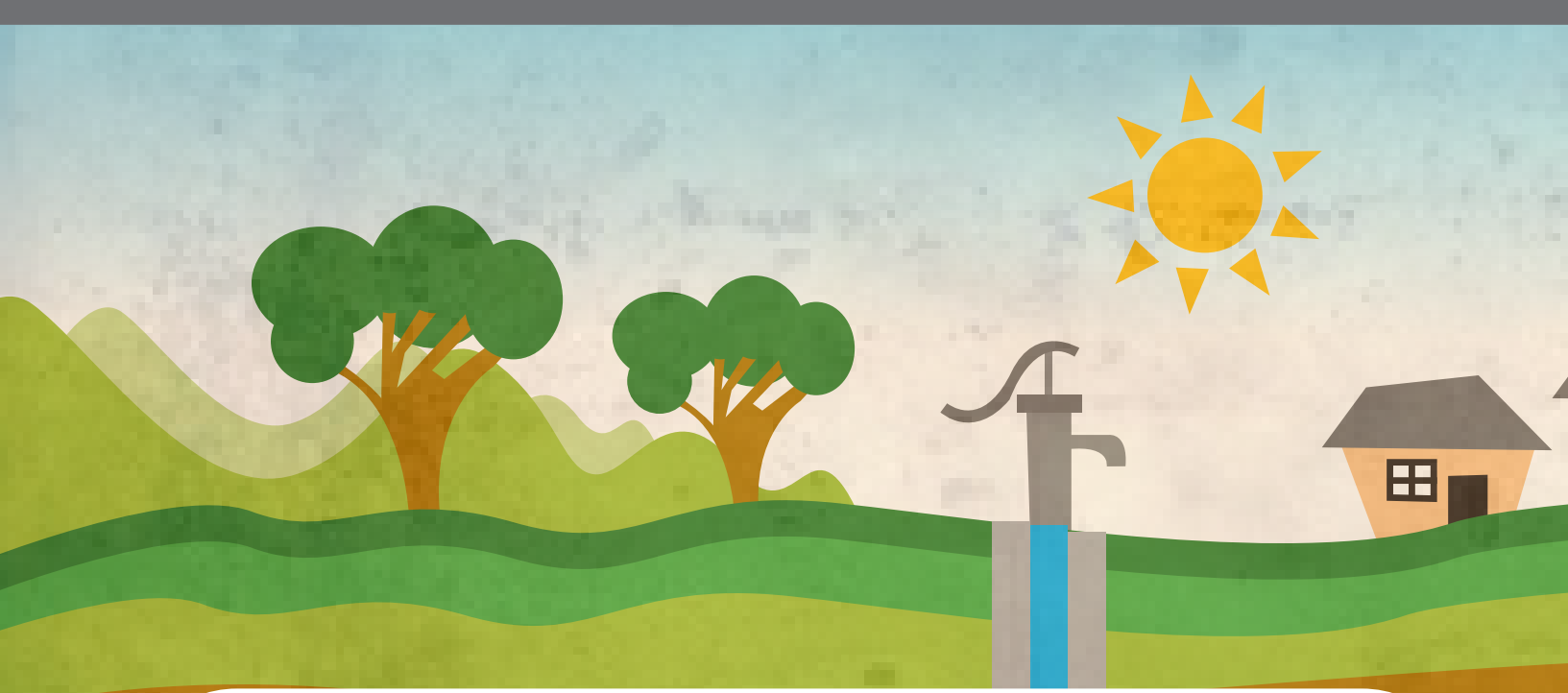
EXCITEMENT: Third prize winners James Khoza Secondary School during the National Water Weeek Final Science Schools Competition.

For more pictures view continues on Page 36 and Page 37



PARTNERS





OBSERVATION: The Final Science Schools Competition adjudicators observing models during the competition.



A LIGHTER MOMENT: (from left to right) The Local Organising Committee (LOC) Silulumanzi's Ms Lerato Mashua, IUCMA's Ms Charmaine Zulu, Mr Tony Sibiya, Ms Liketso Khaile and Ms Pinky Hermanes from the City of Mbombela Local Municipality share a lighter moment after the success of the Final Science Schools Competition.



CONVERSATION: IUCMA's Governing Board Chairperson Mr Sam Mthembu and IUCMA's Adv Bernard Shabangu during Final Science Schools Competition



ACTION: A learner demonstrating how their Ground Water Model functions during the Final Science Schools Competition



MOTIVATION: IUCMA's Deputy Chairperson motivating learners during the Final Science Schools Competition



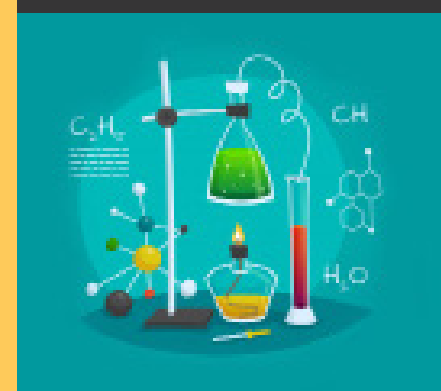
CELEBRATION: A moment of happiness for the teacher and learners for the achievement they received during the Lower Komati Regional Science Schools Competition



By Mr Sizile Mnisi from
Executive Water Resource
Management

CAREER GUIDANCE

FOR LEARNERS IN WATER RESOURCE MANAGEMENT



The Inkomati-Usuthu Catchment Management Agency (IUCMA) is an agency that has been established in terms of the relevant section of the National Water Act, Act 36 of 1998. The IUCMA has been established by the National Department of Water Affairs (DWA) in terms of the Act, to specifically implement certain sections of the Act. The mentioned sections of the Act address the management, protection, development and prevention of pollution of the national water resources.

The IUCMA is the first agency to be established by the DWA in the Mpumalanga area. The IUCMA has the responsibility to protect and manage the Crocodile River, Sabie, Inkomati Rivers and their tributaries within the Inkomati Water Management Area.

Career options and study opportunities in the form of financial assistance are offered by IUCMA. Since the IUCMA is a science focused institution, subject choices during high school should include science, geographical sciences, biological sciences and mathematics.

The breakdown of career choices offered by the IUCMA is indicated below:

1. Water Resource Specialist/Manager

Academic qualifications:

- 1.1. Bachelor of Science degree in (Aquaculture; Biology; Chemistry; Chemical Engineering; Biochemistry; Microbiology, Limnology; Zoology; Botany; Civil Engineering)
- 1.2. Bachelor of Science in Environmental Sciences (Geography; Geographical Information System; Geology)
- 1.3. Bachelor of Technology Water Care
- 1.4. Bachelor of Technology Analytical Chemistry

2. Hydrologist

Academic qualification:

- 2.1. Bachelor of Science (Hydrology; Hydrological Modelling; Water Quality Modelling)

3. Aquatic scientist

Academic qualification:

- 3.1. Bachelor of Science (River Health; Aquaculture; Bio-monitoring; Water and Waste Water; Water Quality Management; Zoology; botany; Limnology)



4. Water Resources Planners

Academic qualification:

- 4.1. Bachelor of Science/Engineering (Water Engineering; Chemical; Waste Water Treatment; Water Resources Modelling)

5. Water Resources Compliance Monitoring and Enforcement

Academic qualifications:

- 5.1. Bachelor of Science degree in (Biology; Chemistry; Chemical Engineering; Biochemistry; Microbiology, Environmental Law; Hydrology; Geohydrology; Civil Engineering)
- 5.2. Bachelor of Science in Environmental Sciences in (Geography; Environmental Law, Geographical Information System)

- 5.3. Law degree (Environmental Law)

6. Geohydrologist

Academic qualifications:

- 6.1. Bachelor of Science (Hydro-geology; Hydrology)
- 6.2. Bachelor of Technology (Geo-hydrology; Hydrology; Water Resources Modelling; Water Quality Management)

7. Stakeholder Management

Academic Qualifications:

- 7.1. Bachelor of Arts (Developmental Studies; Public Administration; Public Management; Social Studies)
- 7.2. Bachelor of Technology (Developmental Studies; Public Administration; Public Management)

LIST OF SOUTH AFRICAN UNIVERSITIES

EASTERN CAPE

NELSON MANDELA
UNIVERSITY

Tel: 041 504 1111
Website: www.mandela.ac.za
Email: info@mandela.ac.za



RHODES UNIVERSITY
Where leaders learn

Tel: 046 603 8148
Website: www.ru.ac.za
Email: registration@ru.ac.za



Tel: 047 502 2200
Website: www.wsu.ac.za
Email: postmaster@wsu.ac.za



University of Fort Hare
Together in Excellence

Tel: 040 653 2312
Website: www.ufh.ac.za
Email: admissions@ufh.ac.za

NORTHERN CAPE



SOL PLAATJE
UNIVERSITY

Tel: 018 299 1111/2222
Website: www.nwu.ac.za
Email: information@spu.ac.za

“For more Universities view page 36 and 37”

LIMPOPO



University of Venda
Creating Future Leaders

Tel: 015 962 8000
Website: www.univen.ac.za
Email: info@univen.ac.za



Tel: 015 268 9111
Website: www.ul.ac.za
Email: enrolment@ul.ac.za

FREE STATE



**Central University of
Technology, Free State**

Tel: 051 507 3911
Website: www.cut.ac.za
Email: tomttomple@cut.ac.za



UFS·UV
UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA

Tel: 051 401 2114
Website: www.ufs.ac.za
Email: Studentadmin@ufs.ac.za



KWAZULU NATAL



Tel: 031 373 2411
Website: www.dut.ac.za
Email: info@dut.ac.za



Tel: 031 260 2227
Website: www.unizulu.ac.za
Email: enquiries@ukzn.ac.za



**UNIVERSITY OF
ZULULAND**
Tel: 035 902 6000
Website: www.ukzn.ac.za
Email: info@unizulu.ac.za



MUT
MANGOSUTHU
UNIVERSITY OF TECHNOLOGY
Tel: 031 907 7111
Website: www.mut.ac.za
Email: info@mut.ac.za

NORTH WEST



Tel: 018 299 1111/2222
Website: www.nwu.ac.za
Email: applicationsug@nwu.ac.za

MPUMALANGA



**UNIVERSITY OF
MPUMALANGA**

Tel: 018 299 1111/2222
Website: www.nwu.ac.za
Email: info@ump.ac.za

GAUTENG



Tel: 011 717 1102
Website: www.wits.ac.za
Email: studentaffairs@wits.ac.za



Tel: 012 429 3111
Website: www.unisa.ac.za
Email: study-info@unisa.ac.za



**Tshwane University
of Technology**
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Tel: 021 382 5911
Website: www.tut.ac.za
Email: info@ump.ac.za



**UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA**

Tel: 012 420 4111
Website: www.up.ac.za
Email: ssc@up.ac.za



VUT
Vaal University of Technology
Your world to a better future

Tel: 016 950 9214/5
Website: www.vut.ac.za
Email: reception@vut.ac.za



**UNIVERSITY
OF
JOHANNESBURG**

Tel: 011 489 3000
Website: www.uj.ac.za
Email: mylife@uj.ac.za

WESTERN CAPE



**UNIVERSITY of the
WESTERN CAPE**

Tel: 021 959 3900
Website: www.uwc.ac.za
Email: admissions@uwc.ac.za



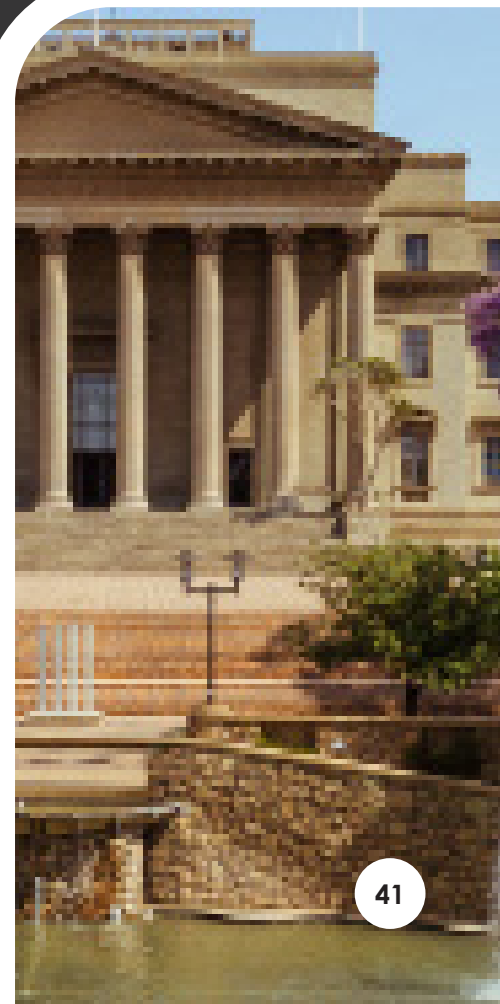
Tel: 021 650 9111
Website: www.uct.ac.za
Email: admissions@uct.ac.za



Tel: 021 808 9111
Website: www.sun.ac.za
Email: info@sun.ac.za

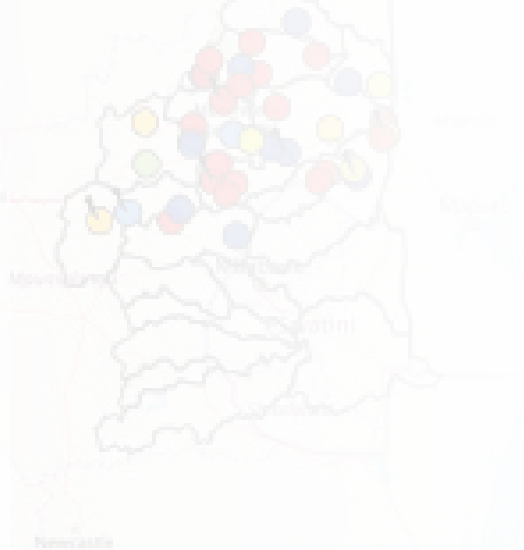


Tel: 021 959 3900
Website: www.cput.ac.za
Email: info@cput.ac.za



(X1H016) Buffelspruit 2:00:00	3.27	m³/s
(X1H017) Komati Riv:8:00:00	3.05	m³/s
(X1H023) Canal From 2:00:00	0.26	m³/s
(X1H033) Komati Riv:6:00:00	6.89	m³/s
(X2H036) Komati Riv:7:48:00	88.04	m³/s
(X1H040) Komati Riv:2:00:00	1.78	m³/s
(X1H052) Mkomati riv:2:00:00	1.45	m³/s
(X1H053) Komati Riv:6:00:00	0.00	m³/s
(X2H055) Nels River v6:00:00	2.60	m³/s
(X2H060) Krokodil Riv:7:48:00	6.60	m³/s
(X2H060) Queens Riv:2:00:00	0.42	m³/s
(X2H010) Nodokopp 6:00:00	1.02	m³/s
(X2H012) Krokodil Riv:6:00:00	3.28	m³/s

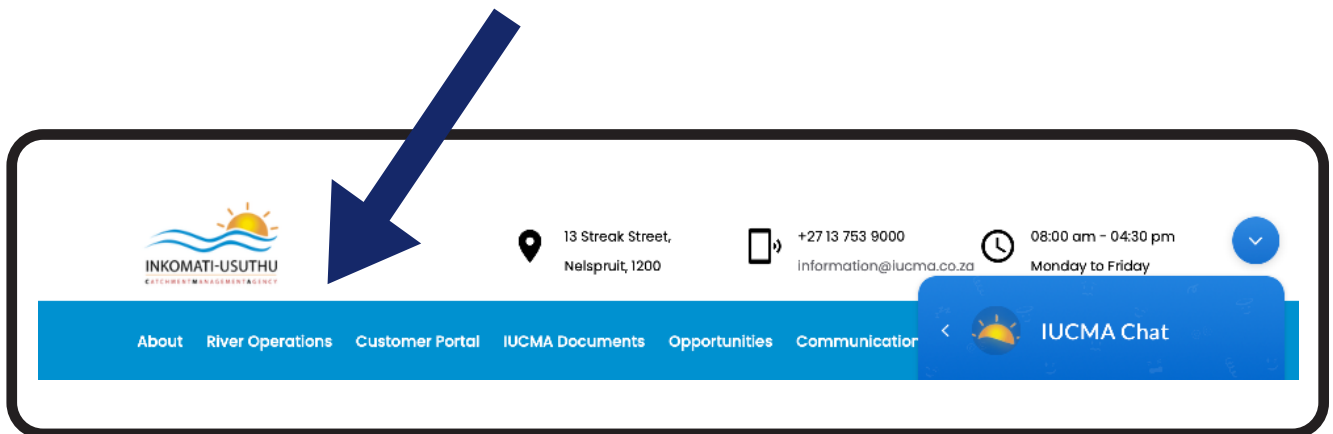
RIVER OPERATIONS WEB PORTAL

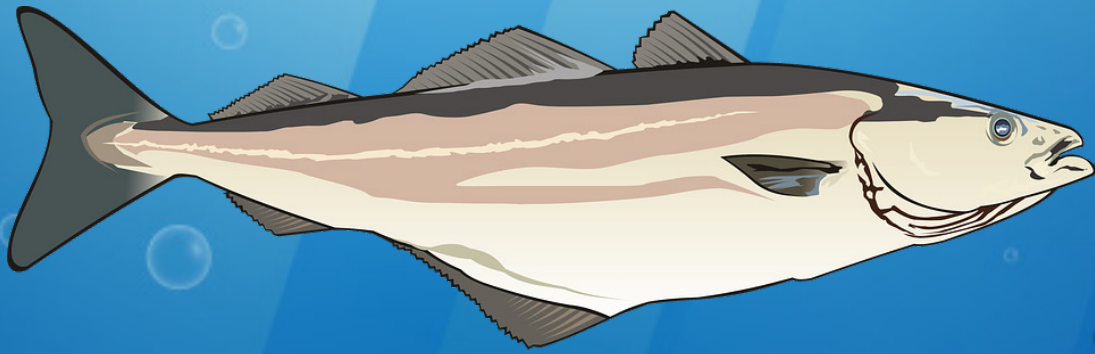


The Inkomati-Usuthu Catchment Management Agency is committed to bring you all the information you need to enable you to use water wisely and considerably. The IUCMA has established a web portal for River Operations that brings you the daily flows of the water in the Catchment. To gain access to this information, please log on to

<http://riverops.inkomaticma.co.za/>

The link to the River Operations portal is also available on the website at www.iucma.co.za to access it go to the **home page of the IUCMA website. click Hydrology water quality status then click the river operations web portal link**





PROTECT OUR STREAMS

*Take action against pollution and be
involved in cleaning campaigns*

Tel: 013 753 9000 | Website: www.iucma.co.za

*Inkomati-Usuthu CMA, your
partner in water management*



**Private bag X11214,
Mbombela, 1200**

**Suite 801, The MAXSA Building,
13 Streak Street, Mbombela, 1200**

**Tel: 013 753 9000
www.iucma.co.za**



INKOMATI-USUTHU
CATCHMENT MANAGEMENT AGENCY