



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



EdTM

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MINISTER OF WATER AND SANITATION

NATIONAL ASSEMBLY: QUESTION 2824 FOR WRITTEN REPLY

A draft reply to the above mentioned question asked by Ms T E Baker (DA) is attached for your consideration.



DIRECTOR-GENERAL

DATE: 8/10/15

DRAFT REPLY APPROVED/AMENDED



**MRS NP MOKONYANE
MINISTER OF WATER AND SANITATION**

DATE: 12-10-15

NATIONAL ASSEMBLY

FOR WRITTEN REPLY

QUESTION NO 2824

DATE OF PUBLICATION IN INTERNAL QUESTION PAPER: 7 AUGUST 2015
(INTERNAL QUESTION PAPER NO. 28)

2824. Ms T E Baker (DA) to ask the Minister of Water and Sanitation:

What is the current trophic status of the Inkomati water management area's (a) river catchment areas, (b) dams and (c) sub-management areas?

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REPLY:

(a) The trophic status gives an indication of the level of nutrients in the water bodies which has a propensity to promote algal blooms or the growth of blue green algae especially during summer when the water temperature rises. Chlorophyll is used as an indicator of trophic status of the water as it measures the amount of blue/green algae growing in the water. Algal blooms are more prevalent in stagnant water or impoundments and less so in flowing water. The following is the trophic status for the four major rivers in the Inkomati-Usuthu Water management area:

Sabie river- The nitrate and Phosphate concentrations are within the acceptable standards of the Inkomati-Usuthu Catchment Management Agency (IUCMA) Water Quality Objectives. The spikes seen at some of the monitoring points during certain periods of the year might be due to rainstorms washing the agricultural fields into the rivers during the specific periods.

Crocodile river- The nitrate concentrations in the Crocodile River (mainstream) from January 2013 till August 2015 range between undetectable levels and 1.5mg/l which is within acceptable levels. The phosphate concentrations in Crocodile River also fall within the acceptable levels of 2mg/l.

Komati river-The nitrate concentrations in the Komati River fall within the target water quality limit of 6mg/l for the period starting January 2013 till August 2015. Similarly, the phosphate concentrations in the tributaries of the Komati River fall within the target water quality limit of 1mg/l for the period starting January 2013 till August 2015. This shows that the conditions in the Komati River are not conducive for the growth of blue green algae that would result in algal blooms.

Usuthu river- The results show that the nitrate concentrations fall within the target water quality limit of 6mg/l and range between 0.2 and 1.8mg/l for the period starting April 2015 till August 2015. The phosphate concentrations also fall within the acceptable limit of 1mg/l.

(b) The IUCMA has been monitoring the trophic status in two dams on behalf of my Department through a Memorandum of Agreement, namely: Injaka and Boesmanspruit dams. The trophic level of both the Injaka and Boesmanspruit dams is oligotrophic since the mean annual chlorophylla content is low measuring less than 10 ($\mu\text{g/l}$) micrograms per litre.

(c) There is no monitoring taking place on sub-management areas. However, the nutrients that are likely to promote the growth of blue/green algae when they occur in higher concentrations in dams, rivers and streams are nitrate and orthophosphate.

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