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Water and Sanitation  
**REPUBLIC OF SOUTH AFRICA**



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# **CLASSIFICATION OF SIGNIFICANT WATER RESOURCES AND DETERMINATION OF RESOURCE QUALITY OBJECTIVES FOR WATER RESOURCES IN THE USUTU TO MHLATHUZE CATCHMENTS (WP11387)**

**Project Steering Committee 2, Virtual: 4 November 2022**



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# BASIC HUMAN NEEDS (BHN) RESERVE

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# OBJECTIVE

- The National Water Act (Act No. 36 of 1998) ensures that everyone has access to sufficient water by setting aside a certain amount of water to meet everyone's basic needs, i.e. the BHNR.
- The BHNR is based upon the current and projected population of those either living within the catchment and directly dependant on the catchment or, critically, not being supplied with water from a recognised formal source

# METHOD

- To calculate the quantity of water for the BHNR, the daily normative allowance of 25 litres per person per day was used for eligible individuals in the population. The figure of 25 litres is used from communication from DWS.

# Method

- Quaternary catchments falling within the Usutu to Mhlathuze Catchment were determined, and the area of each catchment was calculated based on GIS information.
- Data from the 2016 Statistics South Africa Community Survey (Stats SA, 2016) was used to determine the number of people within Local Municipalities that fall either entirely or partially within the Usutu to Mhlathuze Catchment

# Method

- The number of people within the Local Municipality was apportioned to the quaternary catchment based on the size of the quaternary relative to the total Municipal Population and taking cognisance of densely populated urban areas.
- Based on level of service provided by the Local Municipality and the information from the 2016 Statistics South Africa Community Survey, the number of people estimated to be directly dependant on the various water sources were calculated per quaternary catchment.

# Method

- The 2016 Statistics South Africa Community Survey water supply was determined by household and the method needed adjustment to account for individuals.
- Average individuals per household were determined via the analysis of 2016 Statistics South Africa Community Survey.

# Methods

- According to the results of the 2016 Statistics South Africa Community Survey, approximately 77% of the overall Water Management Area (WMA) population has access to formal water supply schemes or abstract groundwater via boreholes.
- Having calculated the qualifying population per quaternary catchment the next step in determining the BHNR is to project the population to a target date. The average growth for the applicable Local Municipalities between 2011 Census and 2016 Community survey of 1.7% per annum was used.
- Model assumes no change in levels of service provided by Municipalities. Evidence suggests that while some municipalities have made progress in terms of level of service provided since 2016 many have not – some have regressed.

# Population BHN

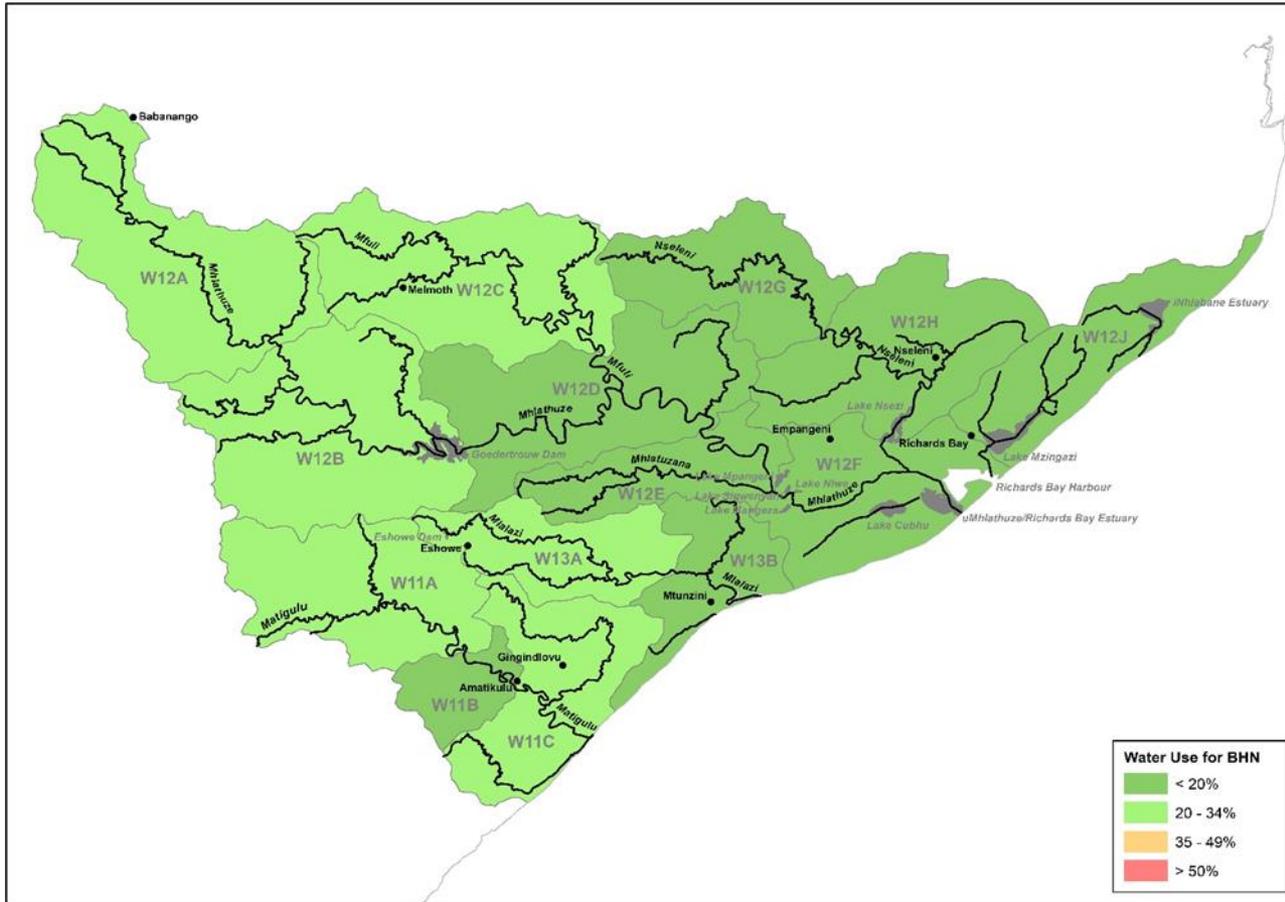
## Summary of catchment area population and population dependant on BHR

Secondary catchment Area	Total population	Population BHR Dependent (excluding boreholes and formal schemes)		
		2022	2030	2040
W1	842 052	111 687	127 811	153 851
W2	758 735	212 514	243 194	292 742
W3	612 763	202 600	231 850	279 086
W4	438 168	116 746	133 601	160 821
W5	425 388	38 000	43 486	52 346
W7	107 693	18 427	21 087	25 384
<b>Total</b>	<b>3 184 799</b>	<b>699 974</b>	<b>801031</b>	<b>964 229</b>

# BHN per catchment area in million m<sup>3</sup> per annum

Area	Pop BHN R Depend excl Borehole	2022	2025	2030
W1	111687	1.019	1.090	1.186
W2	212514	1.939	2.074	2.257
W3	202600	1.849	1.978	2.152
W4	116746	1.065	1.140	1.240
W5	38000	0.347	0.371	0.404
W7	18427	0.168	0.180	0.196
<b>Total</b>	<b>699974</b>	<b>6.387</b>	<b>6.833</b>	<b>7.434</b>

# W1 - Mhlathuze

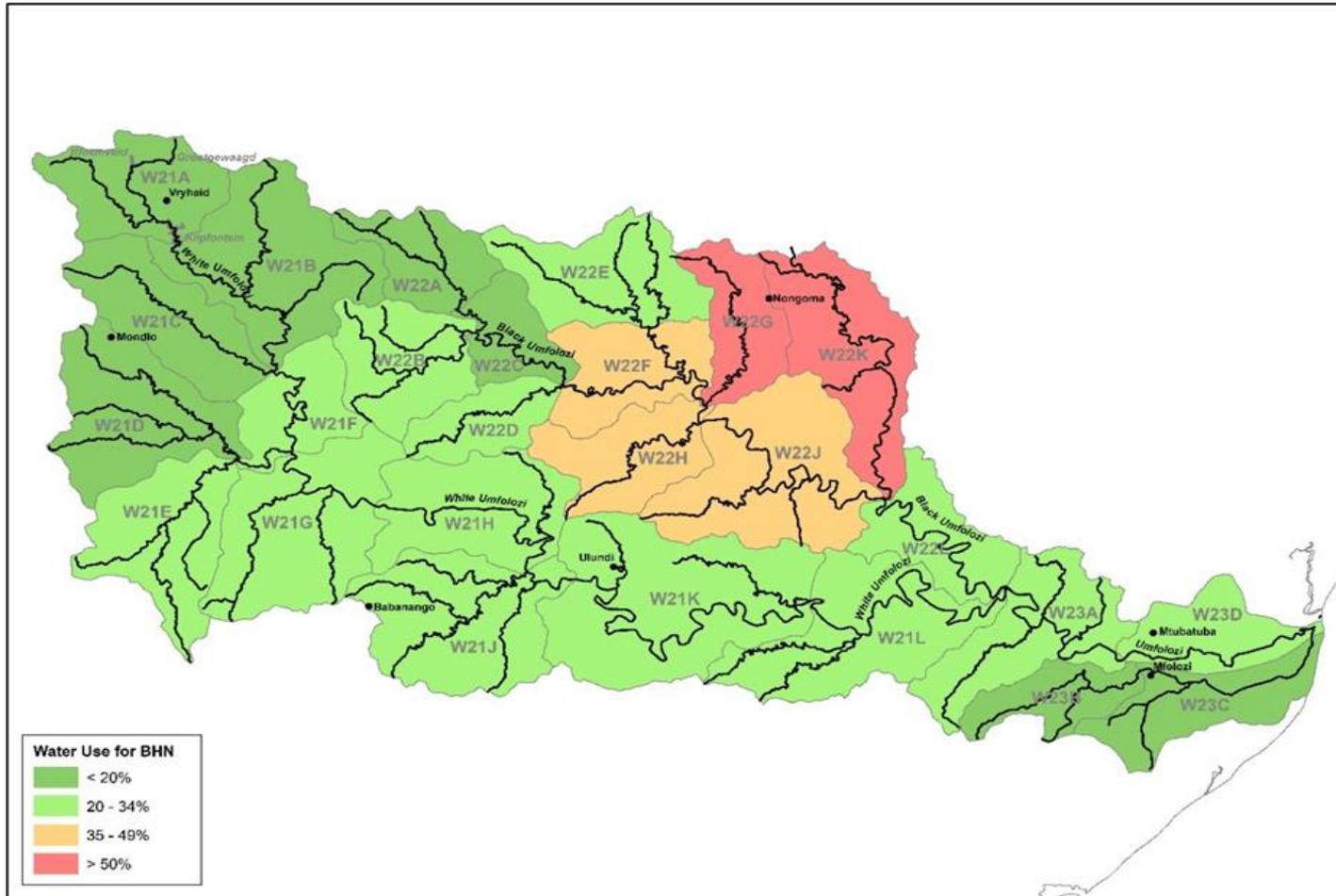


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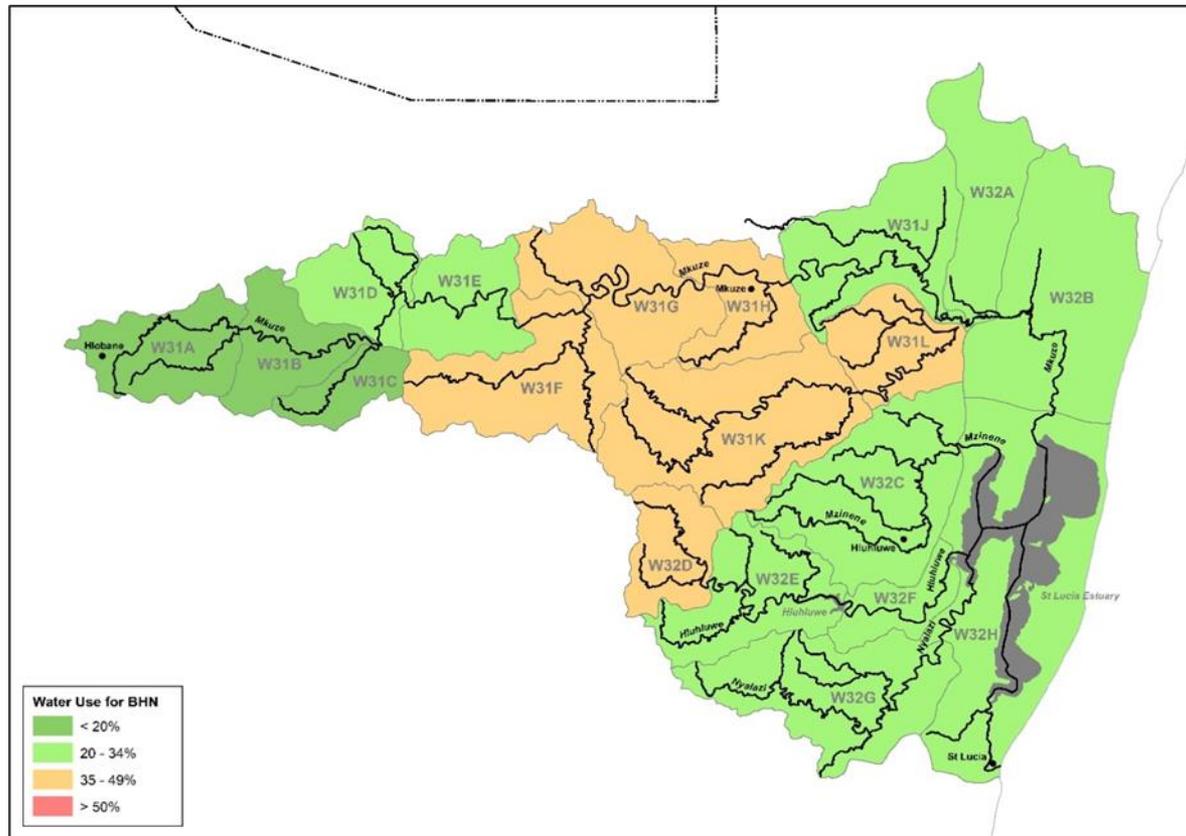
# W2 - Umfolozi



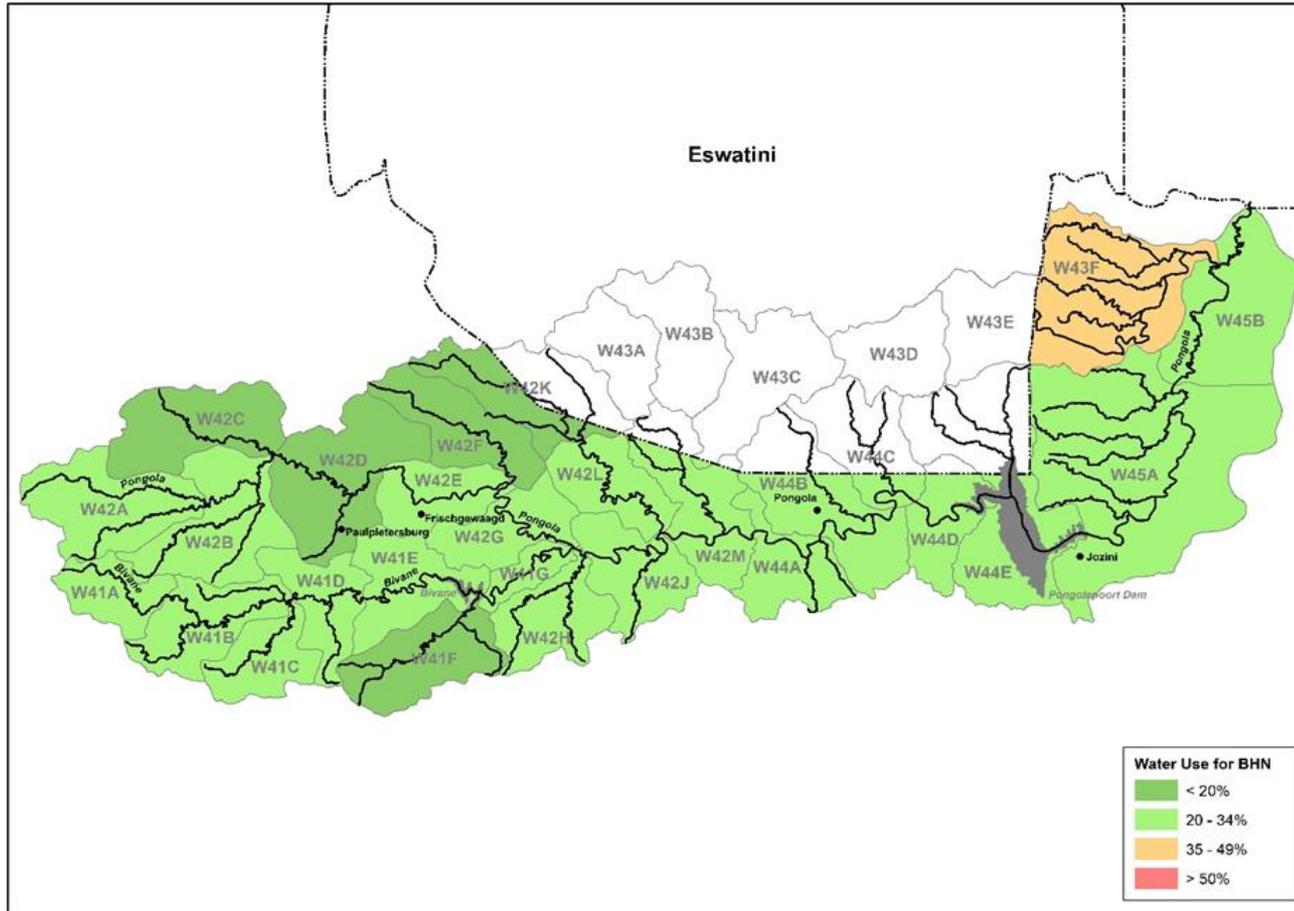
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# W3 - Mkhuze



# W4- Pongola

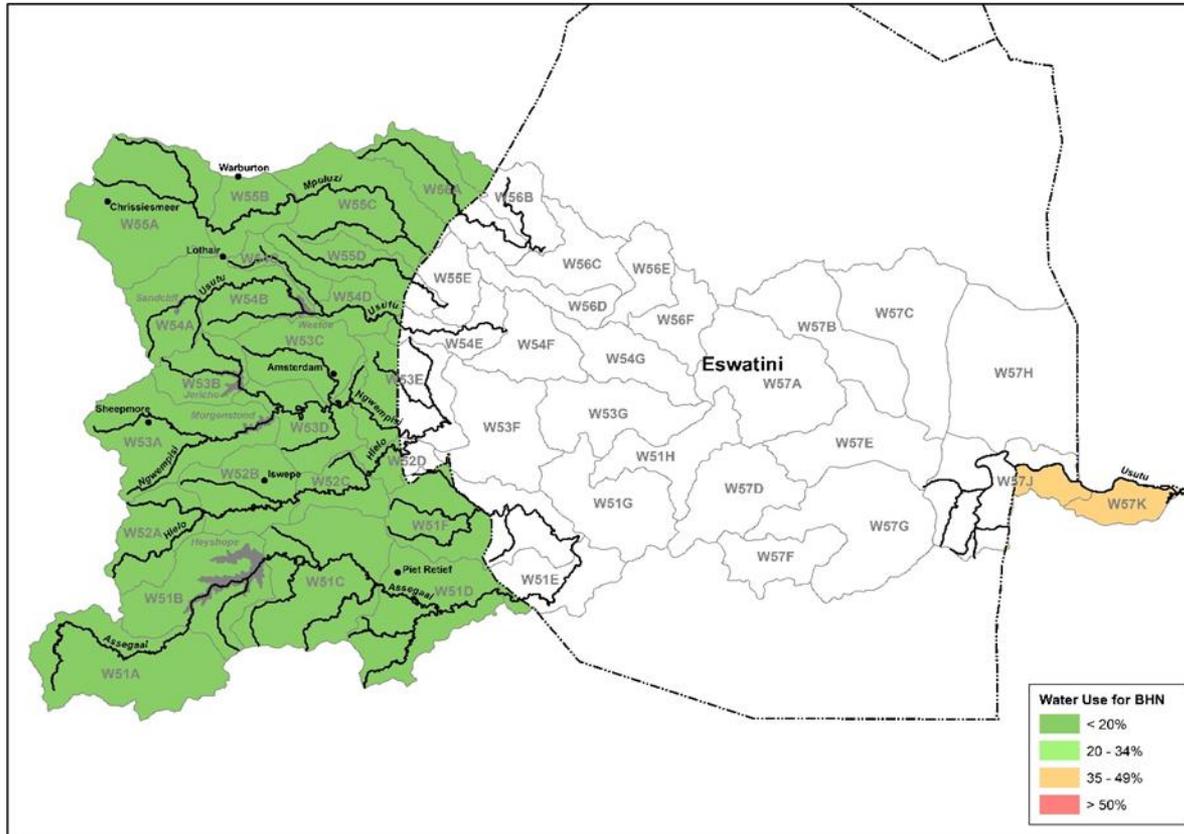


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# W5 - Usutu



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