

Household water security in the Matatiele Local Municipality

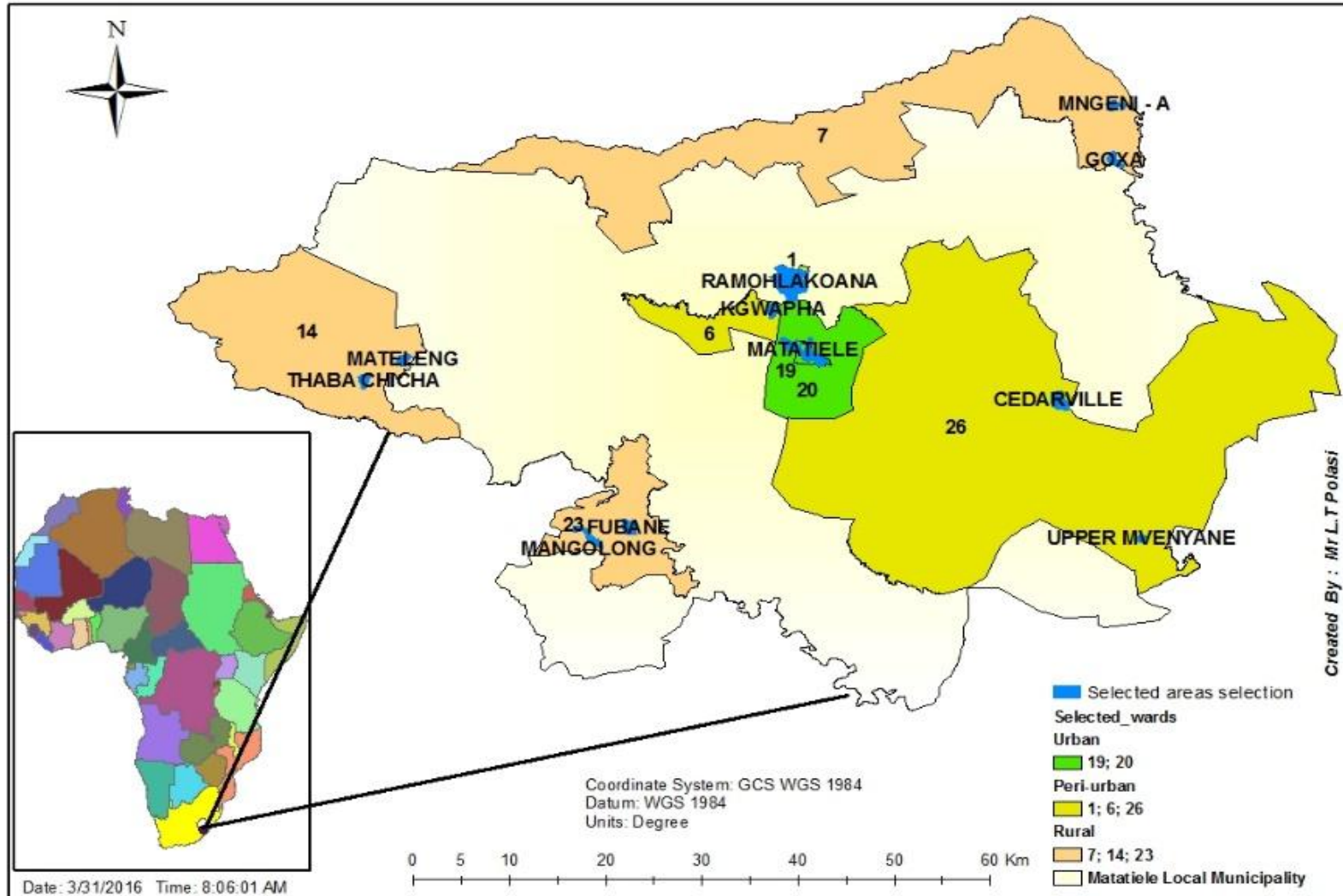
By

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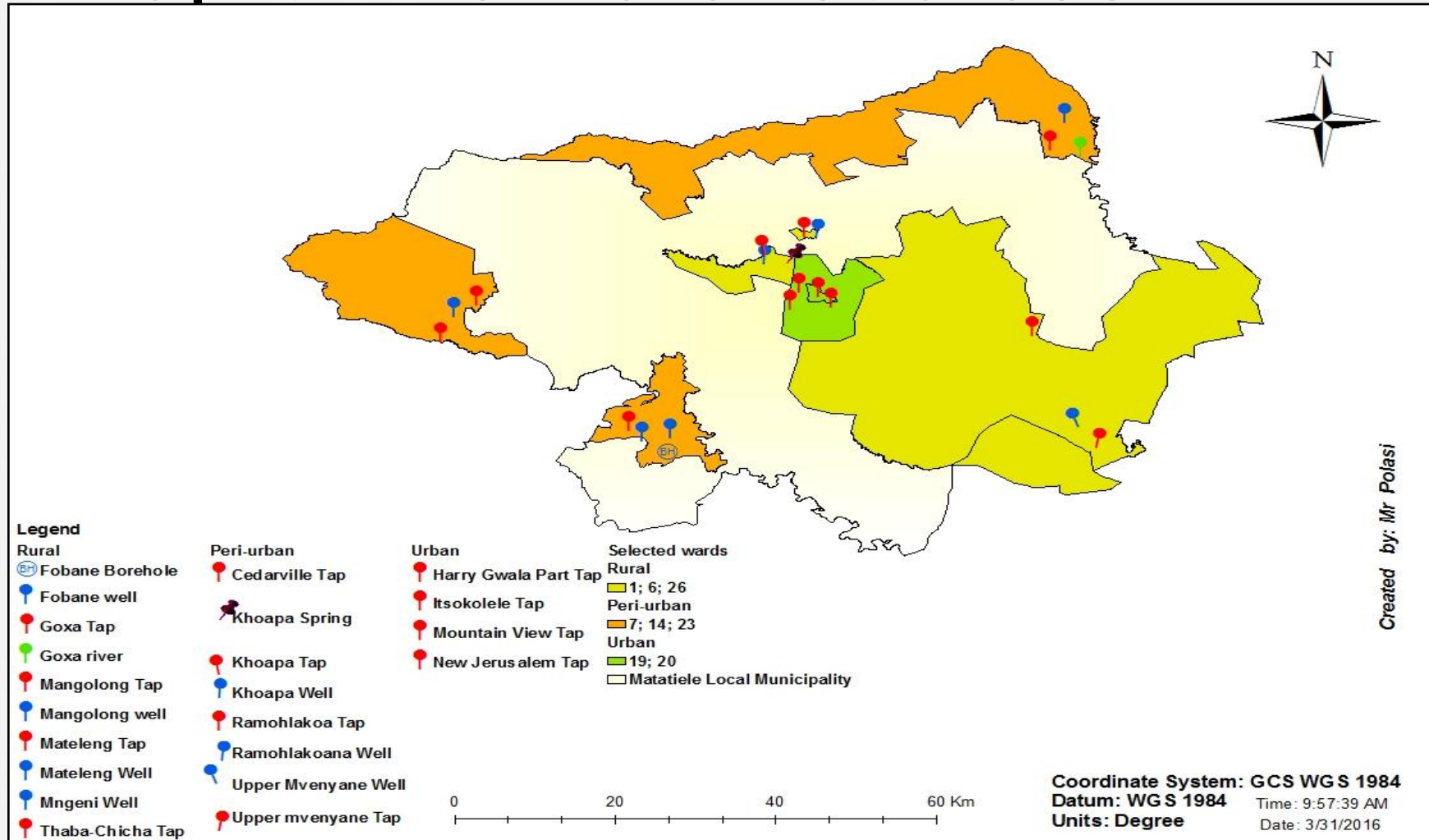
Aim and Objectives

- The aim of the study was to assess water security in the Matatiele Local Municipality.
- Identifying and mapping sources of water which are mostly used;
- Assessing the accessibility of those water sources; and
- Measuring water quality of those water sources for human consumption.

Map of the study area

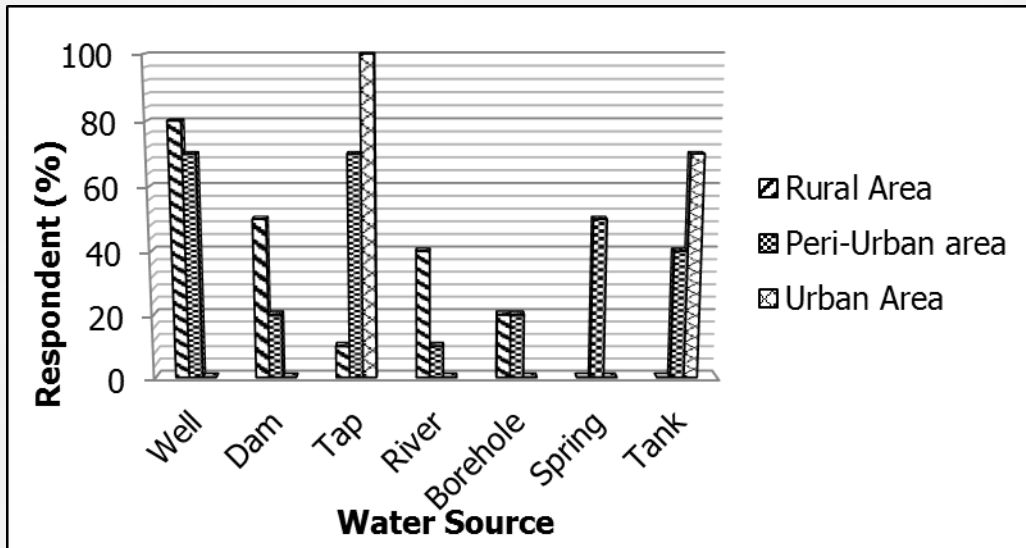


Map of the water sources



Water sources

<i>Source Variation</i>	<i>of SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	1228.286	6	204.714	3.348	0.029
Within Groups	856	14	61.143		
Total	2084.286	20			

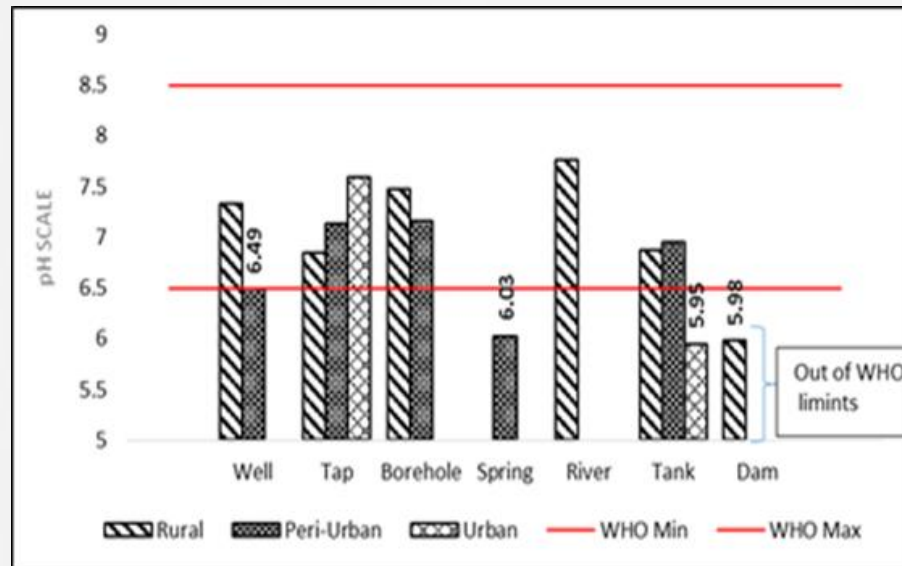


Water sources



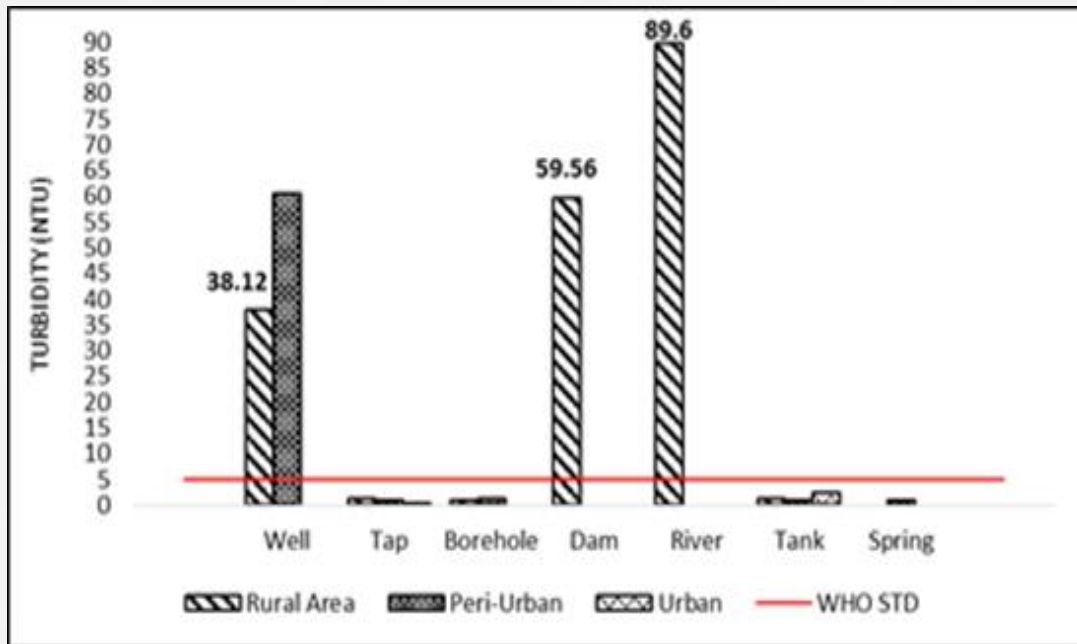
RESULTS: pH

Source of Variation	SS	df	MS	F	P-value
Between Groups	1.821	2	0.910	1.773	0.191
Within Groups	12.324	24	0.514		
Total	14.145	26			



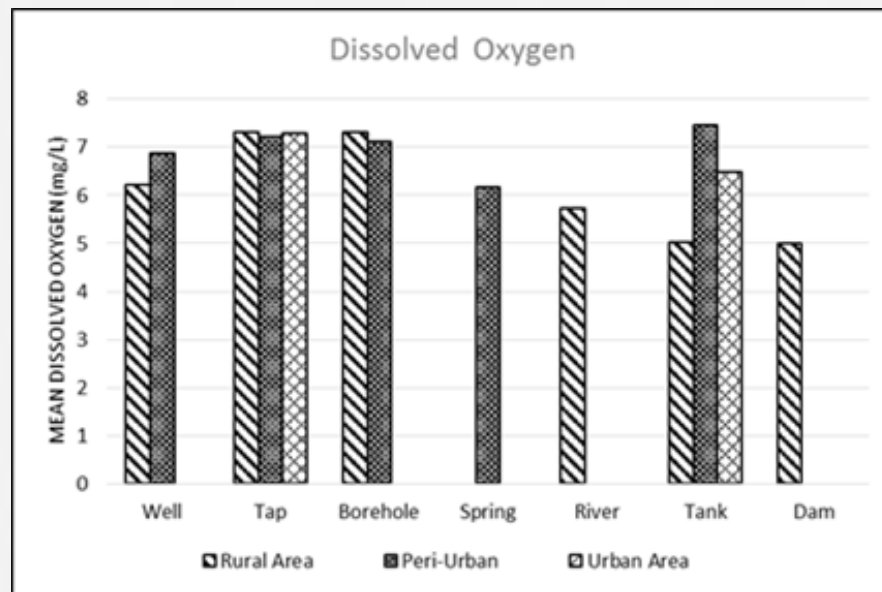
RESULTS: TURBIDITY

Source of Variation	SS	df	MS	F	P-value
Between Groups	2149.189	2	1074.595	1.327	0.284
Within Groups	19440.9	24	810.038		
Total	21590.09	26			



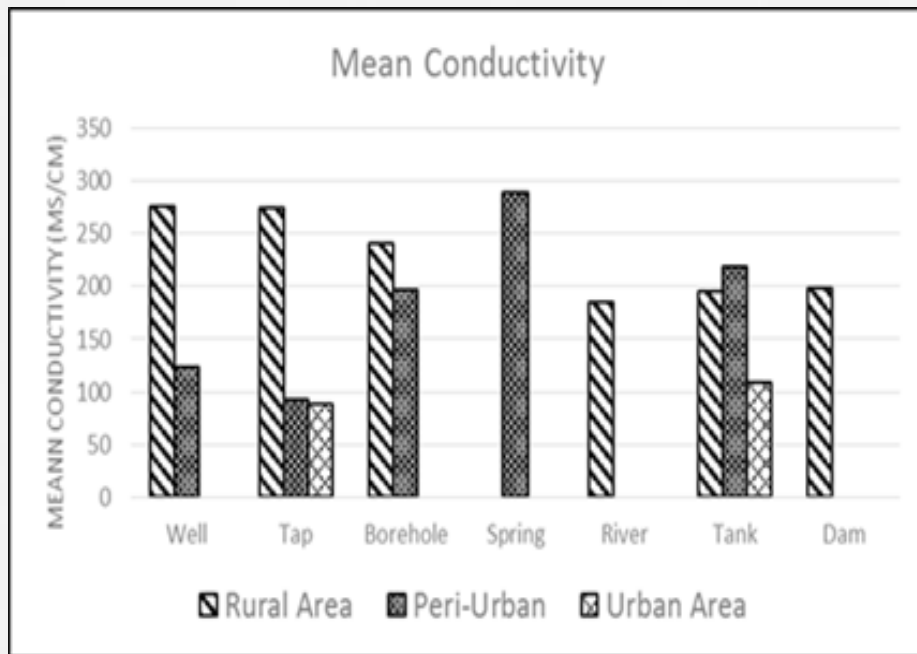
RESULTS: DISSOLVED OXYGEN

Source of Variation	SS	df	MS	F	P-value
Between Groups	2.645	2	1.322	2.192	0.134
Within Groups	14.477	24	0.603		
Total	17.121	26			



RESULTS: CONDUCTIVITY

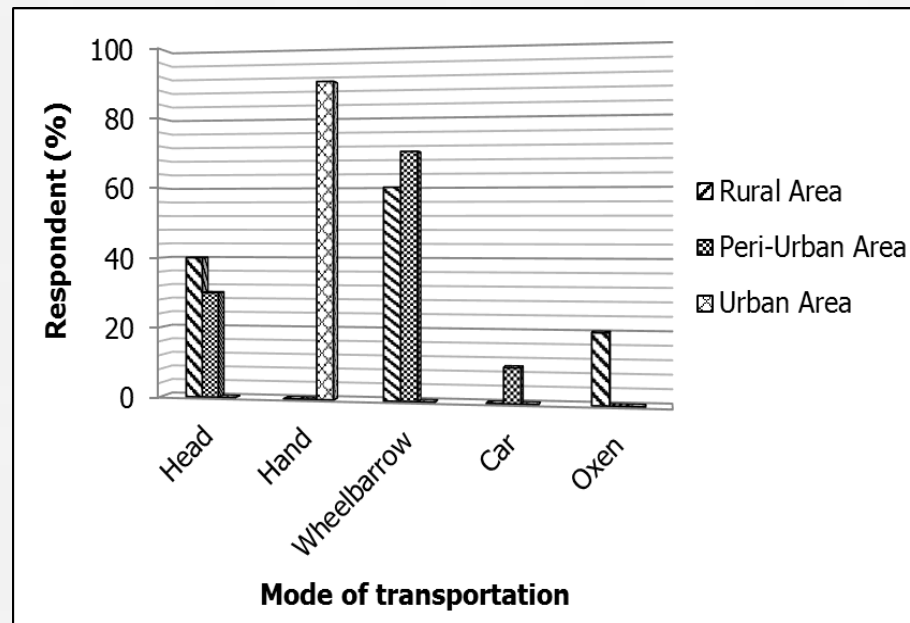
Source of Variation	SS	df	MS	F	P-value
Between Groups	112982.7	2	56491.35	10.001	0.00069
Within Groups	135559.3	24	5648.304		
Total	248542	26			



RESULTS: ACCESSIBILITY

Source of Variation	SS	df	MS	F	P-value
Between Groups	1.682	2	0.841	4.637	0.027
Within Groups	2.721	15	0.181		
Total	4.403	17			

**Average distance travelled
30m, 700m and 1.8km**



Recommendations

- Installation of more boreholes
- Reliable communal taps
- Training on rain water harvesting techniques
- Modification of natural water sources
- Water saving strategies (Awareness)