

WaterAid July 20, 2005

#### Water and Sanitation in Tanzania:

#### An update based on the 2002 Population and Housing Census

The 2002 Census asked over a million houselholds about their main source of drinking water and the toilet facilities they use. The key findings were that:

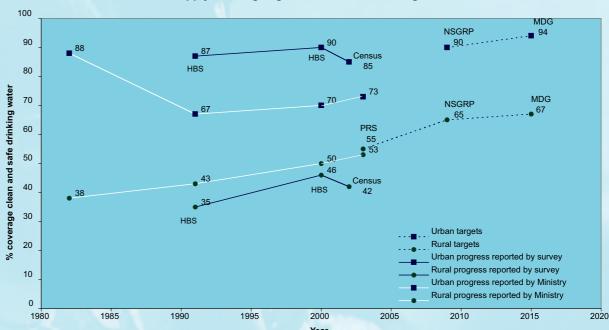
- Only 42% of rural households had access to an improved source of drinking water, making the NSGRP target of 65% by 2010 look even more challenging.
- ⇒ In 7 districts, fewer than 10% of households had access to an improved water source
- In urban areas, 85% of households had access to an improved source of drinking water. Access in non-regional towns was below 75%, and in peri-urban areas, below 50%.
- In Dar es Salaam, although 92% of households had access to an improved water source, over 50% of households in Ilala Municipality were getting their drinking water from wells, 9% of which were not improved.
- ⇒ Over 90% of all households used toilet facilities but it is not possible to tell if these facilities amount to basic sanitation.

#### **Background**

In 2003, the Ministry of Water and Livestock Development, WaterAid, the Eastern Africa Statistical Training Centre and the National Bureau of Statistics published a collaborative work reviewing the water and sanitation indicators used by national surveys in Tanzania. The study also reported on trends derived from

those existing indicators <sup>1</sup>. This briefing paper is an update to that study, based on data made available from the 2002 Population and Housing Census. This update relates the results to the revised indicators for water and sanitation presented in Tanzania's National Strategy for Growth and Reduction of Poverty (NSGRP).

#### Urban and Rural water supply coverage against PRS and MDG targets



Note: The PRS had no urban water supply coverage target.

<sup>1.</sup> Ministry of Water and Livestock Development, WaterAid Tanzania, Eastern Africa Statistical Training Centre (2003). Water and Sanitation in Tanzania: Poverty monitoring for the sector using national surveys. WaterAid, Dar es Salaam.

### The NSGRP indicators for water and sanitation

The NSGRP is Tanzania's second poverty reduction strategy, covering the period 2005 to 2010. The strategy includes six operational targets for water supply, sanitation and waste management (see Box 1).

The Census data can only be used to comment on two of these NSGRP operational targets; water supply (3.1) and basic sanitation (3.5). Moreover, as the Census was carried out in 2002, the data reports on the situation 3 years before the operational targets were set. Nevertheless, the Census data provides an authoritative, nationwide snap-shot of household access to water supply and sanitation that is independent from the routine data reported by the Ministry of Water and Livestock Development.

## What can the 2002 Census data tell us about water supply?

The 2002 Housing and Population Census was administered in a short and a long form. The short form, which covered basic demographic data, was filled in by all households. The long form, covering a range of socio-economic questions including water and sanitation, was filled in by 15% of households in Tanzania.

The long-form of the Census can be used to report on a proxy of the indicator 'access to

clean and safe water'. This proxy is the proportion of households with access to improved water supply. Improved water supply is defined as those households that get their main source of drinking water from a piped supply, or from a protected well or spring. The Census did not ask about the time taken to fetch water, which limits any comment to the type of water sources used.

The Census water supply data can be disaggregated into rural and urban strata, and allows analysis by region and district. The Census reports that 42% of rural households and 85% of urban households in Tanzania get their drinking water from an improved water source.



Box 1. Water Supply and Sanitation in Tanzania's National Strategy for Growth and the Reduction of Poverty

#### Goal 3:

Increased access to clean, affordable and safe water, sanitation, decent shelter and a safe and sustainable environment and thereby, reduced vulnerability from environmental risk.

#### Operational Targets

#### A. Water

3.1 Increase the proportion of the rural population with access to clean and safe water from 53% in 2003, to 65% in 2009/10 to within 30 minutes of time spent on collection of water. Increase the proportion of the urban population with access to clean and safe water from 73% in 2003, to 90% by 2009/10.

#### **B. Sanitation & Waste Management**

- 3.2 Increased access to improved sewerage facilities from 17% in 2003 to 30% in 2010 in respective urban areas.
- 3.3 Reduce households living in slums without adequate basic essential utilities.
- 3.4 100% of schools to have adequate sanitary facilities by 2010.
- 3.5 95% of people with access to basic sanitation by 2010.
- 3.6 Reduce Cholera out-breaks by half by 2010.

Figure 2. Percentage of households by main source of drinking water



Main source of household drinking water

Source: Census 2002

Consistent with previous analysis urban has been further split into Dar es Salaam and 'other urban' areas (see Figure 2).

Access to improved water supply in rural areas as reported by the Census is notably less than the 2003 routine data figure of 53%, presented as a baseline for the NSGRP. Furthermore, the routine 'coverage' indicator does not take into account the time to fetch water. The NSGRP target is therefore far more challenging than it first appears, as the 53% coverage claimed in 2003 does not include a time dimension, whilst the rural target does.

For rural areas, there is no obvious pattern of either over or under reporting between the Census and the Ministry's routine data. It should, however, be pointed out that there is a stronger correlation between the Household Budget Survey data and the Census data than there is between either of these surveys and routine data. There are also a number of extreme discrepancies between the Census data and routine data at regional level (see Table 1).

While some of these discrepancies can be put down to methodological differences between survey and routine data collection systems, these are not explanation enough. The Census data provide further evidence that progress against NSGRP should not just be measured on the basis of routine data, rather progress should be measured on the basis of survey data.

Table 1. Comparison of selected reported rural water supply statistics

Region	Census 2002 %of rural HH with access	Ministry Routine Data 2003 % of rural population served	Difference in % points
Pwani	15	59	- 44
Mtwara	29	64	- 35
Kilimanjaro	74	54	+ 20
Dodoma	50	77	- 17

In urban areas, the Census reported consistently higher rates of access to improved water supply when compared to routine data figures. There are three likely reasons for this:

- · First, the Census only asks about the source of drinking water.
- · Second, the Urban Water and Sewerage Authorities only report on the coverage of the municipal piped systems which they manage. Private sources, including boreholes and protected shallow wells, most of which are not registered, are not included in the coverage estimate.
- · Third, the many households without a direct connection to the municipal supply that get their drinking water from their neighbours are underestimated in routine data reports.

#### District level analysis

The results of the long form of the 2002 Census questionnaire can be analysed by district. This is the first time that a national household survey in Tanzania has been administered at such scale, and provides a rare chance to compare access to improved water supply across districts.

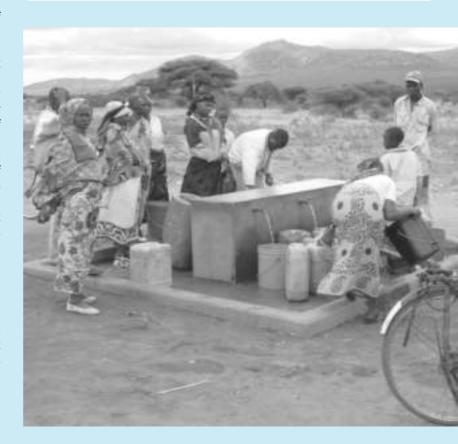
In order for this comparison to be useful, the data for urban and rural access in each district needs to be analysed separately. Water supply infrastructure is both built and managed in very different ways in urban and rural areas, which can lead to very sharp differences in levels of access. Indeed, the aggregate national figures for urban (85%) and rural (42%) access are evidence of an overall inequitable outcome. At district level, these disparities are even greater. Districts with good urban access masked very poor service in surrounding rural areas. For example, Tabora Urban district is made up of both urban and rural enumeration areas 2 and had an overall coverage of 68%. However, while the improved water supply covered 90% of households in the enumeration areas (EAs) classified as urban, coverage in the rural EAs was only 11%. Even in an essentially rural district such as Mbulu, service to the urban EAs was 90%, while in rural EAs it was only 17%.

#### Rural water supply by district

The Census reports that 42% of rural households had access to improved water supply, but the distribution across districts is quite extreme. At the bottom end of the scale, there were 7 districts in which **fewer than 10% of rural households** had access to improved water supply including: Sikonge (4%), Igunga (5%), Kishapu (9.6%),

Table 2: Comparison of selected reported urban water supply statistics

Regional town	Census 2002 % of urban HH with access	Urban Water Authority Routine Data 2002/3 % of urban population served	Difference in % points
Arusha	99	94	+ 5%
Bukoba	74	71	+ 3%
Dodoma	95	64	+ 31%
Iringa	88	80	+ 8%
Kigoma	92	87	+ 5%
Lindi	87	60	+ 27%
Mbeya	98	71	+ 27%
Morogoro	95	75	+ 20%
Moshi	92	85	+ 7%
Mtwara	98	83	+ 15%
Musoma	94	75	+ 19%
Mwanza	88	78	+ 10%
Shinyanga	74	59	+ 15%
Singida	86	45	+ 41%
Songea	94	57	+ 37%
Sumbawanga	92	60	+ 32%
Tabora	90	88	+ 2%
Tanga	97	95	+ 2%



<sup>2.</sup> Enumeration areas were classified by the National Bureau of Statistics in dialogue with District and Municipal planners. Even within a single ward it is possible to find both urban and rural enumeration areas

Liwale (8%), Mkuranga (6%), Rufiji (9%) and Mafia (3%). At the top end of the scale, there were 4 districts in which over 80% of households were reported to have access including; Arumeru (82%), Mwanga (82%), Kyela (83%) and Rombo (93%).

These extremes are largely the result of investment patterns over the years, but they also reflect the relative technical difficulties of developing water supplies in different areas. Many of the districts with higher rates of access are places in which gravity schemes, which are easy to build and maintain, are possible. The challenges of developing water supplies in districts at the bottom of the scale include:

- · Low population densities in Liwale and Sikonge;
- · Salinity in Mkuranga, Rufuji and Mafia;
- · Flouride in Kishapu.

While the 7 districts mentioned above stand out for their lack of access to improved water supplies, there are a total of 76 out of 113 districts in which less than 50% of rural households had access to improved water sources.

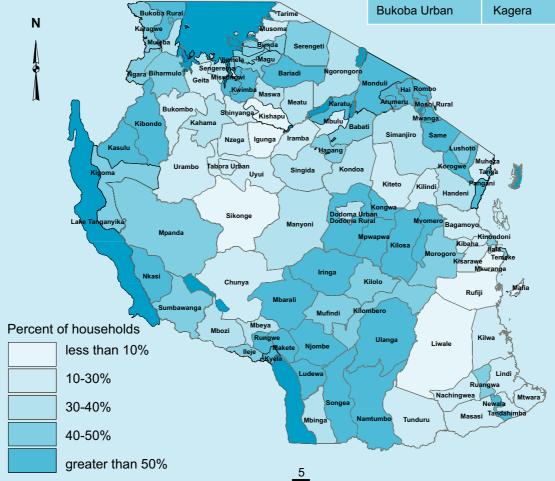
# Rural households using improved water sources as their main source of drinking water

#### Peri-urban areas of regional towns

Peri-urban areas are defined here as rural areas of urban districts. They need special analytical attention because water supply development in these areas is not the responsibility of the Urban Water and Sewerage Authorities that serve the urban parts of these regional towns. As a result, many of these often large, rural areas received very little investment in water supply development in the 1990s. While this gap has been recognised by the Ministry of Water and Livestock Development and investment programmes have since been set up, the Census data provide a unique opportunity to set a baseline for these areas.

Table 3. Peri-urban areas in which fewer than 50% of households have access to improved water sources.

District	Region	% of HH with Access		
Musoma Urban	Mara	3		
Tabora Urban	Tabora	11		
Iringa Urban	Iringa	17		
Morogoro Urban	Morogoro	21		
Kibaha	Pwani	28		
Singida Urban	Singida	32		
Lindi Urban	Lindi	35		
Dodoma Urban	Dodoma	38		
Bukoba Urban	Kagera	48		



#### Urban water supply by district

The Census reports that just under 84% of households in urban areas, other than Dar es Salaam, got their drinking water from improved water supplies.

Despite this high average, there were urban areas in 9 districts in which fewer than 50% of households used improved water supplies (see Table 4). The reasons for these comparatively low figures varied. Urban areas in Kigoma Rural and Lindi Rural are a result of urban expansion into rural districts without a parallel expansion of municipal water supply services. Other places listed are district towns, some of which are long established with persistent unresolved water supply problems (Kahama, Nachingwea). The remainder are trading centres (designated as district headquarters in the past 10 years) that have grown without substantial investments in town water supplies (Tandahimba, Manyoni, Iramba, Urambo and Simanjiro).

#### Dar es Salaam by municipality

The three municipal districts of Dar es Salaam (Ilalla, Kinondoni and Temeke) were broken down into rural and urban areas for analysis though the rural part of Dar es Salaam accounts for only 6% of the city's population. Analysing the urban part of Dar es Salaam data by its 3 municipalities shows just how different the water supply situation is in each of the municipalities, and serves as a useful guiding baseline to the water reforms in Dar es Salaam.

Most notably, in Ilalla over half (51%) of urban households surveyed were not getting their drinking water from the municipal piped system. Ilalla also had the greatest proportion of households using unprotected or unsafe water sources (9%). The remainder were getting their drinking water from protected wells and other sources, including vendors. This contrasts with the picture of access in Kinondoni, where over 90% of households questioned were using piped water as their main source of drinking water. In the rural parts of Dar es Salaam access was much poorer than in the urban part, with only 35% of households getting their drinking water from improved sources. Most notable was the rural part of Ilala where nearly 80% of rural households were getting their water from unsafe sources.



Table 4. Urban areas in which fewer than 50% of households have access to improved water sources.

District	Region	% of HH with Access		
Kigoma Rural	Kigoma	23		
Iramba	Singida	33		
Simanjiro	Manyara	35		
Nachingwea	Lindi	36		
Kahama	Shinyanga	41		
Urambo	Tabora	43		
Tandahimba	Mtwara	45		
Manyoni	Singida	47		
Lindi Rural	Lindi	48		

# Access to water supply in relation to other sectors and cross-cutting issues

For this update, water supply data from the Census was analysed in relation to a range of other household characteristics, including education, disability, gender and age of the head of household <sup>3</sup>. This exploratory analysis is limited by the structure of the questionnaire, but given the scale of the Census, is helpful in drawing out issues for detailed research in the future.

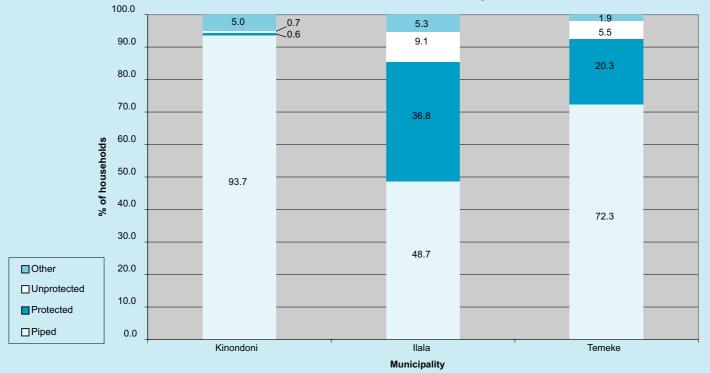
Gender of the head of household – Based on the 2000/1 Household Budget Survey data, the 'Water and Sanitation in Tanzania' study reported that female headed households were more likely to have access to improved sources of water than were male headed households. This is NOT confirmed by the Census data. The proportion of households with/without access to improved water supplies did not vary between female and male headed households.

Households headed by people with disabilities – 3.6% of households in mainland Tanzania were headed by people with disabilities but no significant difference in the proportion of households with/without access to improved water supplies was found. As the question in the Census only asks 'What is your main source of drinking water?' this result says nothing about the quality of access in terms of ease or time.

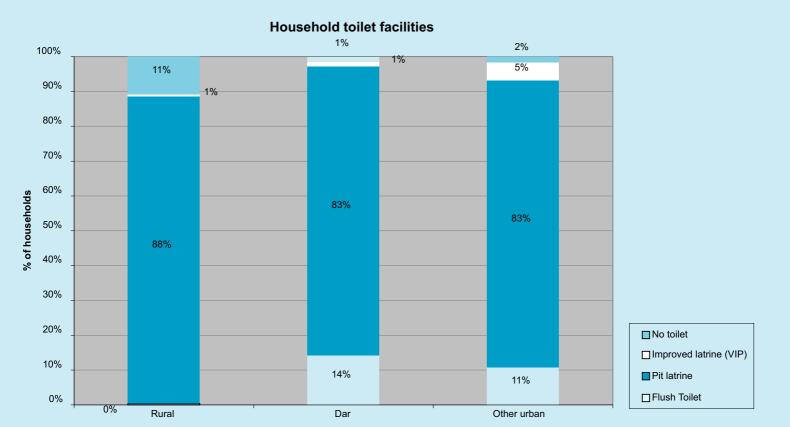
Households headed by people over 65 - In rural areas, access to improved water supply was similar across all age categories. However, in urban areas (both in Dar es Salaam and in other urban areas) households headed by over 65 year olds were LESS likely to have access to improved sources for their drinking water. In Dar es Salaam, 5% of households were headed by over 65s, 84% of which had access to improved sources against an average of 88%. In other urban areas, 8% of households were headed by over 65s, 80% of which had access to improved sources against an average of 84%. That these differences were only found in urban areas suggests that affordability may be a factor for this differential.

Education – School age children in households with access to improved water supply were more likely to be attending school than school age children in households without access to improved water supply. This is reflected across all three strata (rural, Dar and other urban). The difference is most pronounced in rural areas, where 80% of school age children in households using improved water sources were attending schools compared to 71% from households not using improved water sources.

#### Main source of household drinking water



3. Links with poverty will be presented in a separate paper being written with REPOA.



## What can the 2002 Census data tell us about basic sanitation?

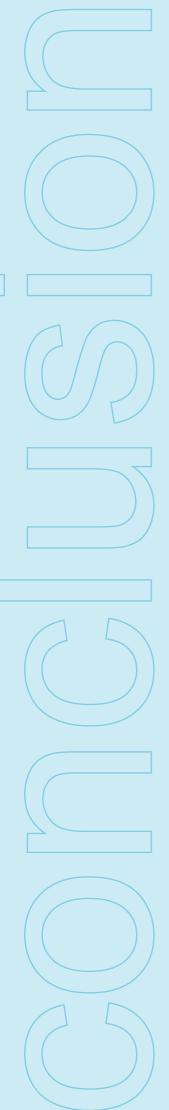
The Census reports on household toilet facilities. The long form of the questionnaire asked about the use of facilities, the response options were limited to flush toilet, pit latrine, ventilated improved pit latrine, no facility and other.

Consistent with previous surveys, the Census reports a very high percentage (87%) of households as having pit latrines, and only 9% of households with no toilet facility at all. Breaking the data down into rural, Dar es Salaam and other urban strata confirms that the majority of households without toilet facilities are in rural areas (see Figure 4).

These figures are frequently questioned by water and health experts, particularly those not familiar with Tanzania, but the data are consistent across all national surveys and are supported by other more detailed surveys. As far back as 1973, the government introduced a 'latrinisation' campaign under a programme called "Mtu ni Afya" (You are your health), aimed at ensuring that each household would have a latrine. The campaign was given added impetus following a cholera outbreak in 1977. Latrine coverage increased from 20-50% between 1973 and 1980, reaching 85% in the 1988 Census.

What can and should be questioned is the quality of toilet facilities. The response options pit latrine and ventilated improved pit (VIP) fail to distinguish adequate from inadequate sanitation. The term VIP is too specific, and the term pit latrines too broad, as pit latrines cover both adequate and inadequate sanitation.

There are also some notable geographical variations. Further breaking the data down by district reveals that there are four districts in which more than 50% of rural households had no toilet facilities: Ngorongoro (57%), Kiteto (58%), Simanjiro (61%) and Monduli (79%). These are all districts in which the majority of people are pastoralists. Though many still depend on their transhumant livelihoods and so would see little point in building permanent toilet facilities, increasing numbers of families are building permanent bases around new health, education and water supply infrastructure.



#### Conclusion

The 2002 Population and Housing Census asked over a million households questions about their assets, and their access to basic services. Amongst these was a question on water supply asking 'What is your main source of drinking water' and one about the household use of toilet facilities.

The results bring into sharp relief the inequality of access to improved water supply both between urban and rural communities, but particularly the inequality among districts. Access in rural areas ranged from 3% to 97%. In 7 districts, access was below 10% and access by rural households to improved water sources in 76 districts was below 50%. The Census data also showed poor levels (below 50%) of household access in peri-urban areas of most regional towns, and of trading centres designated as district headquarters in the past ten years.

Consistent with previous national surveys, the Census reports a very high percentage (87%) of households as having pit latrines, and only 9% of households with no toilet facility at all. The problem is that these data say nothing about the quality of these facilities, or whether these facilities amount to basic sanitation.

The water and sanitation data from the 2002 Census, although basic, are an invaluable baseline for everyone working in the sector, and will no doubt be used by all Tanzanians to monitor the progress of the sector towards universal access to water and sanitation.



## **Households with** access to improved water sources

#### Urban households with access to improved water sources

Rural households	with a	ccess	to	improved	water	sources
District	R	Region		%		

	District	Region	%	District	Region	%	ter sources		
	Kigoma Rural	Kigoma	23	Musoma Urban	Mara	3	Iringa Rural	Iringa	52
			23 33	Mafia	Pwani	3 3	Nkasi	Rukwa	5/
	Iramba	Singida		Sikonge	Tabora	4	Kibondo	Kigoma	54
	Simanjiro	Manyara	35		Tabora	5	Misungwi	Mwanza	54 54 54
	Nachingwea	Lindi	36	lgunga Mkuranga		7	Sumbawanga Urban		54
	Kahama	Shinyanga	41	Liwale	Pwani Lindi	8	Ludewa	Rukwa	54 55
	Urambo	Tabora	43					Iringa	55
		Mtwara	45	Rufiji	Pwani	9	Songea Urban	Ruvuma	55
	Manyoni	Singida	47	Kishapu	Shinyanga	10	Kilosa	Morogoro	55
	Lindí Rural	Lindi	48	Uyui	Tabora	10	Ulanga	Morogoro	56
		Kilimanjaro	54	Tabora Urban	Tabora	11	Rungwe	Mbeya	56
		Manyara	56	Urambo	Tabora	11	Newala _	Mtwara	56
	Masasi	Mtwara	57	Kilwa	Lindi	14	Bukoba Rural	Kagera	57
		Mara	58	Tarime	Mara	15	Njombe	Iringa	59
	Bukombe	Shinyanga	60	Musoma Rural	Mara	16	Pangani	Tanga	59
	Sengerema	Mwanza	61	Mbulu	Manyara	17	Shinyanga Urban	Shinyanga	61
	Magu	Mwanza	61	Iringa Urban	Iringa	17	Kigoma Urban	Kigoma	61
	Mafia	Pwani	63	Kiteto	Manyara	18	Karatu	Arusha	61
	Muleba	Kagera	63	Kisarawe	Pwani	18	Mpwapwa	Dodoma	62
	Rufiji	Pwani	64	Lindi Rural	Lindi	18	llemela	Mwanza	63
	Bagamoyo	Pwani	67	Tandahimba	Mtwara	20	Mbarali	Mbeya	63
	Biharamulo	Kagera	69	Masasi	Mtwara	20	Kasulu	Kigoma	65
	Geita	Mwanza	69	Nzega	Tabora	21	Kwimba	Mwanza	65
	Nzega	Tabora	70	Morogoro Urban	Morogoro	21	Hai	Kilimanjaro	66
	Maswa	Shinyanga	74	Ilala	Dar	21	Tanga	Tanga	66
	Bukoba Urban	Kagera	74	Bagamoyo	Pwani	22	Kongwa	Dodoma	72
	Shinyanga Urban	Shinyanga	74 74	Nachingwea	Lindi	23	Moshi Rural	Kilimanjaro	76
	Ukerewe	Sninyanga Mwanza	74 75	Muheza	Tanga	24	Songea Rural	Ruvuma	76
				Shinyanga Rural	Shinyanga	27	Mtwara Urban	Mtwara	70
	Tunduru	Ruvuma	75 70	Mtwara Rural	Mtwara	27	Namtumbo	Ruvuma	79 79
	Korogwe	Tanga	76	Bukombe		27			82
	Mufindi	Iringa	76		Shinyanga Pwani	28	Arumeru	Arusha	82
		Mwanza	76	Kibaha			Mwanga	Kilimanjaro	
		Mara	79	Kilindi	Tanga	29	Mbeya Urban	Mbeya	83
		Mbeya	80	Chunya	Mbeya	29	Kyela	Mbeya	83
	Kilosa	Morogoro	81	Geita	Mwanza	29	Rombo	Kilimanjaro	93
	Namtumbo	Ruvuma	81	Iramba	Singida	30	Arusha	Arusha	97
	Chunya	Mbeya	81	Ngorongoro	Arusha	31	( (		
	Hai	Kilimanjaro	83	Maswa	Shinyanga	32			
	Njombe	Iringa	83	Singida Urban	Singida	32 33			
	Ruangwa	Lindi	85	Kahama	Shinyanga	33			
	Mpanda	Rukwa	85	Manyoni	Singida	34			
	Kondoa	Dodoma	85	Muleba	Kagera	34			
	llala	Dar	86	Temeke	Dar	35			
- /	Singida Urban	Singida	86	Mbozi	Mbeya	35 35			
	Muheza	Tanga	87	Sengerema	Mwanza	35		$\sim$	
	Ulanga	Morogoro	87	Lindi Urban	Lindi	35			
/	Lindi Urban	Lindi	87	Meatu	Shinyanga	36		11	
_	Iringa Urban	Iringa	88	Kondoa	Dodoma	37			
		Mwanza	88	Simanjiro	Manyara	37			
		Mtwara	88	Handeni	Tanga	38		- /	
		Rukwa	89	Mbinga	Ruvuma	38			
	Nkasi		89	Singida Rural	Singida	38			
	Kasulu Mbulu	Kigoma	89	Dodoma Urban	Dodoma	38			
		Manyara		Monduli		39			
	Tabora Urban	Tabora	90	Mbeya Rural	Arusha Mbeya	39 40			
- 1	Mbinga	Ruvuma	90						
	Mbarali	Mbeya	90	Hanang	Manyara	40 41			
١.	Bariadi	Shinyanga	91	Morogoro	Morogoro				
		Kigoma	92	Ruangwa	Lindi	41			
1		Morogoro	92	Kigoma Rural	Kigoma	41			
		Rukwa	92	Bunda	Mara	41			
		Kilimanjaro	92	Biharamulo	Kagera	42			
	Lushoto	Tanga	92	Magu	Mwanza	44			
/	Temeke	Dar	93	Lushoto	Tanga	44			
		Manyara	93	Mpanda	Rukwa	44			
	Songea Urban	Ruvuma	94	Sumbawanga Rural	Rukwa	45			
_ (	Kinondoni	Dar	94	Karagwe	Kagera	45			
1	Musoma Urban	Mara	94	Kilombero	Morogoro	45 45			
	Same	Kilimanjaro	94 95	Serengeti	Mara	46			
_		Mbeya	95	Tunduru	Ruvuma	46 46			
		Dodoma	95	Mufindi	Iringa	46			
		Morogoro	95 95	lleje	Mbeya	48			
_	Kilombero	Morogoro	96	Bukoba Urban	Kagéra	48			
		Arusha	96	Kilolo	Iringa	48			
	Tanga	Tanga	96 97	Kinondoni	Dar	48 49			
		Mwanza	97	Babati	Manyara	49			
_		Mbeya	98	Ngara	Kagera	49			
		Mbeya	98	Ukerewe	Mwanza	50			
	Pangani	Tanga	98	Bariadi	Shinyanga	50			
		Mtwara	98 98	Korogwe	Tanga	51			
		Arusha	99	Mvomero	Morogoro	51			
		Mbeya	99 99	Dodoma Rural	Dodoma	51			
		Arusha	99	Same	Kilimanjaro	52			
	Kibaha	Pwani	99	Makete	Iringa	52 52			
	·ana				3				

Note: Figures in urban table for rural districts refer only to urban areas of rural districts. Conversely, figures in the rural for urban districts refer only to rural or peri-urban parts.



	Rura	al households					Urb	an household				
Arusha Region	Population 884.491	% using improved 63.4	Piped 52.6	eakdown by type Protected U 10.8	of source (%) inprotected 35.9	Other 0.8	Population 403.597	% using improved 98.2	Piped 96.3	Protected 1.9	type of source (%) Unprotected 1.6	Other
Monduli Arumeru	160,521 421,495	39.2 81.8	29.1 71.5	10.1 10.3	60.7 16.8	0.1	23,995 93,156	98.5 96.4	97.5 91.2	1.0 5.2	0.9 3.3	0.5 0.3
Arusha Karatu	11,123 168,514	97.2 61.3	96.8 53.3	0.4 8.0	2.8 38.6	0.0	270,485 9,437	98.8	98.0	0.8	1.0	0.2
Ngorongoro	122,838	30.8	12.9	17.9	69.1	0.1	6,524	-		-		
Dar es Salaam Kinondoni	<b>151,233</b> 56,688	35.3 48.2	21.8 45.3	13.5 3.0	64.5 51.3	0.2 0.5	2,336,055 1,027,225	91.7 94.4	76.0 93.7	15.7 0.7	4.2 0.6	4.1 5.0
Ilala Temeke	46,027 48,518	20.7 34.6	0.3 16.2	20.5 18.4	79.2 65.4	0.0	588,897 719,933	85.5 92.6	48.7 72.3	36.8 20.3	9.1 5.5	5.3 1.9
Dodoma Region Kondoa	<b>1,478,782</b> 409,877	50.3 36.5	38.6 28.9	11.7 7.6	49.6 63.5	0.1 0.1	213,243 18,213	93.7 85.1	92.1 81.0	1.6 4.1	1.8 11.8	4.6 3.2
Mpwapwa Kongwa	232,909 231,364	62.0 72.2	51.3 56.3	10.7 15.9	37.9 27.7	0.1 0.1	20,693 17,292	-	-	-	-	3.2
Dodoma Rural Dodoma Urban	431,001 173,631	50.8 38.2	39.8 19.6	11.0 18.6	49.2 61.8	0.0	7,865 149,180	94.8	93.5	1.3	0.5	4.7
Iringa Region	1,234,560	50.9	30.7	20.2	48.8	0.3	256,332	81.8	64.8	17.1	16.9	1.3
Iringa Rural Mufindi	237,837 247,927	52.1 46.1	43.9 16.5	8.2 29.6	47.9 53.9	0.0	7,196 34,144	- 75.7	41.0	34.8	24.1	0.2
Makete Njombe	98,480 341,986	51.7 58.7	34.7 30.4	17.0 28.3	48.3 41.3	0.0 0.0	7,295 77,129	83.1	73.7	9.4	16.9	0.0
Ludewa Iringa Urban	114,375 6,648	54.5 17.1	39.5 1.0	14.9 16.1	45.5 82.9	0.0	13,780 99,723	88.0	84.8	3.2	8.0	3.9
Kilolo Kagera Region	187,307 1.901.407	48.2 45.7	30.9	17.3 34.2	50.0	0.4	17,065 <b>126,750</b>	71.4	42.3	29.1	27.3	1.3
Karagwe Bukoba Rural	417,045 388,089	45.0 57.4	25.0 9.3	19.9 48.1	54.1 42.0	0.9	7,242 5,931	71.7		-	-	1.3
Muleba Biharamulo	376,450 368,547	33.7 42.1	3.1 6.7	30.6 35.4	66.1 57.9	0.2 0.0	8,734 40,842	63.3 69.1	30.6 21.9	32.7 47.2	32.5 30.3	4.3 0.6
Ngara Bukoba Urban	329,565 21,711	48.8 47.9	10.5 7.8	38.2 40.1	51.2 51.9	0.0 0.2	4,844 59,157	- 73.7	54.9	18.8	25.0	1.3
Kigoma Region	1,471,240	54.2	27.8	26.4	45.4	0.4	202,807	82.5	67.8	14.7	17.0	0.5
Kibondo Kasulu	398,544 593,290	53.7 64.9	13.1 37.2	40.6 27.7	46.3 35.1	0.0	15,233 33,452	89.0	83.5	5.5	9.8	1.2
Kigoma Rural Kigoma Urban	465,291 14,115	41.1 60.8	27.4 52.9	13.7 7.9	57.7 39.2	1.2 0.1	23,980 130,142	22.6 92.0	7.6 75.0	15.0 17.0	77.4 7.6	0.0 0.4
Kilimanjaro Region Rombo	1,088,611 232,528	74.4 93.0	59.7 87.1	14.8 6.0	25.0 6.4	0.5 0.6	288,091 13,188	87.6 0.0	85.6	2.0	7.2	5.2
Mwanga Same	86,294 149,704	81.8 51.6	51.1 24.2	30.7 27.4	17.9 48.3	0.3 0.1	28,851 62,034	54.0 94.4	53.7 92.4	0.3 2.0	39.8 5.6	6.2
Moshi Rural Hai	392,014 228,071	75.6 65.9	63.6 51.4	12.0 14.5	24.3 32.6	0.1	9,355 30,864	82.5	78.2	4.3	13.8	3.7
Moshi Urban	-	-	-	-	-	-	143,799	92.2	90.4	1.9	0.4	7.4
Lindi Region Kilwa	<b>661,228</b> 157,038	22.1 14.3	6.6 0.6	15.6 13.6	77.7 85.7	0.2	<b>126,396</b> 14,019	63.0	36.1	26.9	35.8	1.2
Lindi Rural Nachingwea	184,162 138,969	18.4 22.9	6.0 9.3	12.4 13.6	81.5 76.4	0.1 0.7	30,720 22,504	48.3 35.7	14.2 21.5	34.1 14.2	51.1 63.2	0.6 1.1
Liwale Ruangwa	61,290 106,848	8.0 41.0	0.3 12.7	7.7 28.2	92.0 59.0	0.1	13,838 17,161	84.9	50.4	34.5	14.0	1.1
Lindi Urban Manyara Region	12,921 <b>896,886</b>	35.3	14.1	21.2	64.7	0.0	28,154 140,719	86.9 63.8	63.1 45.5	23.8	11.2	1.9
Babati Hanang	260,664 185,081	48.7 40.3	36.7 30.3	12.0 10.1	51.3 59.7	0.0	41,589 19,559	92.6	87.6	5.0	7.3	0.1
Mbulu Simanjiro	218,159 99,672	16.5 36.6	3.6 16.2	12.9 20.4	83.5 62.4	0.0	19,121 41,464	89.4 35.4	51.7 8.8	37.7 26.7	10.6 6.1	0.1 58.4
Kiteto	133,310	18.1	14.0	4.1	79.7	2.2	18,986	55.6	48.8	6.8	42.5	1.9
Mara Region Tarime	<b>1,109,791</b> 417,609	23.9 15.1	4.1 0.2	19.9 14.9	76.0 84.8	0.1 0.1	<b>253,606</b> 73,122	78.9 58.3	53.1 19.4	25.8 38.9	20.1 40.5	1.0 1.3
Serengeti Musoma Rural	161,024 319,676	45.5 15.6	8.6 3.9	36.9 11.7	54.3 84.2	0.1 0.2	15,033 10,148	:	- 1			
Bunda Musoma Urban	207,124 4,358	41.3 3.0	10.0 1.9	31.3 1.0	58.7 96.9	0.1 0.2	51,806 103,497	79.3 94.1	22.2 93.6	57.1 0.6	20.6 4.7	0.1 1.2
Mbeya Region	1,642,183	48.5	28.2	20.3	51.5	0.0	<b>421,145</b> 18,244	94.0	83.5	10.4	5.4	0.6
Chunya Mbeya Rural Kyela	187,671 216,136 153,790	28.7 39.5 82.9	17.5 23.4 79.2	11.1 16.0 3.7	71.2 60.5 17.1	0.1 0.0 0.0	37,933 20,040	80.7 97.7 98.6	68.3 97.2 94.2	12.4 0.5 4.4	19.1 2.3 1.4	0.2 0.0 0.0
Rungwe Ileje	283,798 106,808	56.0 47.7	31.7 13.0	24.3 34.7	44.0 52.3	0.0	22,582 3,039	94.7	93.9	0.8	5.3	0.0
Mbozi Mbarali	461,567 197,145	34.9 63.1	5.9 48.6	29.0 14.4	65.1 36.9	0.0	52,033 36,956	79.5 90.2	37.8 81.5	41.7 8.7	16.1 9.7	4.4 0.0
Mbeya Urban	35,268	82.7	73.6	9.1	17.2	0.1	230,318	97.9	91.4	6.5	1.9	0.1
Morogoro Region Kilosa	<b>1,279,513</b> 374,690	48.8 54.8	19.4 20.4	29.4 34.3	51.1 45.2	0.1 0.0	<b>473,849</b> 113,510	91.0 80.5	78.8 64.6	12.2 15.9	7.6 13.9	1.4 5.6
Morogoro Rural Kilombero	255,229 230,774	40.8 45.1	16.3 21.2	24.6 23.9	59.1 54.9	0.1 0.0	7,783 90,837	96.0	71.1	24.9	4.0	0.0
Ulanga Morogoro Urban	168,267 21,053	55.7 20.6	17.1 2.8 22.3	38.5 17.8	44.3 79.3	0.0	25,013 206,868	86.8 94.9	47.3 94.7	39.6 0.2	13.1 5.1	0.1
Mvomero Mtwara Region	229,500 <b>895,942</b>	50.6 29.0	22.3	28.2 6.2	48.8	0.6	29,847 <b>228,539</b>	92.1 72.3	71.2	20.9	7.7	0.2
Mtwara Rural Newala	189,975 162,689	26.7 56.3	19.4 54.6	7.3 1.7	70.9 4.1	2.4	14,182 20,655	88.3	88.2	0.1	0.2	11.5
Masasi Tandahimba	365,470 163,768	20.1 19.9	10.6 19.4	9.5 0.5	79.9 60.3	0.0 19.8	75,517 40,069	56.9 44.9	52.7 38.2	4.2 6.7	43.0 46.7	0.1 8.4
Mtwara Urban	14,040	79.1	47.7	31.3	20.8	0.1	78,116	98.2	93.6	4.6	1.8	0.0
Mwanza Region Ukerewe	<b>2,328,387</b> 229,771	43.1 49.5	5.1 0.1	38.0 49.4	56.8 50.4	0.2 0.1	<b>601,257</b> 31,060	82.0 74.6	63.8 3.9	18.2 70.7	15.5 25.1	2.5 0.3
Magu Nyamagana	377,202	44.2	7.8	36.4	55.7	0.1	37,803 209,806	61.2 97.2	35.3 95.0	26.0 2.2	29.1 2.4	9.7 0.4
Kwimba Sengerema	298,365 462,055	65.2 34.9	9.8 1.5	55.5 33.5	34.7 64.8	0.0	16,560 36,938	88.0 61.0	32.3 42.1	55.7 18.9	11.5 38.9	0.6
Geita Misungwi Ilemela	636,596 235,529 88,869	28.7 53.7 62.9	2.3 10.5 12.2	26.4 43.2 50.7	71.1 46.3 36.2	0.1 0.0 0.9	72,482 20,604 176,004	69.2 - 76.1	10.6 - 65.8	58.5 - 10.2	26.2 - 20.2	4.6 - 3.8
Pwani Region	698,156	14.7	8.0	6.7	85.1	0.9	186,861	78.1	61.6	16.4	19.7	2.2
Bagamoyo Kibaha	187,812 73,868	22.0 28.1	16.2 24.7	5.8 3.3	77.2 71.9	0.8 0.1	41,155 57,374	66.9 98.9	65.0 98.7	1.9	32.8 1.0	0.3
Kisarawe Mkuranga	80,817 165,798	18.3 6.8	6.9 0.1	11.4 6.7	81.7 93.2	0.0	14,506 21,129	:	-			
Rufiji Mafia	158,301 31,560	8.6 3.3	0.8 0.3	7.8 3.0	91.4 96.7	0.0	43,700 8,997	63.8 62.6	10.6 51.3	53.2 11.3	28.7 37.1	7.5 0.3
Rukwa Region	936,232	47.0	15.7	31.3	53.0	0.0	200,122	88.8	19.7	69.0	10.9	0.4
Mpanda Sumbawanga Rural	344,905 351,977	44.4 44.7	11.6 21.7	32.8 23.0	55.6 55.2	0.0	65,547 19,772	85.0	10.6	74.5	14.1	0.9
Nkasi Sumbawanga Urban	166,811 72,539	53.6 54.1	7.6 21.4	46.1 32.7	46.4 45.9	0.0	40,500 74,303	88.5 92.1	22.0 26.5	66.6 65.6	11.5 7.9	0.0 0.1
Ruvuma Region	944,045	52.7 45.6	23.9 19.7	28.8 25.8	47.3 54.4	0.0	169,670 23,482	89.7 75.1	63.9 69.7	25.8	10.2 24.2	0.1
Tunduru Songea Rural Mbinga	223,573 145,638 378,403	45.6 76.0 37.9	19.7 36.1 16.4	25.8 39.8 21.5	54.4 24.0 62.1	0.0 0.0 0.0	23,482 11,292 25,416	75.1 - 90.0	69.7 - 78.5	5.4 - 11.5	24.2 - 10.0	0.7 - 0.0
Songea Urban Namtumbo	32,711 163,720	54.6 79.0	15.1 40.0	39.5 39.1	45.4 21.0	0.0	98,149 11,331	93.9 80.6	57.5 77.7	36.4 2.9	6.1 19.4	0.0
Shinyanga Region Bariadi	<b>2,540,578</b> 572,929	33.7 50.4	6.0 6.9	27.6 43.5	65.7 49.5	0.6	<b>256,052</b> 30,675	63.9 90.6	32.8 27.8	31.1 62.8	12.9 8.6	23.2 0.8
Maswa Shinyanga Rural	279,466 275,357	31.7 26.5	12.7 0.6	19.0 26.0	68.3 69.1	0.0 4.3	24,936 1,036	73.6	68.9	4.7	26.3	0.2
Kahama Bukombe	528,840 355,706	32.6 27.4	3.0 8.2	29.6 19.1	67.3 72.5	0.1 0.1	66,051 39,592	41.3 59.8	2.1 2.4	39.2 57.4	9.9 34.0	48.8 6.2
Meatu Shinyanga Urban	241,389 60,755	36.1 60.6	5.4 19.3	30.6 41.3	63.8 36.9	0.2 2.5	6,825 73,768	73.9	65.4	8.4	2.8	23.4
Kishapu Singida Region	226,136	9.6	3.2	6.4	90.3	0.1	13,169	61.1	4.1.1		27.0	
Singida Region Iramba Singida Rural	938,081 334,355 379,613	33.9 29.7 38.1	10.3 10.3 4.7	23.6 19.4 33.4	66.1 70.3 61.9	0.0 0.0 0.0	148,667 32,681 20,764	61.1 32.7	44.1 12.6	17.0 20.1	37.0 66.9	1.9 0.5
Manyoni Singida Urban	167,164 56,949	33.6 32.0	23.9 6.5	9.8 25.5	66.3 68.0	0.0	37,318 57,904	47.0 86.1	26.6 72.9	20.3 13.1	50.8 11.6	2.3 2.4
Tabora Region	1,490,581	11.8	0.5	25.5	88.1	0.0	219.884	79.2	66.2	13.1	18.6	2.4
Nzega Igunga	385,877 303,952	20.5 5.0	0.0 0.3	20.5 4.7	79.5 94.8	0.0 0.2	29,329 20,142	69.7	57.4	12.3	24.8	5.5
Uyui Urambo	276,793 340,348	10.4 11.3	1.1 0.1	9.3 11.2	89.6 88.7	0.0	4,308 28,981	42.9	1.2	41.7	56.9	0.2
Sikonge Tabora Urban	123,493 60,118	4.0 10.9	0.1 5.3	4.0 5.7	96.0 89.1	0.0	9,240 127,887	89.8	83.1	6.7	8.4	1.8
Tanga Region	1,335,084	40.5	21.7	18.8	59.2	0.3	301,196	91.8	88.5	3.2	7.7	0.5
Lushoto	400,992 215,700	44.3 50.5	20.2	24.1 29.1	55.7 49.1	0.0 0.4	17,660 44,538	92.4 75.6	72.3 69.9	20.1 5.7	7.5 23.8	0.1
Korogwe		24.2	8.8	15.4	74.9	0.9	34,220	86.9	83.3	3.6	11.3	1.8
Korogwe Muheza Tanga Pangani	244,185 63,240 37,012	66.4 58.9	54.2 36.3	12.2 22.6	33.6 41.0	0.0 0.1	179,400 6,908	96.9 98.0	96.0 97.2	0.8 0.8	2.8 1.9	0.3 0.1

Notes:
All figures rounded to one decimal place

' means there were no households in this category or no households in this category were sampled

# Rural households not using a toilet facility

#### Rural households not using a toilet facility

Iringa Urban Iringa 0 Sumbawanga Rural Rukwa 5 Maswa Shinyanga 18 Ludewa Iringa 0 Nachingwea Lindi 5 Musoma Rural Mara 18 Mufindi Iringa 0 Sengerema Mwanza 6 Uyui Tabora 19 Moringa 1 Mbarali Mbeya 6 Hanang Manyara 20 Songea Rural Ruvuma 1 Hai Kilimanjaro 6 Karatu Arusha 20 Ileje Mbeya 1 Kibondo Kigoma 6 Muheza Tanga 20 Ileje Mbeya 1 Liwale Lindi 6 Kahama Shinyanga 21 Njombe Iringa 1 Liwale Lindi 6 Kahama Shinyanga 21 Njombe Iringa 1 Masasi Mtwara 6 Dodoma Rural Dodoma 21 Mbinga Ruvuma 1 Mtwara Urban Mtwara 6 Serengeti Mara 21 Moringa Rungwe Mbeya 1 Arusha Arusha 7 Bariadi Shinyanga 23 Rombo Kilimanjaro 1 Kilwa Lindi 7 Kilindi Tanga 25 Bukoba Urban Kagera 1 Kondoa Dodoma 7 Misungwi Mwanza 26 Mbeya Urban Mbeya 1 Arumeru Arusha 7 Pangani Tanga 25 Songea Urban Mbeya 1 Ngara Kagera 7 Tanga Tanga 29 Songea Urban Ruvuma 1 Muleba Kagera 7 Nzega Tabora 29 Namtumbo Ruvuma 1 Lindi Rural Lindi 8 Manyoni Singida 29 Kasulu Kigoma 1 Lindi Urban Lindi 8 Sikonge Tabora 29	
Iringa RuralIringa1KaragweKagera8IgungaTabora30Moshi RuralKilimanjaro2Shinyanga UrbanShinyanga8KwimbaTabora31TandahimbaMtwara2MeatuShinyanga8TarimeMara34NewalaMtwara2RuangwaLindi9MafiaPwani51Kigoma UrbanKigoma2Tabora UrbanTabora9Musoma UrbanMara53MorogoroMorogoro2KilosaMorogoro9NgorongoroArusha57Bukoba RuralKagera2BabatiManyara9KitetoManyara58MwangaKilimanjaro3UramboTabora10SimanjiroManyara58Sumbawanga UrbanRukwa3MpwapwaDodoma11MonduliArusha79TunduruRukwa3IlemelaMwanza11MonduliArusha79SameKilimanjaro3KongwaDodoma11MonduliArusha79KyelaMbeya4BiharamuloKagera11MonduliArusha12KyelaMbeya4BindaManyara12MonduliArusha12KyelaMbeya4MinandaManyara12MonduliArusha12KyelaMbeya4MinandaManyara12MonduliArusha<	ara 18 bora 19 annyara 20 usha 20 ninyanga 20 ninyanga 21 bdoma 21 ara 21 ara 21 ara 25 wanza 26 nnga 25 wanza 26 nnga 29 bora 29 bora 29 bora 29 bora 29 bora 30 wanza 31 ara 34 vani 51 ara 53 anyara 58 anyara 58 anyara 58
Nkasi Rukwa 5 Shinyanga Rural Shinyanga 16 Dodoma Urban Dodoma 5 Magu Mwanza 17	

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#### Acknowledgements

This update was written by the policy team at WaterAid Tanzania based on the 2002 Population and Housing Census data from NBS, with analytical support from Dr Zakayo Msokwa, EASTC, inputs from Weitze Lindeboom and Blandina Kilama at REPOA and designed by Carpe Diem Ink.

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