Tanzania

Malaria Atlas

Malaria Indicator Survey 2017

United Republic of Tanzania

Tanzania Malaria Indicator Survey (TMIS)

Malaria Atlas
2017

Ministry of Health, Community Development,
Gender, Elderly and Children
Dar es Salaam

Ministry of Health
Zanzibar

National Bureau of Statistics (NBS)
Dar es Salaam

Office of Chief Government Statistician (OCGS)
Zanzibar

The DHS Program
Rockville, Maryland USA

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The 2017 Tanzania Malaria Indicator Survey (2017 TMIS) was implemented by the National Bureau of Statistics (NBS) and Office of the Chief Government Statistician (OCGS), Zanzibar, in collaboration with the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC), Tanzania Mainland, and the Ministry of Health (MoH), Zanzibar. ICF provided technical assistance. The 2017 TMIS is part of the worldwide DHS Program, which assists countries in the collection of data to monitor and evaluate population, health, and nutrition programs. The survey was funded by the President's Malaria Initiative (PMI) and The Global Fund.

Additional information about the 2017 TMIS may be obtained from the National Bureau of Statistics, Head Office, 18 Kivukoni Road, P.O. Box 796, 11992, Dar es Salaam, Tanzania. Telephone: 255-22-212-2722/3; fax: 255-22-213-0852; e-mail: dg@nbs.go.tz; internet: www.nbs.go.tz

Information about The DHS Program can be obtained from ICF, 530 Gaither Road, Suite 500, Rockville, MD 20850, USA. Telephone: 301-407-6500; fax: 301-407-6501; e-mail: info@DHSprogram.com; internet: http://www.DHSprogram.com

Cover photo:
School children receive free bed nets during a distribution at Buhigwe School, Tanzania. © 2017 Magali Rochat/VectorWorks, Courtesy of Photoshare

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Introduction

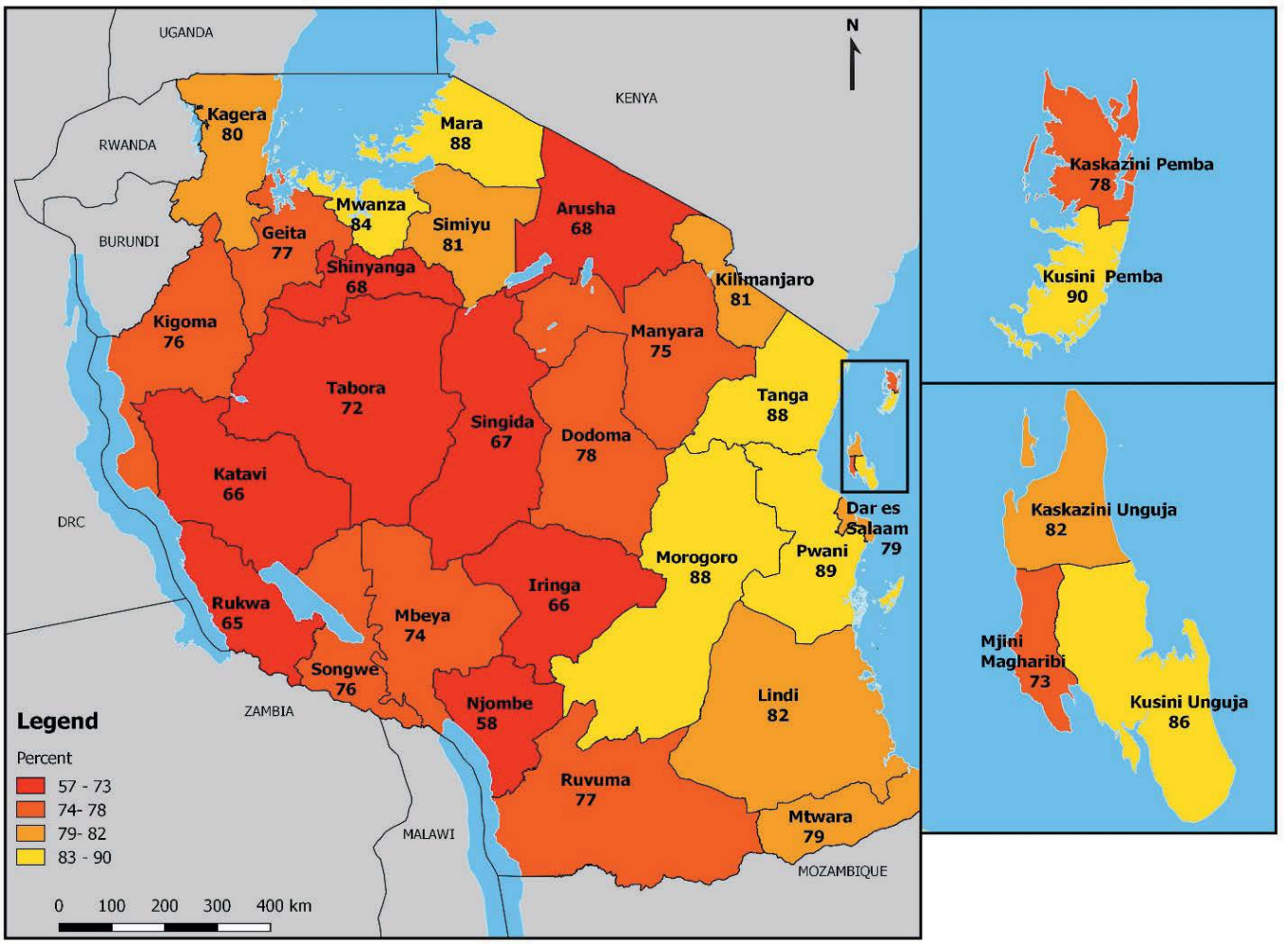
The 2017 Tanzania Malaria Indicator Survey (2017 TMIS) is designed to provide up-to-date-estimates of basic demographic and health indicators for malaria. The primary objectives of the 2017 TMIS are to measure the level of ownership and use of mosquito nets; assess coverage of intermittent preventive treatment for pregnant women; identify treatment practices, including the use of specific antimalarial medications to treat malaria among children age 6-59 months; measure the prevalence of malaria and anemia among children age 6-59 months; and assess knowledge, attitudes, and practices among women age 15-49. The 2017 TMIS is a follow-up to the 2015-16 Tanzania Demographic and Health Survey and Malaria Indicator Survey (TDHS-MIS) and provides updated indicators covered in the 2007-08 Tanzania HIV/AIDS and Malaria Indicator Survey (THMIS), 2010 TDHS, and the 2011-12 THMIS. In total, 9,724 households were selected for the 2017 TMIS, of which 9,390 were occupied at the time of fieldwork. Of the occupied households, 9,330 were successfully interviewed, yielding a total household response rate of 99%. In the interviewed households, 10,136 women age 15-49 were eligible for individual interview and 10,018 were successfully interviewed, yielding a response rate of 99%. The sample design for the 2017 TMIS provides estimates at the national level, urban and rural areas, Mainland Tanzania and Zanzibar, for 9 zones, and for the 31 regions.

This Malaria Atlas presents a first look at selected malaria findings from the 2017 TMIS. A comprehensive analysis of the data is presented in a final report.

Maps provided in this atlas are intended to easily communicate how different indicators vary across regions.

Coverage of Insecticide-treated Nets (ITN)

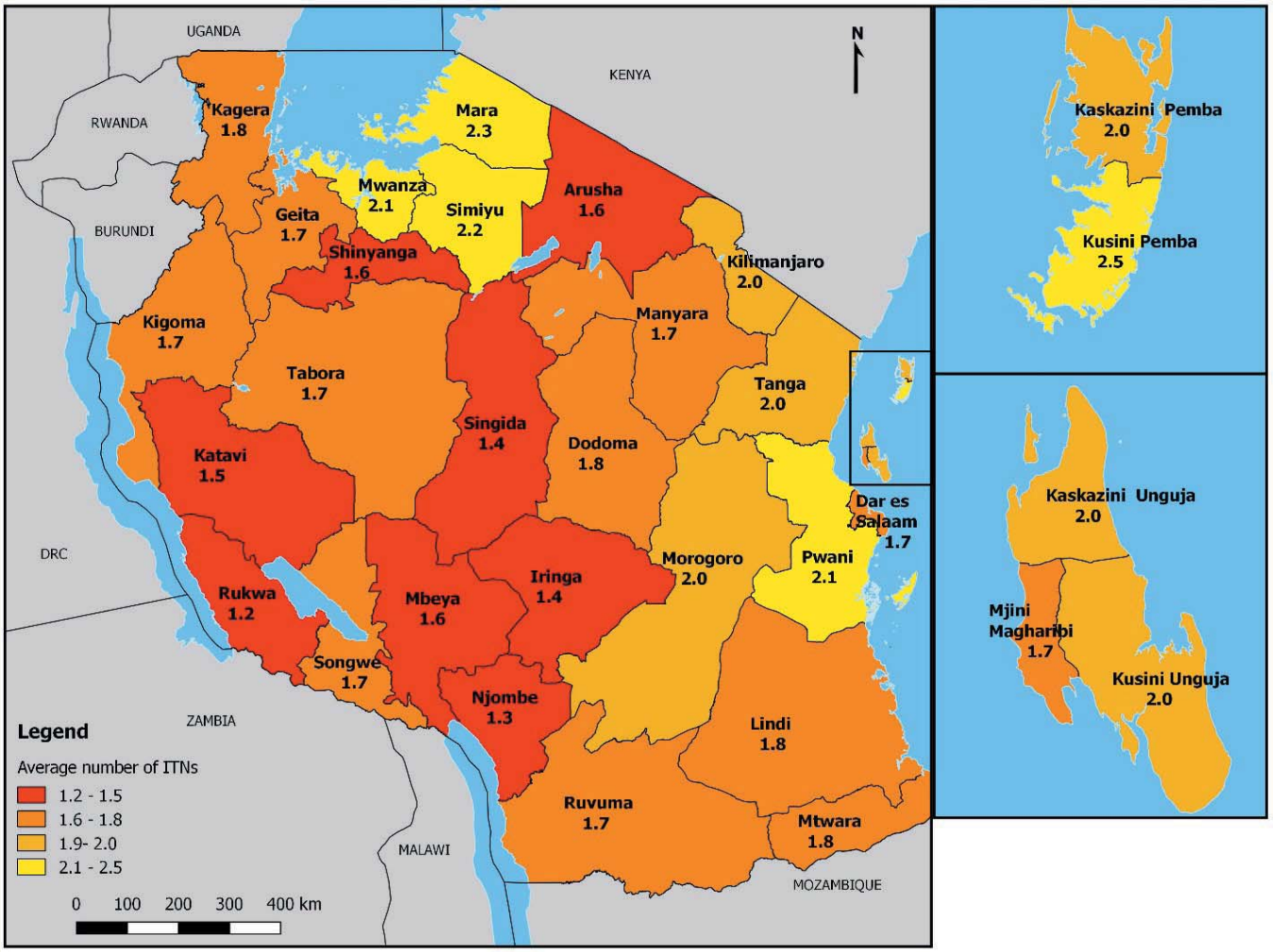
Percentage of households with at least one insecticide-treated mosquito net (ITN)



Significant advances have been made in the prevention of malaria through the use of ITNs. Use of treated mosquito nets has been found to significantly reduce malaria transmission. The 2017 TMIS included questions on bed net ownership, use and type of net. Overall, 78% of households in Tanzania own at least one ITN. Households in urban areas are more likely to own an ITN than households in rural areas (81% and 77%, respectively).

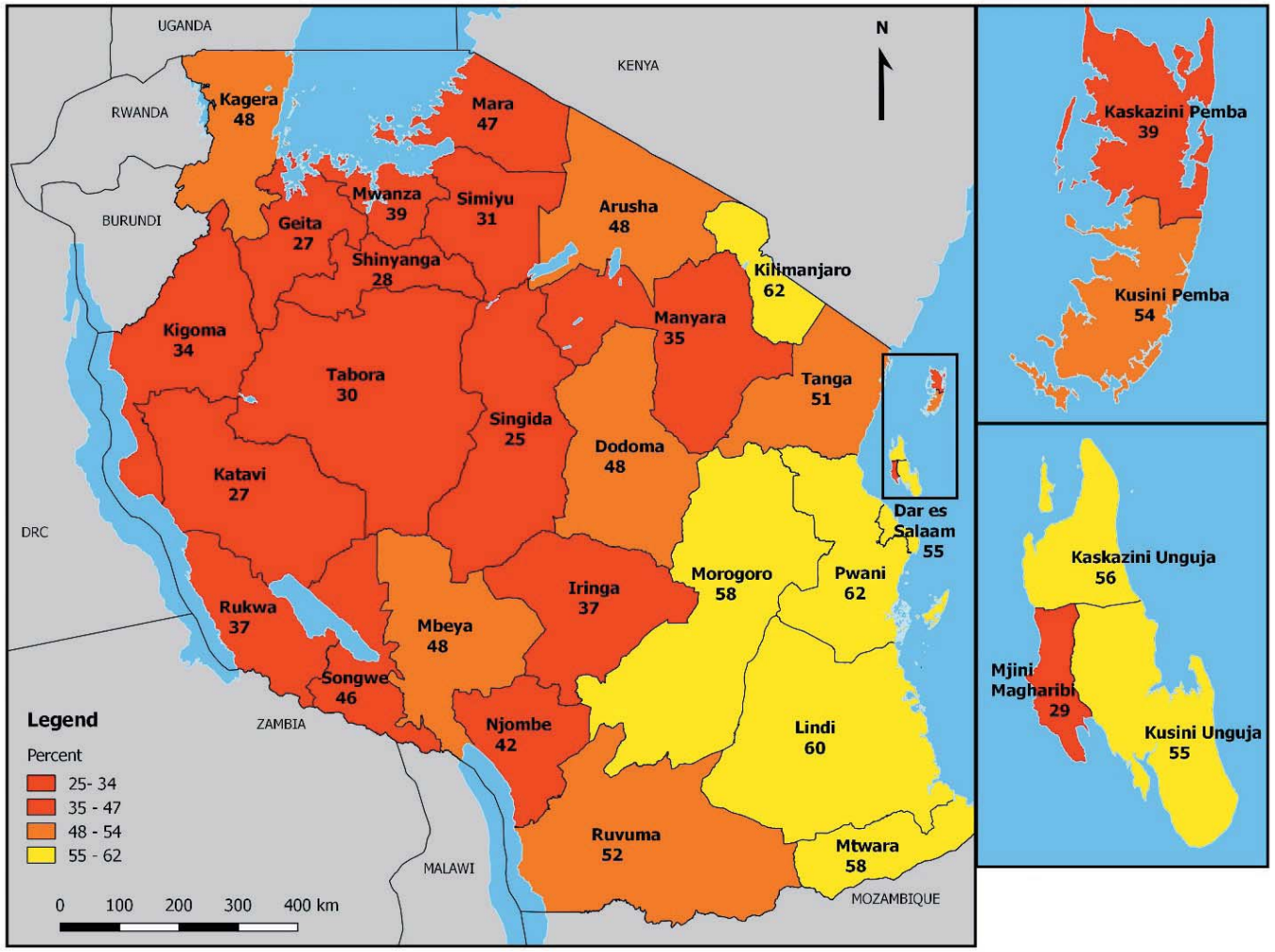
Across regions in Mainland Tanzania, the percentage of households with at least one ITN is highest in Pwani (89%) and lowest in Njombe (58%). In Zanzibar, Kusini Pemba has the highest percentage of households with at least one ITN (90%), while Mjini Magharibi has the lowest percentage (73%).

Average number of ITNs per household



Overall, the mean number of ITNs per household in Tanzania is 1.8. In Tanzania Mainland, the average number of ITNs per household ranges from 1.2 in Rukwa to 2.3 in Mara. In Zanzibar, the mean number of ITNs per household ranges from 1.7 in Mjini Magharibi to 2.5 in Kusini Pemba.

Percentage of households with at least one ITN for every two persons who stayed in the household the night before the survey

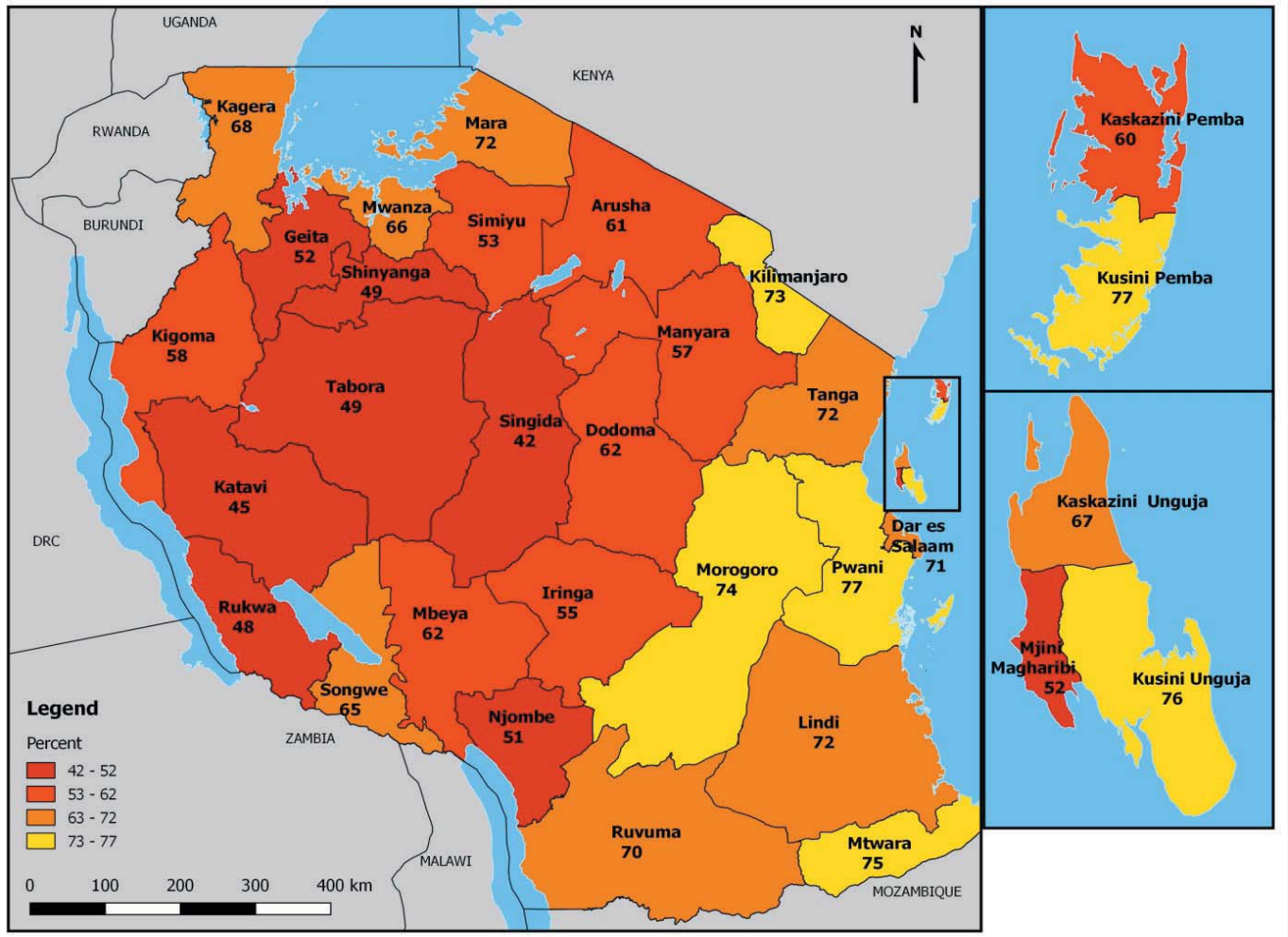


The availability of ITNs to all household members, that is at least one ITN for every two persons, is closely associated with high ITN use. On the other hand, proper use of ITNs protects households and the entire local community from malaria. The distribution and use of ITNs is one of the central interventions for preventing malaria infection in Tanzania. The results from the 2017 TMIS show that, only 45% of households in Tanzania own an ITN for every two persons who slept in the household the night before the survey, indicating that below fifty percent of households in Tanzania have sufficient nets for its occupants if each net is used by up to two persons.

More than 6 in 10 households (62%) own one ITN for every two people in Kilimanjaro and Pwani regions. Universal coverage is lowest in Singida where only 25% of households own one ITN per two persons.

Access to ITNs

Percentage of the de facto household population who could sleep under an ITN if each ITN in the household were used by up to two people

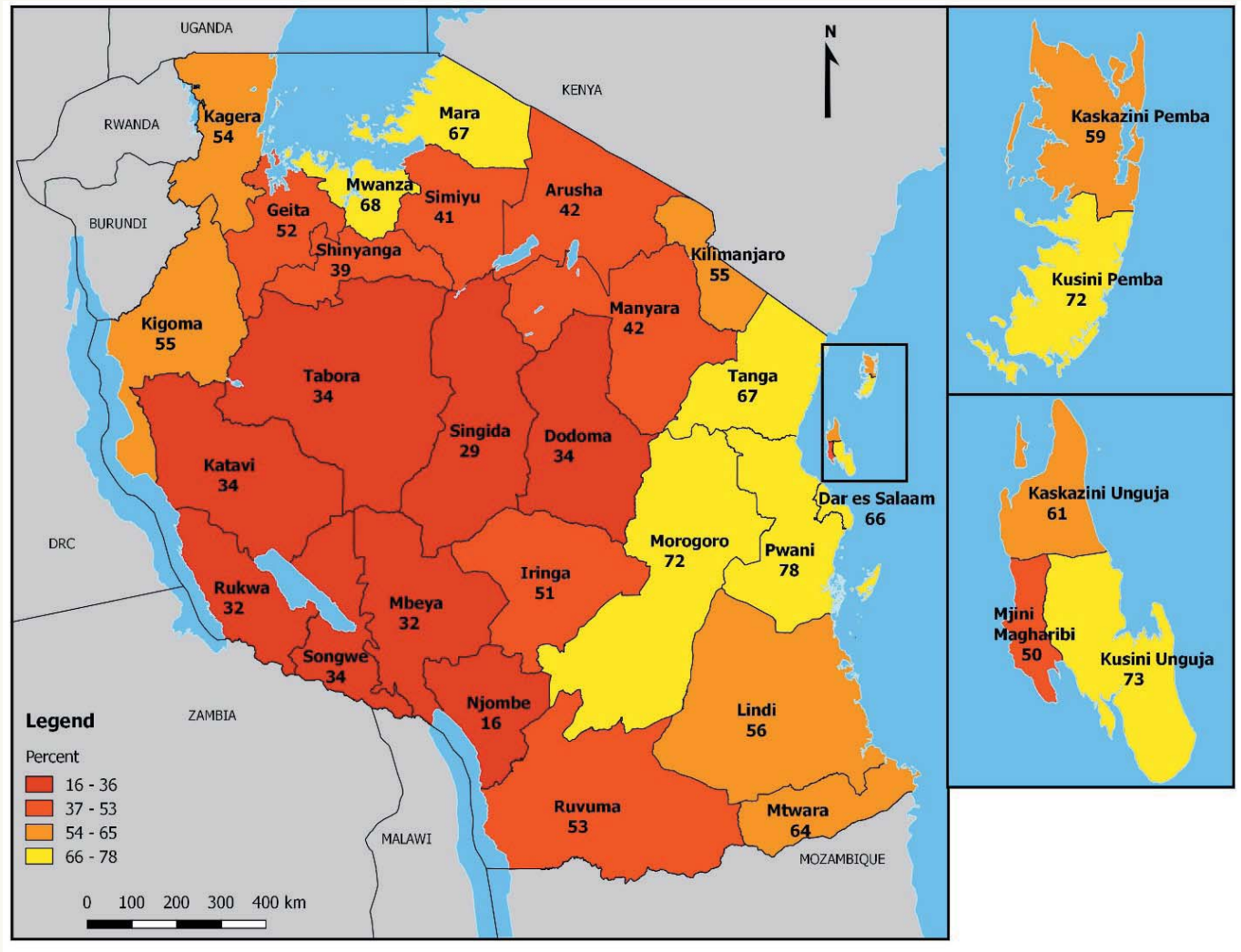


Access to an ITN is measured by the proportion of the population that could sleep under an ITN if each ITN in a household is used by two people. Comparing ITN access and ITN use indicators can help programmes identify behavioural gaps in which available ITNs are not being used.

Sixty-three percent of the Tanzanian population has access to an ITN. The urban population is more likely to have access to an ITN than the rural population (69% and 60%, respectively). Across regions in Mainland Tanzania, the percentage of the population with access to an ITN ranges from 42% in Singida to 77% in Pwani. In Zanzibar, ITN access ranges from 52% in Mjini Magharibi to 77% in Kusini Pemba.

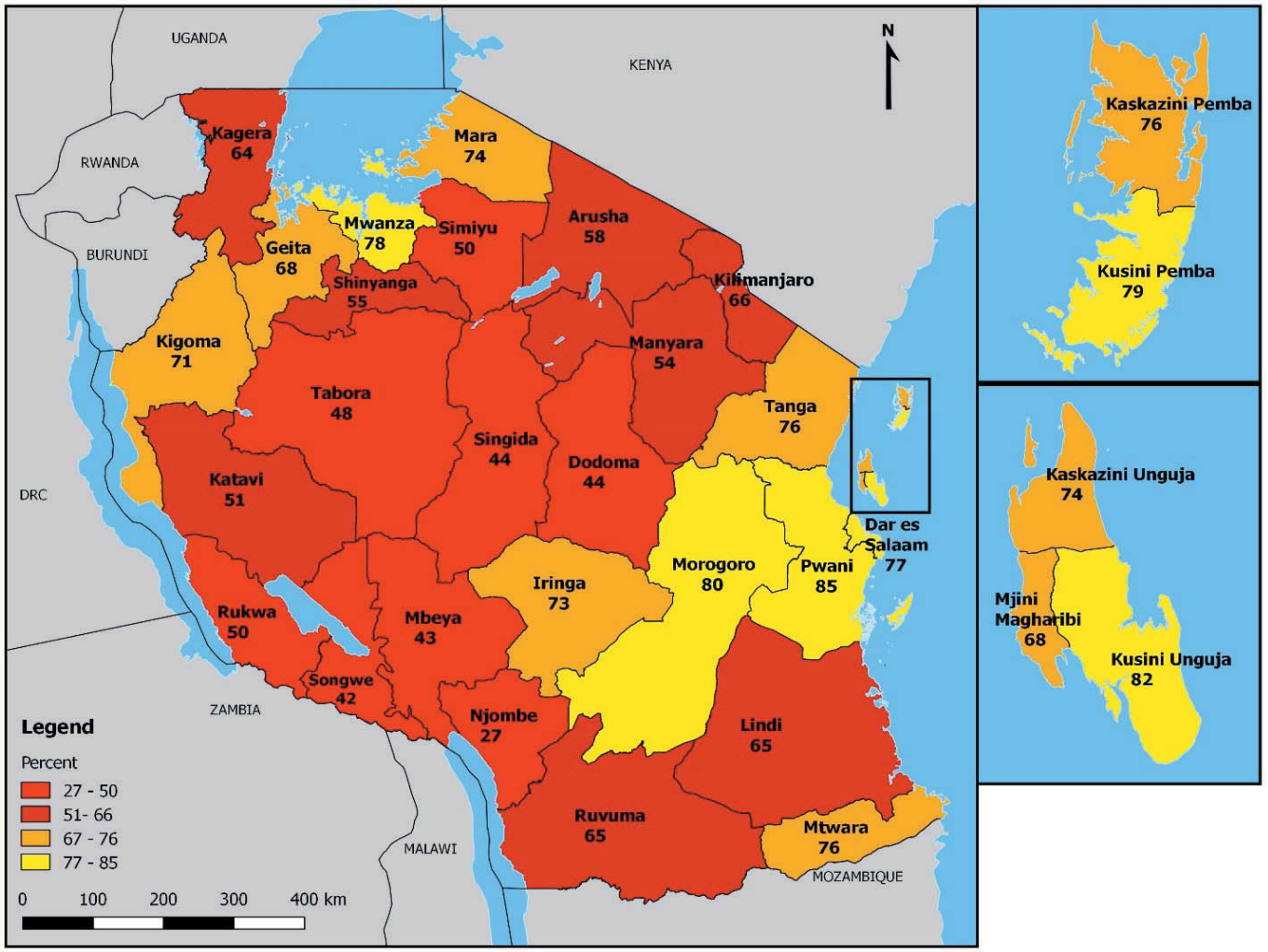
Use of ITNs by Household Members

Percentage of the household population who slept under an ITN the night before the survey



According to the 2017 TMIS, over half (52%) of the household population in Tanzania slept under an ITN the night before the survey. In Tanzania, more than 70% of the household population slept under an ITN the night before the survey in four regions – Pwani (78%), Kusini Unguja (73%), Morogoro, and Kusini Pemba (72% each).

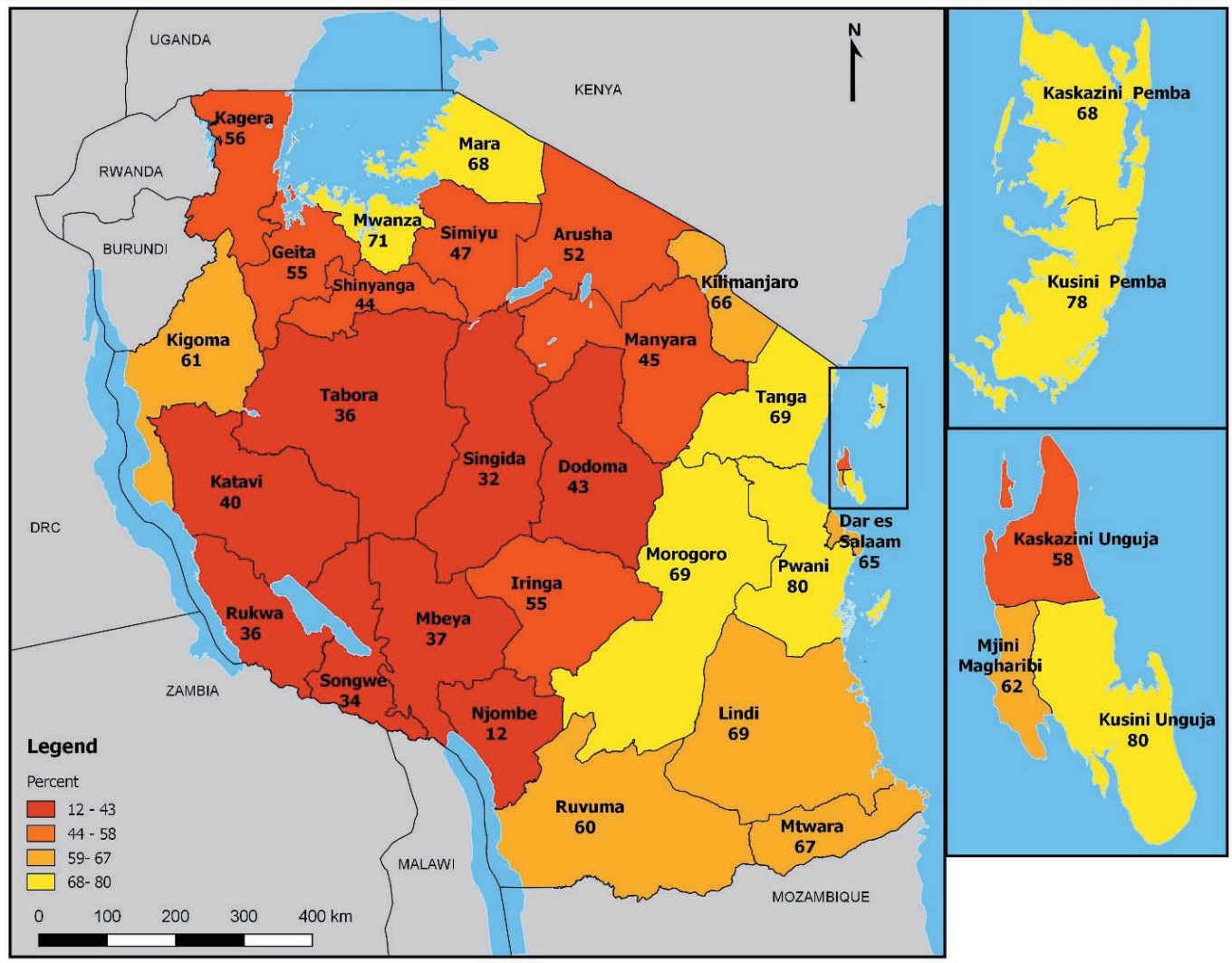
Percentage of the household population who slept under an ITN the night before the survey among households with at least one ITN



In households with at least one ITN, 65% of household members slept under an ITN the night before the survey. In Tanzania Mainland, use of ITNs among household members in households with at least one ITN ranges from 27% in Njombe to 85% in Pwani. In Zanzibar, ITN use among household members in households with at least one ITN ranges from 68% in Mjini Magharibi to 82% in Kusini Unguja.

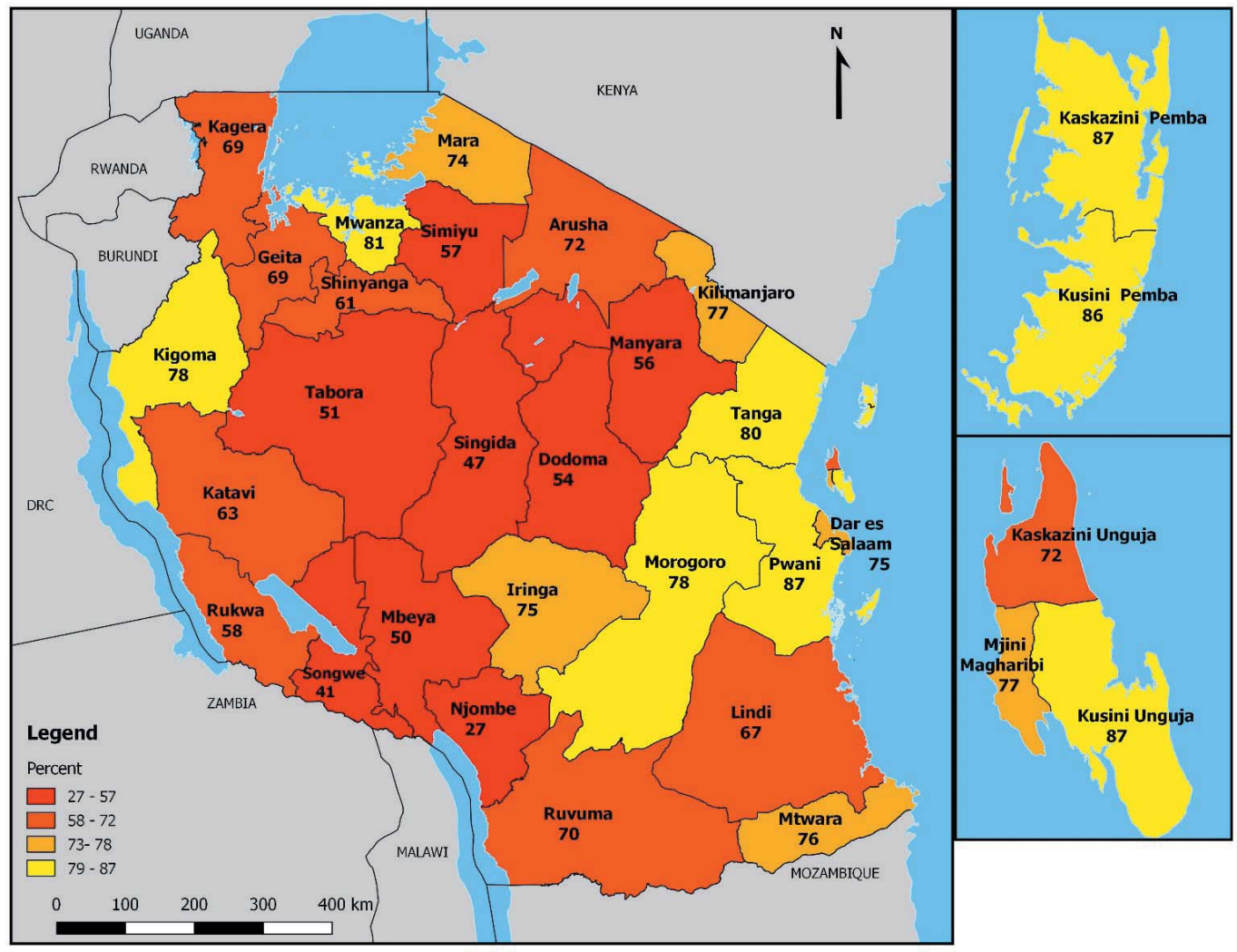
Use of ITNs by Children

Percentage of children under age 5 who slept under an ITN the night before the survey



Since children and pregnant women are particularly at risk, their use of ITNs is very important for preventing malaria. More than half (55%) of children under age 5 slept under an ITN the night before the survey. Fifty-four percent of children under age 5 slept under an ITN in Tanzania Mainland, compared with 67% of children under age 5 in Zanzibar. In Tanzania Mainland, children are most likely to have slept under an ITN the night before the survey in Pwani (80%), followed by Mwanza (71%). Children in Njombe are least likely to have slept under an ITN the night before the survey (12%). In Zanzibar, children's use of ITNs ranges from 58% in Kaskazini Unguja to 80% in Kusini Unguja.

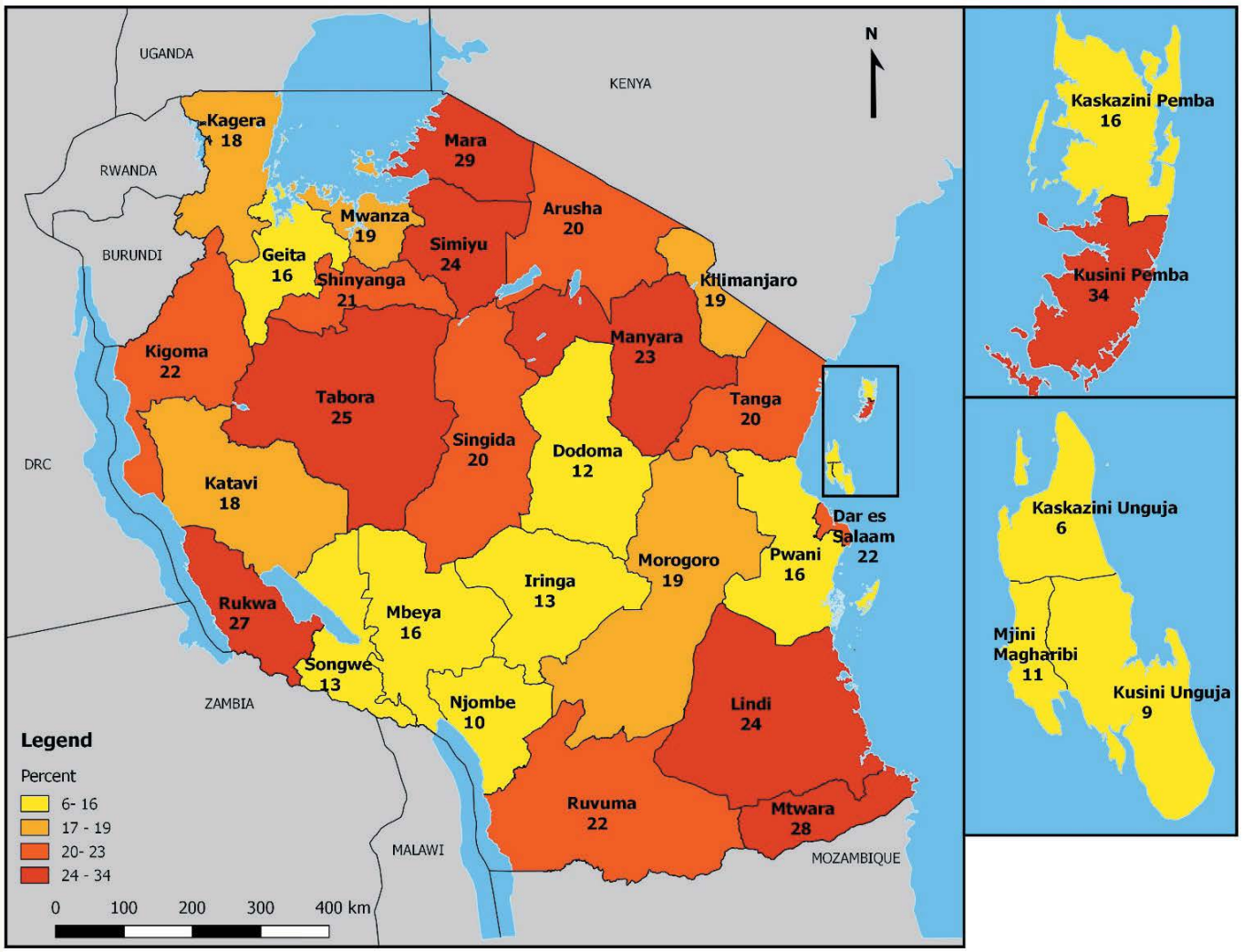
Percentage of children under age 5 who slept under an ITN a night before the survey among households with at least one ITN



Among households with at least one ITN, 68% of children under age 5 slept under an ITN the night before the survey. Use of ITNs among children under age 5 in households with at least one ITN ranges from 27% in Njombe to 87% in Pwani, Kusini Unguja, and Kaskazini Pemba.

Fever in Children

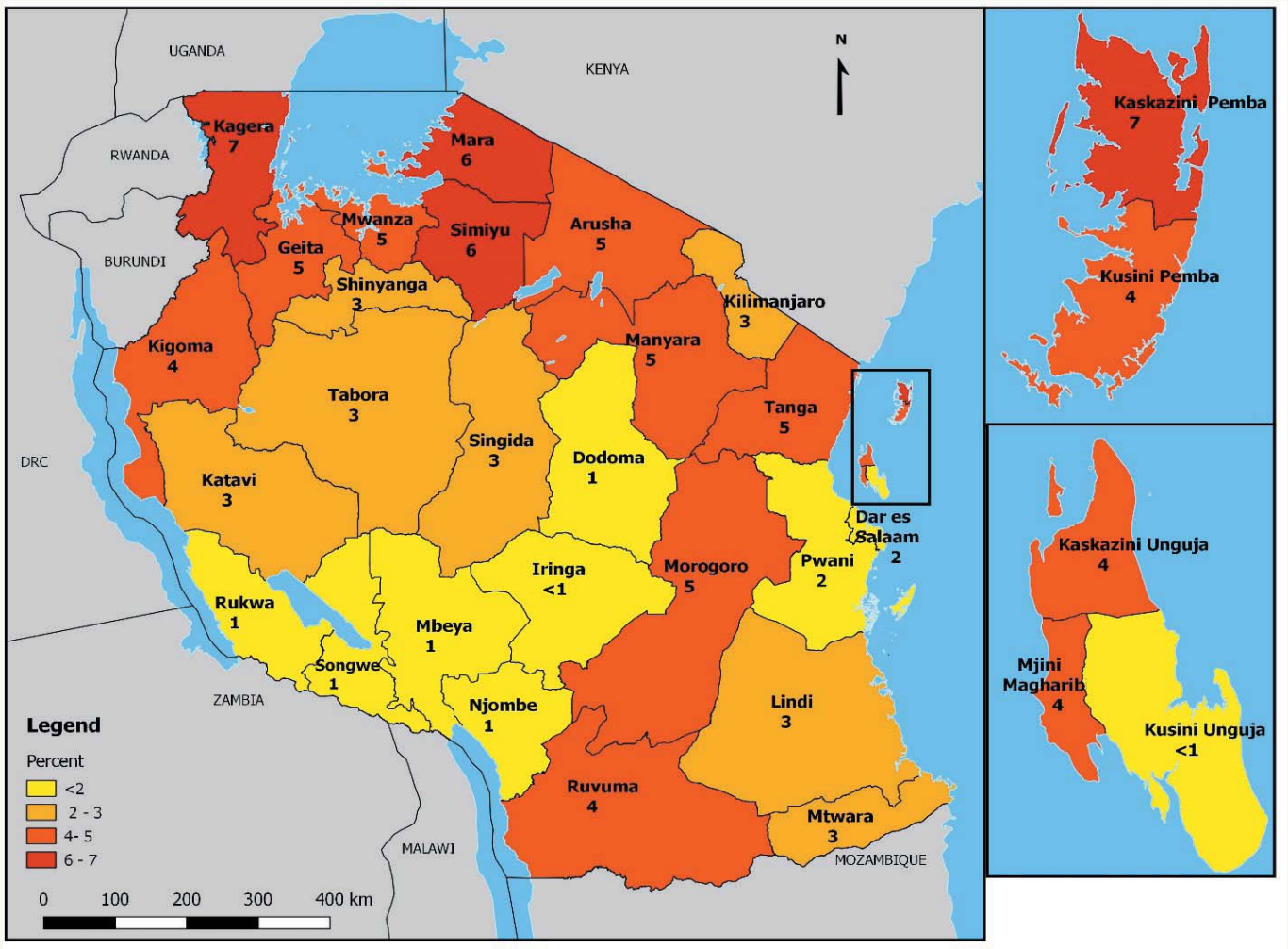
Percentage of children under age 5 with fever in the two weeks preceding the survey



Fever is a major symptom of malaria and other acute infections in young children. In the 2017 TMIS, mothers were asked whether any of their children under age 5 had a fever in the two weeks preceding the survey and if so, whether treatment or advice was sought and whether blood testing was performed. Information was also collected about the type and timing of the treatment given. Overall, 20% of children under age 5 had fever in the two weeks preceding the survey. In Mainland Tanzania, children with recent fever ranges from a low of 10% in Njombe to a high of 28% in Mtwara. In Zanzibar, recent fever is lowest in Kaskazini Unguja (6%) and highest in Kusini Pemba (34%). Among children with fever, advice or treatment was sought for 75% and 43% had blood taken from a finger or a heel for testing.

Anaemia in Children

Percentage of children age 6-59 months with haemoglobin lower than 8.0 g/dl

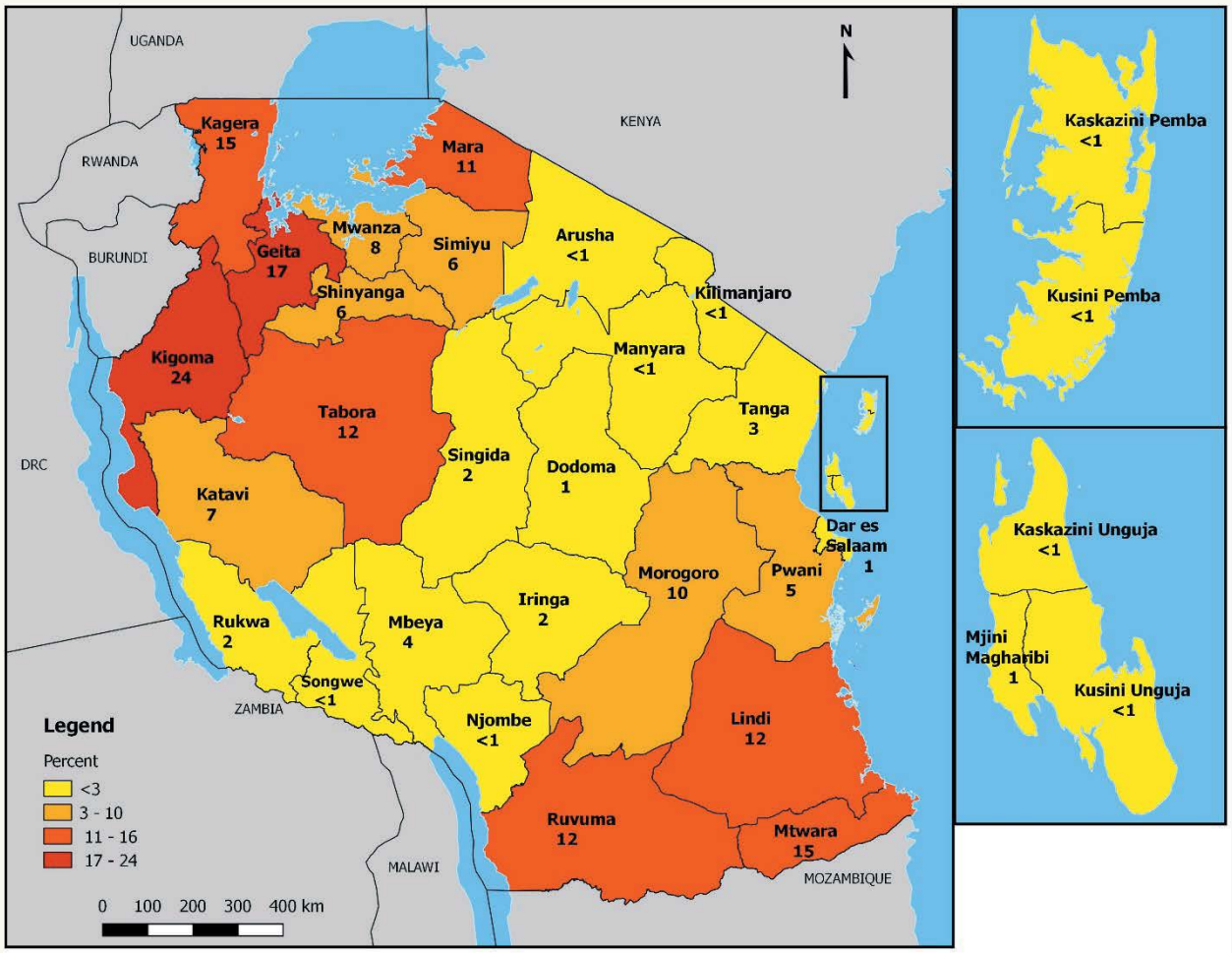


The 2017 TMIS tested children's haemoglobin levels using the HemoCue system to determine anaemia prevalence. Four percent of Tanzania children age 6-59 months had severe anaemia (haemoglobin less than 8g/dl).

Severe anaemia among children age 6-59 months differ markedly across regions. Among regions in Mainland Tanzania, the percentage of children age 6-59 months with severe anaemia is highest in Kagera (7%) and lowest in Iringa (< 1%). In Zanzibar, severe anaemia is highest in Kaskazini Pemba (7%) and lowest in Kusini Unguja (<1 %).

Malaria Prevalence in Children

Percentage of children age 6-59 months classified as having malaria, according to Rapid Diagnostic Test (RDT)

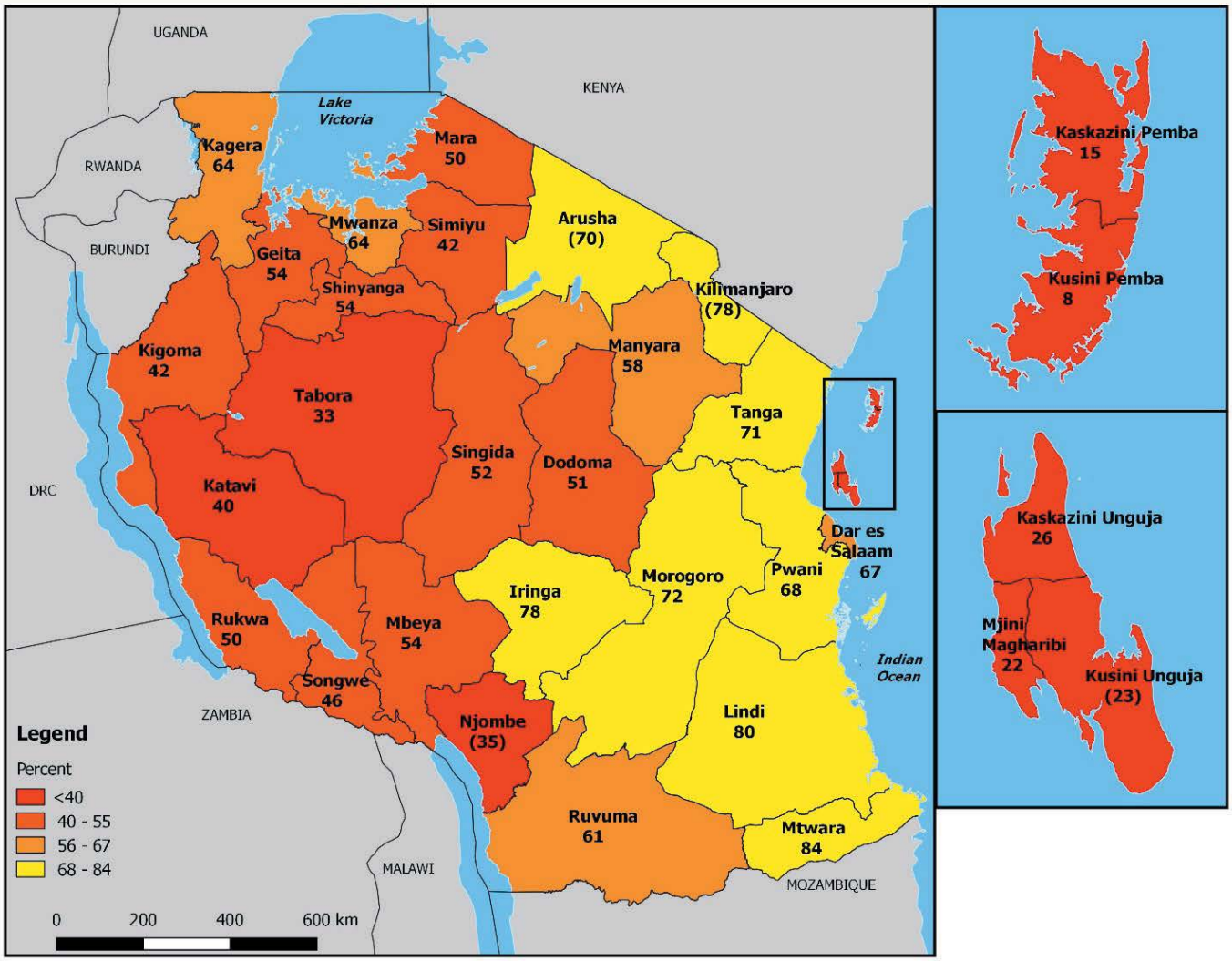


The overall prevalence of malaria in young children in Tanzania as measured by rapid diagnostic test (RDT) is 7%. Rural children are more likely than urban children to test positive for malaria by RDT (9% in rural areas compared with only 2% in urban areas).

Eight percent of children age 6-59 months in Mainland Tanzania tested positive for malaria, compared to <1% of children in Zanzibar. There are large variations in malaria prevalence among children across regions in Mainland Tanzania. The highest malaria prevalence among children is found in Kigoma region (24%), followed by Geita (17%). The regions with the lowest malaria prevalence among children are Arusha, Kilimanjaro, Manyara, Njombe and Songwe (less than 1% each). In Zanzibar, malaria prevalence is <1% in all regions, except Mjini Magharibi (1%).

Intermittent Preventive Treatment during Pregnancy (IPTp)

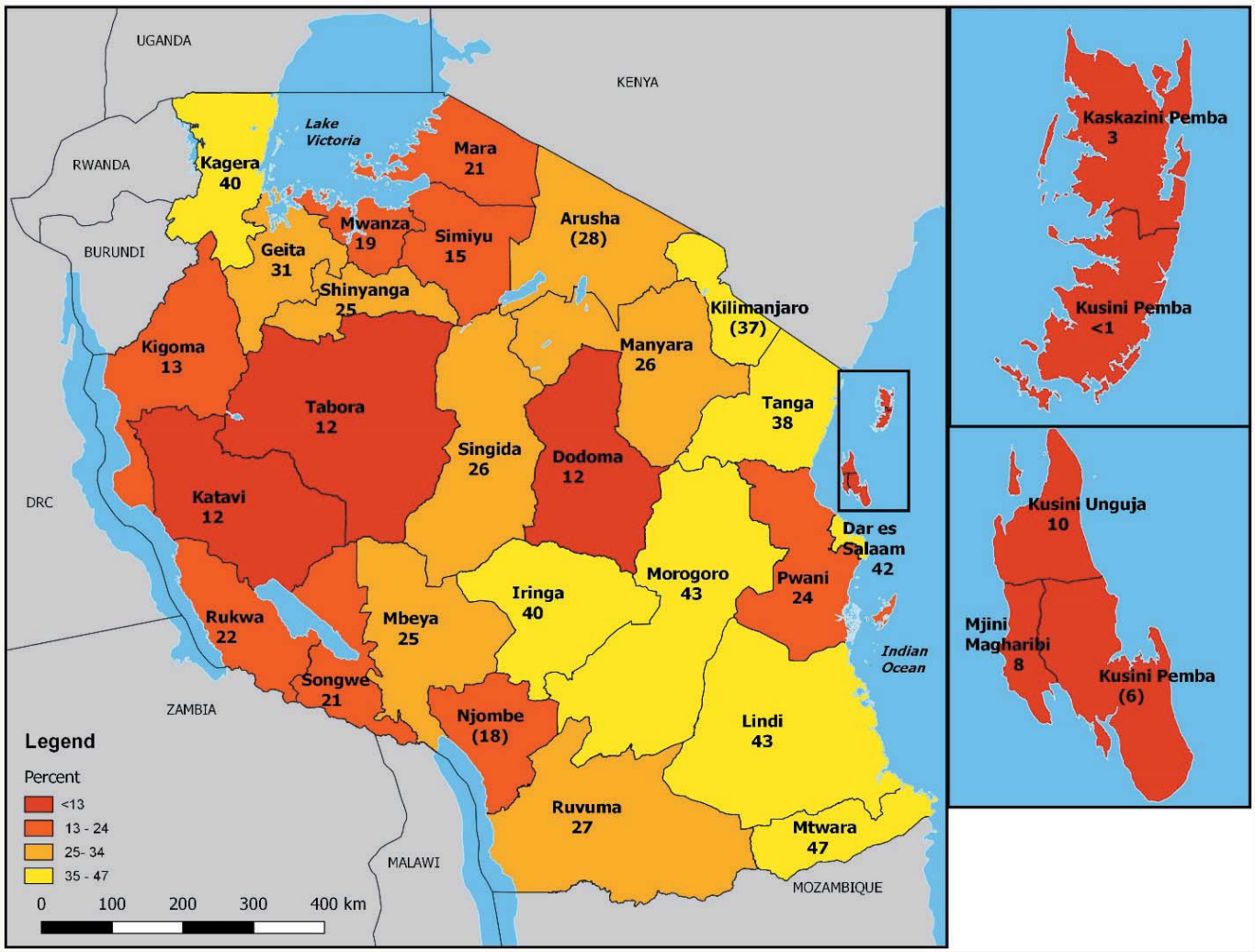
Percentage of women age 15-49 with a live birth in the two years before the survey who, during the pregnancy that resulted in the last live birth, received two or more doses of SP/Fansidar



Intermittent preventive treatment (IPTp) of malaria in pregnancy is a full therapeutic course of antimalarial medicine (sulphadoxine/pyrimethamine [SP]) given to pregnant women at routine antenatal care visits to prevent malaria. Pregnant women, especially those who are pregnant for the first time, lose some degree of immunity and are susceptible to malaria. Fifty-six percent of women age 15-49 with a live birth in the 2 years preceding the survey received 2 or more doses of SP/Fansidar (IPTp2+) to prevent malaria. Pregnant women in urban areas are more likely to have received IPTp2+ (66%) than pregnant women in rural areas (53%). Women are most likely to have received IPTp2+ in Mtwara (84%) and least likely in Kusini Pemba (8%).

Note: *Figures in parentheses are based on 25-49 unweighted cases*

Percentage of women age 15-49 with a live birth in the two years before the survey who, during the pregnancy that resulted in the last live birth, received three or more doses of SP/Fansidar during pregnancy



In Mainland Tanzania, it is recommended that all pregnant women attending ANC receive 3 or more doses of SP/Fansidar. Zanzibar dropped the IPTp strategy in 2013. Overall, 26% of women age 15-49 with a live birth in the 2 years preceding the survey received 3 or more doses of SP/Fansidar (IPTp3+) to prevent malaria. Urban women (31%) are more likely than rural women (24%) to have received IPTp3+ during their most recent pregnancy in the past two years. In Mainland Tanzania, use of IPTp3+ ranges from 12% in Dodoma, Tabora, and Katavi to 47% in Mtwara.

Note: *Figures in parentheses are based on 25-49 unweighted cases*