Looking Beyond Indicator Levels and Trends: Understanding the Numbers

By Sarah Eunice Asiimwe Kabaija
Monitoring Specialist
UNICEF, Uganda

Abstract

A critical component of data improvement for Sustainable Development is information provision on the number of people whose rights remain unrealised. This will address a key critique of the MDGs – namely, they did not focus enough on leaving no one behind.

For selected indicators collected in the four Uganda Demographic and Health Surveys between 1995 and 2011, the numbers of those not attaining the corresponding human rights were derived and assessed. The results show that an improvement in indicator performance does not necessarily imply a decrease in number of people left behind. For example, the number of under-5's dying annually could steadily increase while corresponding mortality rates decline due to changing population dynamics.

To achieve an improvement in both indicator performance and universal coverage, it is necessary to monitor the number of people left behind – and ensure that this information is reflected in the geographical prioritization of development interventions.

1.   Introduction

The Sustainable Development Agenda's (SDA's) main goal is to eradicate extreme poverty from the face of the earth by 2030 – a worthy goal that can only happen when human rights are universally ensured. Indicators were selected for a critical subset of these human rights from three dimensions (Nutrition, Sanitation and Health) of the Bristol multidimensional approach to measuring child deprivation[1] and 2030 targets were assigned. Targets for the years 2016, 2021 and 2026 were also designated for the scenarios of this study, so as to define the trajectory that the country would need to adhere to in order to attain each 2030 target.

These indicators are currently assessed on a proportional basis, i.e. share of a given (sub)-population meeting the indicator's target. The targets of indicators that give the prevalence of an undesirable attribute of human welfare are defined on a "ceiling" basis (e.g., proportion of under 5 children who are stunted is no more than 10%) and the indicator's performance improves as its value decreases. The converse applies for targets of indicators that give the status of a desirable attribute of human welfare (defined on a "floor" basis, e.g., proportion of the population with access to an improved sanitation facility is no less than 60% and the indicator's performance is deemed to be improving if its value is increasing). Therefore, 2030 targets for both types of indicators were designated accordingly.

It has been recognised that for no one to be left behind by 2030, a data revolution is required that more effectively and continually measures progress towards the achievement of indicator targets and towards the universal attainment of human rights. To that end, participants of the 2013 PARIS21/Philippines' side event hosted by the UN General Assembly on the "why", "what" and "how" of the required data revolution, agreed on the need for better, faster and more accessible data that makes a difference to and for people – especially those at the fringes of society.

"Better" data has many facets and several have been extensively discussed in various forums, e.g. disaggregation (by gender, geographical location, urban/rural, wealth quintile, educational level, etc.) which enables us to more clearly identify the sub-population that is being left behind, and to more effectively target them in the planning and implementation of development interventions.

The objective of this paper is to suggest an additional aspect of what should be seen as "better" development data, namely monitoring the trend in absolute population numbers of people whose right to a given service remains unmet. This is necessary because improved indicator performance does not always follow from a decrease in the size of the under-served population, as population growth may at times outpace the rate of improvement in indicator performance. In such cases, while both the absolute number of individuals *and* share of population attaining a given right increases, the absolute number of individuals *not* realising this right increases as well. This concern is not merely an arithmetic artefact of numerator/denominator/ quotient dynamics, but is also a totally consequential development reality that makes it essential to monitor the absolute sub-

---

[1] The Bristol multidimensional approach to measuring child deprivation dimensions are: (i) Nutrition; (ii) Water; (iii) Sanitation; (iv) Health; (v) Shelter; (vi) Education; and (vii) Information.

population numbers behind the proportional indicators from which they are derived, in the same systematic manner that we approach indicator monitoring.

2.   Approach

Using data collected on selected indicators in the Uganda's Demographic and Health Surveys (DHS) of 1995, 2000/2001, 2006 and 2011, estimates of the corresponding number of people who are not realising the right measured by each indicator were calculated. The trends in indicator performance were compared with the trends in the levels of absolute sub-population numbers who were not realising the relevant right, to assess whether or not these two variables were changing in the same direction over the period 1995–2011.

Projections for both the population and indicator levels, based on targets set for the next four DHS up to 2031, were produced. The year 2031 is chosen because it is the DHS year that is nearest to the end of the 2030 Agenda period. Targets were then set for 2031 that were either "Optimistic" or "Conservative", and indicator levels were designated against the three DHS years of 2016, 2021, 2026, which would lead the country to attainment of its targets in 2031. "Optimistic" targets refer to an improvement in the indicator performance of 67 percent or more. "Conservative" targets refer to an improvement in the indicator performance of 50 percent or slightly more. The indicator levels assigned to the DHS years 2016–2026 were those which, if achieved, would imply that the country is on track to reach its 2031 target for the indicator. Population growth projections were produced and used to estimate the number of people left out by the time each DHS is conducted. With these three data sets, we can demonstrate how the number of people not realising their rights could change with a change in indicator levels.

Furthermore, graphs corresponding to indicator levels and number of people left behind were produced for each indicator, in order to provide a visual presentation of both the historical trend for the years 1995–2011 and the extrapolated trend for the years 2016–2031.

Finally, for each of the 10 subnational regions used in the 2011 DHS, the performance of selected indicators and the number of people not realising the right measured by each indicator were compared to demonstrate that the regions with the poorest indicator performance are not necessarily the ones with the highest numbers of unreached people.

Recommendations are made based on extrapolations of the trends in both indicator values and absolute numbers of people left out to demonstrate the need to set targets and monitor trends of the absolute numbers corresponding to development indicators if we are to ensure that the 2030 Agenda of "no one left behind" is not just a rallying slogan, but a reality on the ground.
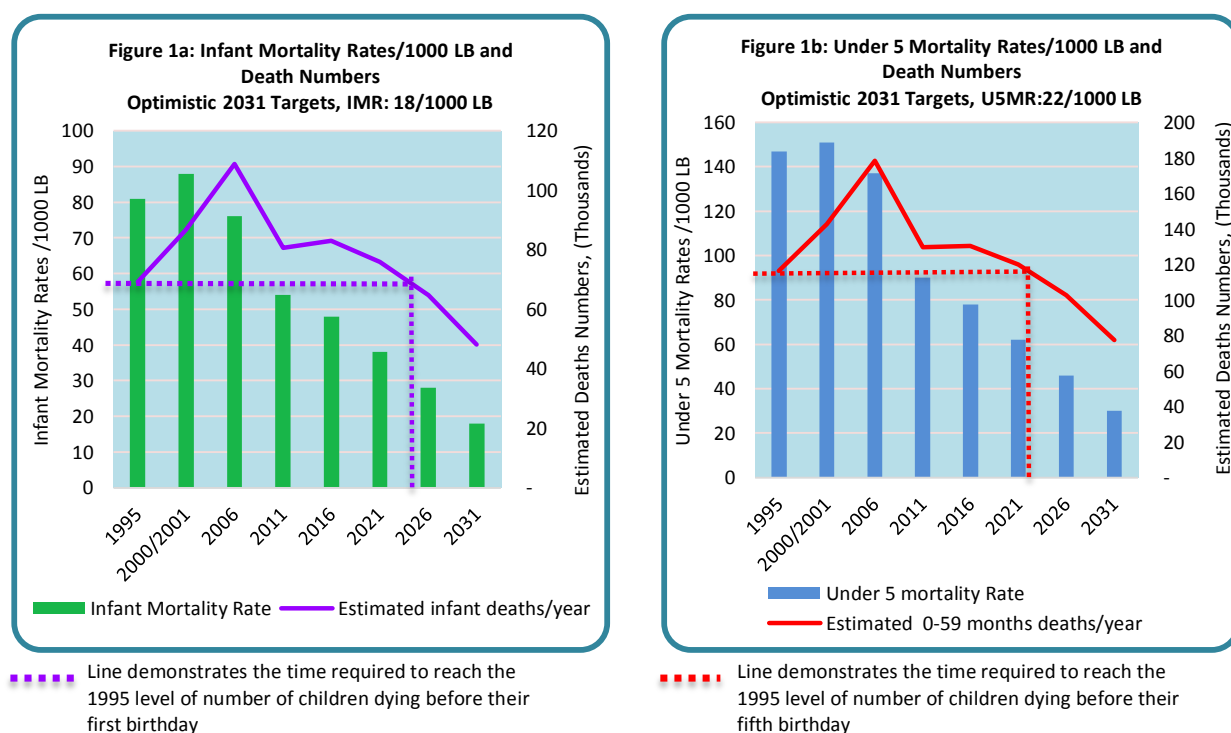
3.   Review of Selected Indicators

3.1   Evidence for the need to look at the trends in absolute numbers

Evidence from both the historical data (1995–2011) and projections (2016–2031) on seven indicators demonstrated that it is possible to improve development indicators while the number of people not reached or left behind is growing. Furthermore, the evidence showed that even after countries begin to see a decline in the number of people left behind, it can take several years (with the length of the period depending on population growth rates and the size of the sub-population on which the indicator is based) to reach 1995 levels. This complicates the effective planning of development interventions that aim to ensure that no one is left behind.

3.1.1   Infant and Under 5 Mortality Rates and Associated absolute death numbers

Scenario 1: Optimistic 2031 Targets: Infant Mortality Rate (IMR), 18/1000; Under 5 Mortality Rate (U5MR), 22/1000

We begin with an optimistic scenario where interventions are put in place to achieve a two-thirds reduction in both rates: from 54 per 1000 live births (/1000LB) in 2011 to 18/1000LB in 2031 for the IMR; and from 90/1000 to 30/1000LB over the same period for the U5MR. The scenario is depicted in Figures 1a and 1b.

.

Figure 1a: Infant Mortality Rates/1000 LB and Death Numbers Optimistic 2031 Targets, IMR: 18/1000 LB

Line demonstrates the time required to reach the 1995 level of number of children dying before their first birthday

Figure 1b: Under 5 Mortality Rates/1000 LB and Death Numbers Optimistic 2031 Targets, U5MR:22/1000 LB

Line demonstrates the time required to reach the 1995 level of number of children dying before their fifth birthday
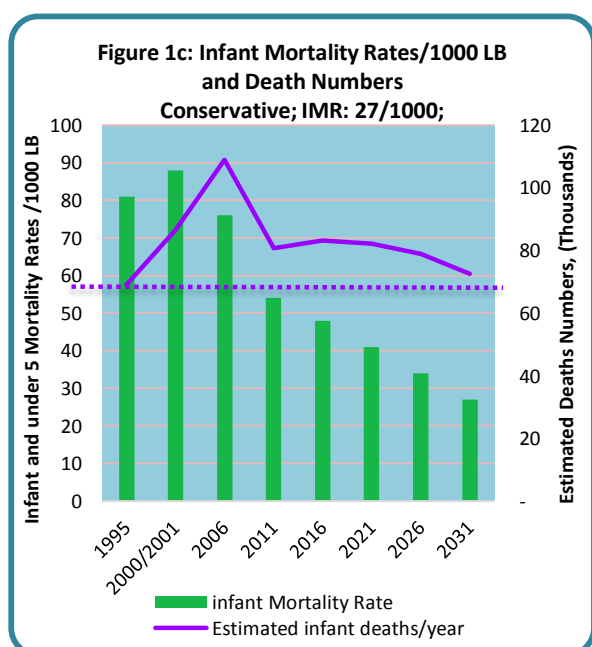
Sources:
  i.   *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
  ii.   *Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author*

We observe that over the period covered by the four sample surveys between 1995 and 2011, the national levels of the IMR and U5MR followed a declining trend on the average – a desirable direction of change. On the other hand, the corresponding estimated absolute numbers of deaths for infant and under 5 children followed an increasing trend – an undesirable direction of change.

We observe further that there is a reduction in IMR and U5MR for the years 2000/2001–2031, and consequently a reduction in the levels of the annual number of deaths of infant and under 5 children from 2011 forward. While this certainly denotes some commendable progress, the striking observation is that the 1995 annual absolute death numbers are not re-"attained" until around 2025 for IMR and 2022 for U5MR – and this is for the optimistic scenario. By failing to closely scrutinise the absolute number of people not attaining a given right as measured by the indicators, we may overlook the fact that the estimated absolute number of infant and under-five deaths is consistently higher than the 1995 estimates for about 30 years despite the consistent improvement in indicator performance – which could lead to complacency.

Scenario 2: Conservative 2031 Targets: Infant Mortality Rate (IMR) 27/1000; Under 5 Mortality Rate (U5MR), 30/1000

As shown in Figures 1c and 1d, the key observations are similar to those discussed above under the optimistic scenario, except that the 1995 infant and under 5 absolute numbers are not expected to be reached even by 2031. While we consider the conservative targets SMART (Specific, Measurable, Achievable, Realistic and Time-bound) on the basis of the current level of resources, this observation illustrates the need to for each country to re-think how best to grow/increase the available resource base starting at the domestic level in addition to setting SMART targets.

Figure 1c: Infant Mortality Rates/1000 LB and Death Numbers Conservative; IMR: 27/1000;

Line demonstrates the time required to reach the 1995 level of number of children dying before their first birthday

Figure 1d: d Under 5 Mortality Rates/1000 LB and Death Numbers Conservative, U5MR:45/1000
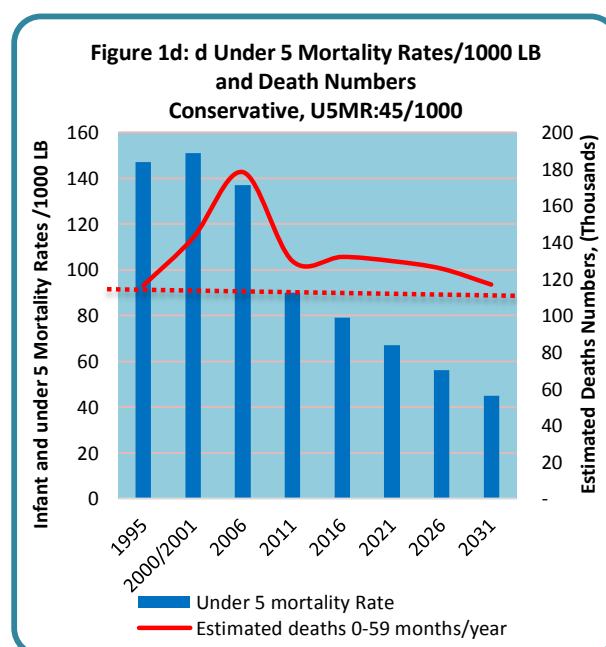
Line demonstrates the time required to reach the 1995 level of number of children dying before their fifth birthday
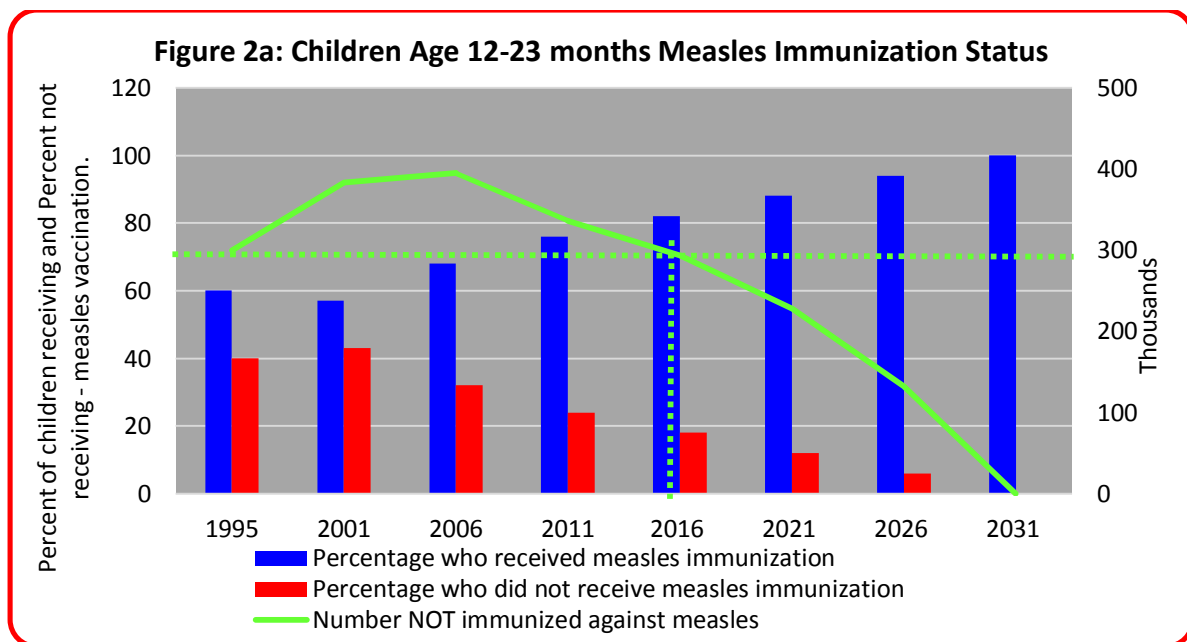
Sources:
    i.   *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
    ii.   *Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author*

3.1.2 Measles and Full Immunization Status among Children Aged 12-23 months

Scenario: 2031 Targets for both indicators is 100% coverage for children 12-23 months

The set targets are conservative for measles immunisation (2011 baseline is 76 percent, Figure 2a) and optimistic for full immunization (2011 baseline is 52 percent, Figure 2b).

Looking at the measles immunisation trend over the period 1995–2011, the proportion of children aged 12–23 months who had received the measles vaccination by the time of each survey declined by 3 percent between 1995 and 2001. A consistent upward trend was observed thereafter and the indicator's performance rose from 69 percent to 76 percent, an increase of 16 percentage points. However, while the corresponding proportion of children who did not receive a measles vaccine declined from 40 percent to 24 percent, the absolute number of children who did not receive the vaccine followed the opposite trend – rising by 90,000 over the period 1995 to 2006. Although the number had decreased to 339,000 by 2011, the 2011 figure for children who have not received measles vaccination remained higher than the same number in 1995 by 36,000. It is projected that the 1995 level of number of children without measles immunisation will only be reached more than 20 years after 1995.
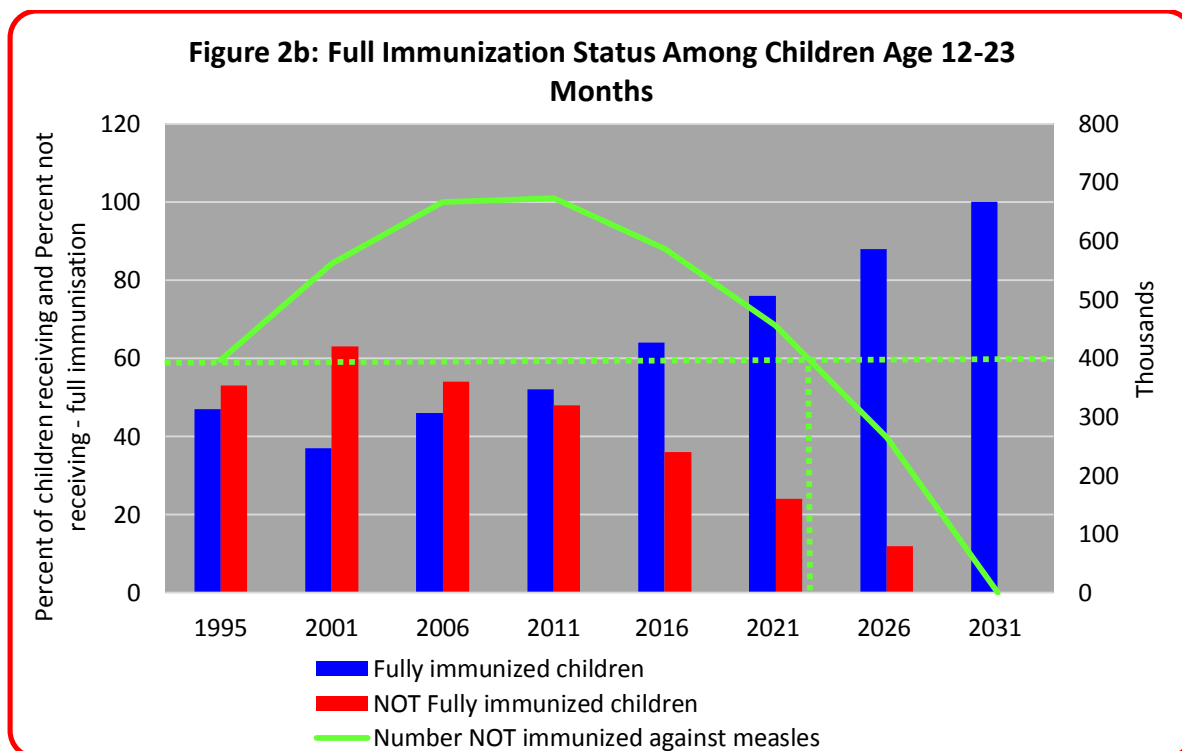

Figure 2a: Children Age 12-23 months Measles Immunization Status

Legend:
- Percentage who received measles immunization
- Percentage who did not receive measles immunization
- Number NOT immunized against measles

▪▪▪▪Broken line demonstrates the time required to reach the 1995 level of number of children aged 12-23 months who are not immunised against measles

Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

Children are considered fully vaccinated when they have received a vaccination against tuberculosis (BCG), three doses each of the pentavalent vaccine DPT-HepB-Hib[2] and polio vaccines, and a measles vaccination by the age of 12 months. Over the 15 year period spanning 1995–2011, the percentage

---

[2] Protects against diphtheria, pertussis (whooping cough), tetanus, hepatitis B, and Haemophilus influenza type 'b.' It has replaced the diphtheria, pertussis, and tetanus (DPT) vaccine.

of fully immunised children rose by 5 percentage points only, from 47 percent to 52 percent – and the proportion of children not immunised decreased in tandem. While the change in the two proportions appears very small, there is a drastic increase in the number of children aged 12–23 months who did not receive full immunisation – increasing by 284,000 children (or 72%) over the period under observation. So while the indicator trend improved marginally, the number of children not accessing their rights increased more than 1.5 fold, and once again, for this indicator it is projected that the 1995 level of number of children without measles immunisation will only be re-attained more than 25 years after 1995.

Figure 2b: Full Immunization Status Among Children Age 12-23 Months

Legend:
- Fully immunized children
- NOT Fully immunized children
- Number NOT immunized against measles

Broken line demonstrates the time required to reach the 1995 level of number of children aged 12-23 months who are not fully immunised
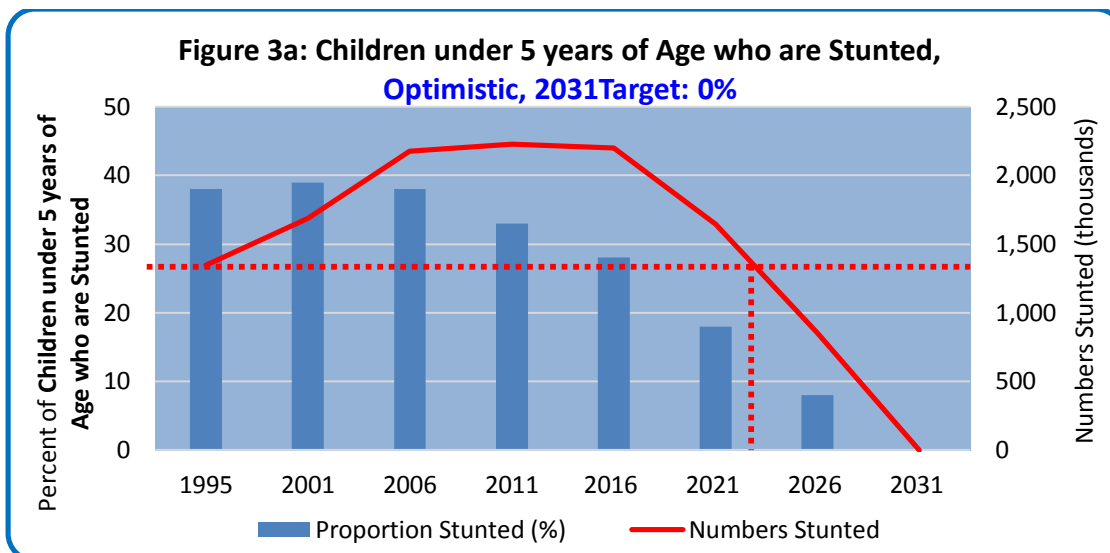
Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

3.1.3 Children under 5 who are stunted

The proportion of stunted children declined from 38 percent to 33 percent over the period 1995 to 2011, and the proportion of children not stunted increased in tandem. While the change in the two proportions appears very small and in the desired direction, the increase in the absolute number of stunted children is significant – an additional 896,000 children (or 66%). Projecting forward to 2031, we assess both the optimistic and conservative scenarios.

Scenario 1: Optimistic 2031 Target: Proportion of under 5 children who are stunted is 0%

Under this scenario in which no child is predicted to be stunted by 2031, it is expected that the number of children who are stunted will decline to its 1995 level after 2021 (over 25 years later) and almost a million under 5 children will remain stunted by 2026.
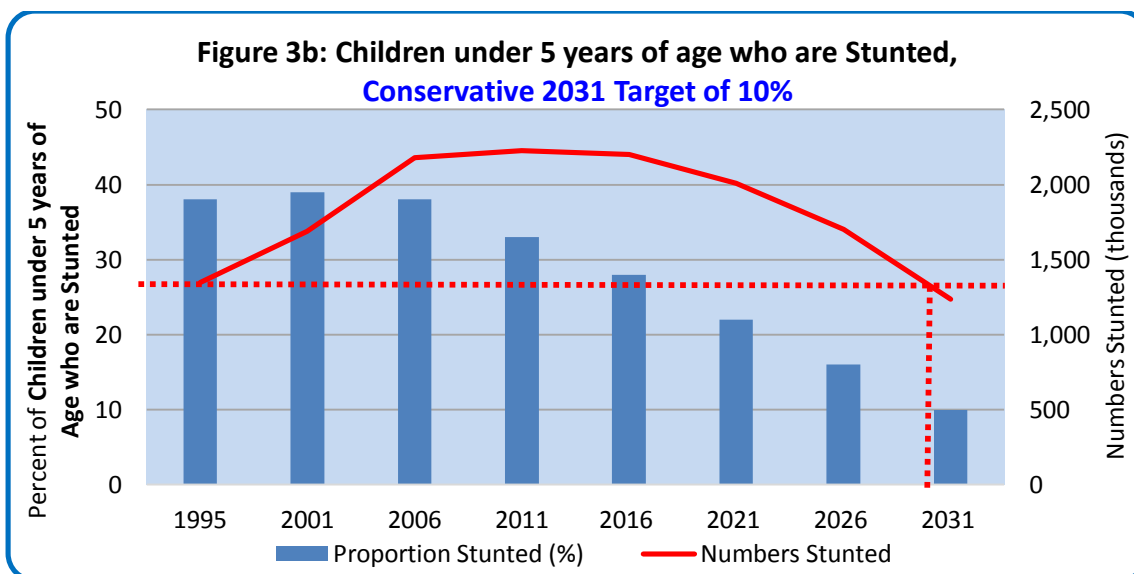
Figure 3a: Children under 5 years of Age who are Stunted, Optimistic, 2031Target: 0%

........Broken line demonstrates the time required to reach the 1995 level of number of children under 5 years of age who are stunted

Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

Scenario 2: Conservative 2031 Target: Proportion of under 5 children who are stunted is 10%

Under this scenario, it is projected that the absolute number of children who are stunted will decline to its 1995 level near 2030 (about 35 years later). It is important to note that under this scenario, over 2 million under 5 children are classified as stunted until after 2021, a dire situation given the well-documented impacts of stunting on the development of young children. Furthermore, over 1 million children will remain stunted by 2031.

Figure 3b: Children under 5 years of age who are Stunted, Conservative 2031 Target of 10%

........Broken line demonstrates the time required to reach the 1995 level of number of children under 5 years of age who are stunted
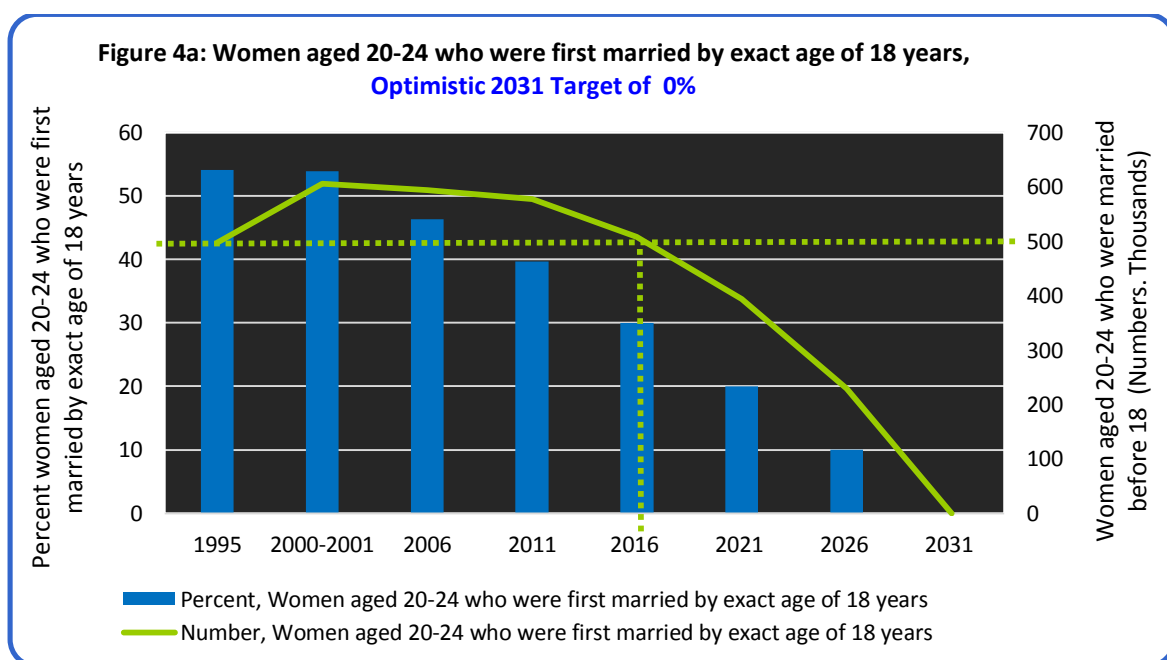
Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

3.1.4 Women aged 20–24 who were first married by exact age of 18 years

Despite a consistent decline in the proportion of women aged 20–24 who were first married by the age of 18 years over the four surveys (from 54 percent in 1995 to 40 percent in 2011), the absolute number of women aged 20–24 who were married by age 18 years rose over the same period by 80,000 girls (or 16%).

Scenario 1: Optimistic 2031 Target: Women aged 20–24 who were first married by exact age of 18 years is 0%

Under this scenario (Figure 4a) under-age marriage is completely eliminated by 2031, and despite a consistent decline in the proportion of women aged 20-24 years who were married by age 18 years, the corresponding absolute number of the 1995 levels of the women is not re-attained until after over 20 years later, around 2016.
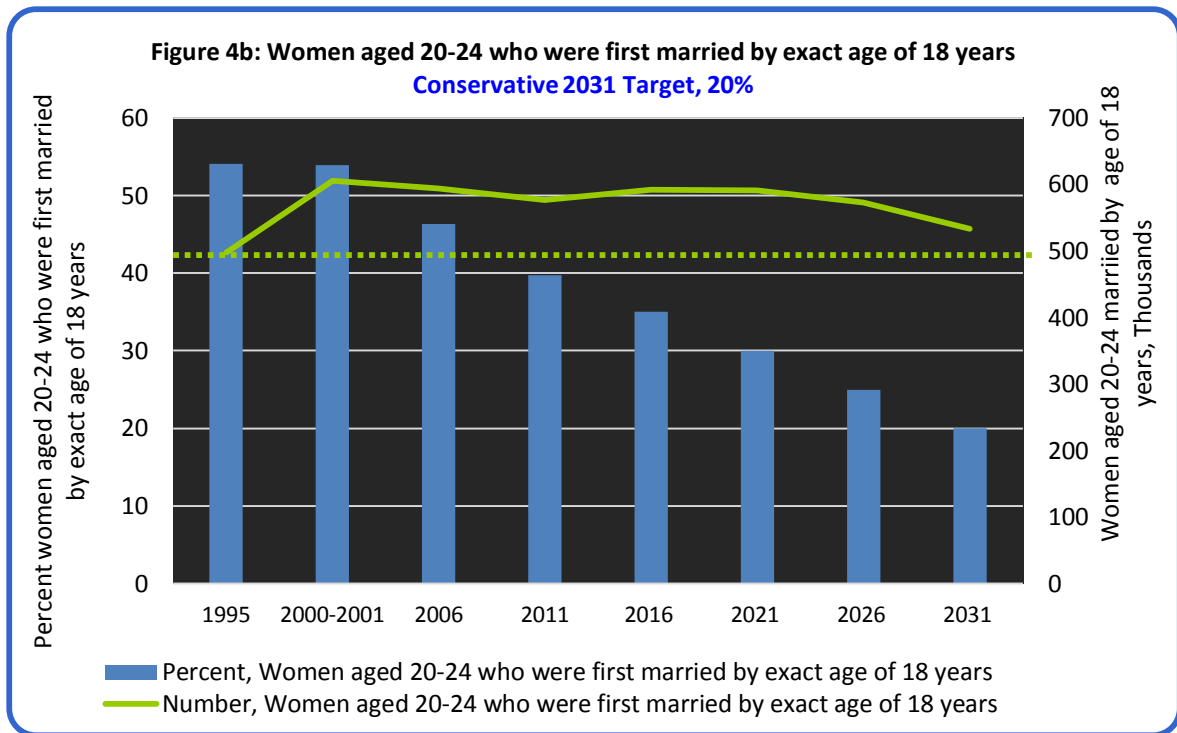
Figure 4a: Women aged 20-24 who were first married by exact age of 18 years, Optimistic 2031 Target of 0%

Broken line demonstrates the time required to reach the 1995 level of number of Women aged 20-24 who were first married by exact age of 18 years

Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

Scenario 2: Conservative 2031 Target: Women aged 20–24 who were first married by exact age of 18 years is 20%

Despite targeting a reduction of 50 percent in the proportion of 20–24 year old girls who are married by age 18 by 2031 (Figure 4b), the corresponding estimate of the absolute number of the same women is estimated at 533,000, which is 7 percent higher than its 1995 value.

Figure 4b: Women aged 20-24 who were first married by exact age of 18 years
Conservative 2031 Target, 20%

Percent women aged 20-24 who were first married by exact age of 18 years (left axis)

Women aged 20-24 married by age of 18 years, Thousands (right axis)

■ Percent, Women aged 20-24 who were first married by exact age of 18 years
— Number, Women aged 20-24 who were first married by exact age of 18 years

••••••• Broken line demonstrates the time required to reach the 1995 level of number of Women aged 20-24 who were first married by exact age of 18 years

Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

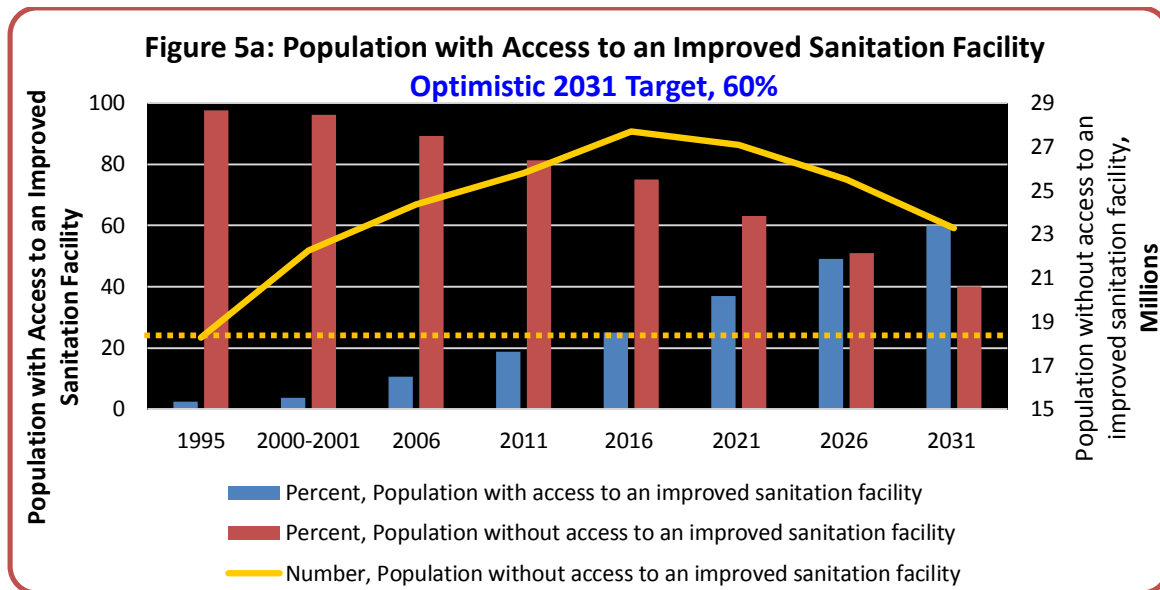### 3.1.5 Population with access to an improved sanitation facility

The proportion of the population with access to an improved sanitation facility increased from 3 percent in 1995 to 19 percent in 2011, while the proportion of the population without access to an improved sanitation facility decreased in tandem. However, the absolute number of people without access to the same facility increased over the same period from 18 million to 26 million (or 41 percent).

Scenario 1: Population with Access to an Improved Sanitation Facility, Optimistic 2031 Target of 60%

The scenario represents an increase in excess of 300 percent (Figure 5a) above its 1995 value in this indicator's performance and a 51 percent decrease in the proportion of the population without access to an improved sanitation facility. However, it is projected that the absolute number of people without access to the improved facility will remain above its 1995 level beyond 2031, with the 2031 number exceeding the 1995 value by 17 million for this "Optimistic" scenario.

It is therefore apparent that the three-fold improvement in indicator performance, while significant, is too small to results in a decrease in the absolute number of people who are left behind. This further endorses the need to give serious consideration to the absolute numbers of

those left behind when setting targets, and the need to monitor them as consistently as we monitor indicator levels.

Figure 5a: Population with Access to an Improved Sanitation Facility
Optimistic 2031 Target, 60%

- Percent, Population with access to an improved sanitation facility
- Percent, Population without access to an improved sanitation facility
- Number, Population without access to an improved sanitation facility

······· Broken line demonstrates the years to reach the 1995 level of the population without access to an improved sanitation facility

Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

Scenario 2: Population using an Improved Sanitation Facility, Conservative 2031 Target of 40%
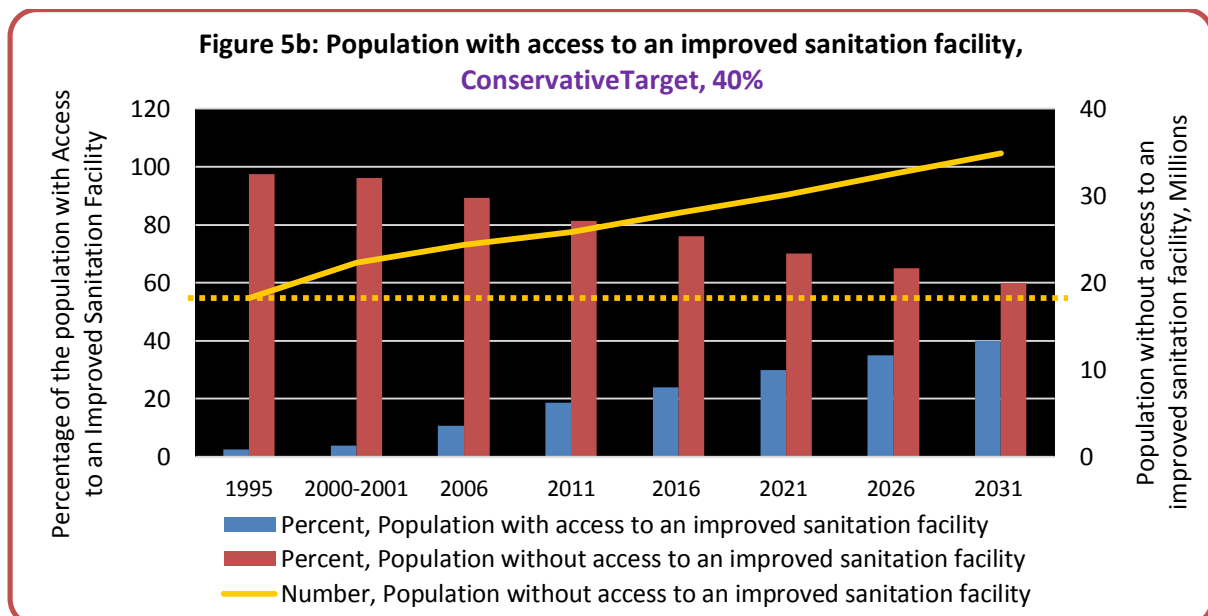
Figure 5b: Population with access to an improved sanitation facility,
ConservativeTarget, 40%

- Percent, Population with access to an improved sanitation facility
- Percent, Population without access to an improved sanitation facility
- Number, Population without access to an improved sanitation facility

······· Broken line demonstrates the time required to reach the 1995 level of the population without access to an improved sanitation facility

Source: *UBOS and Macro International, 1995, 2000–01 and 2006; UBOS and ICF International, 2012*
Numbers left out and population projections for 2016, 2021, 2026 and 2031 are estimated by the author

Despite an over 200 percent projected increase in the proportion of the population using an improved sanitation facility by 2031, the number of people without access to an improved sanitation facility is projected to almost double under this scenario from 18 million in 1995 to 35 million in 2014 (Figure 5b).

4. The need to consider the number of people left behind when determining the geographic prioritization of development interventions.

Evidence shows that due to the demographic patterns and population distribution of a country, the regions with the lowest indicator performance levels might not necessarily have the largest numbers of people who have been "left out". Therefore, to support required change in indicators, especially at the national level, it is important to pay attention to the parts of the country that have the largest numbers of the people left out even if, based on indicator levels, they live in better performing regions/districts.

Table 1: Low Birth Weight Prevalence Rates and Estimated Low Birth Numbers per region

UDHS 2011 Regions	Low Birth Weight (%)	Low birth weight numbers
Central 1	14.4	18,693
Central 2	12.5	18,235
East Central	11.9	22,255
Eastern	6.8	17,073
Kampala	10.5	4,924
Karamoja	9.8	4,496
North	11.4	18,000
South West	7.9	12,339
Western	8.3	15,346
West Nile	10.6	13,930
Uganda	**10.2**	**145,290**

Source: UBOS and ICF International, 2012
Numbers are estimated by the author

Table 2: Under 5 Mortality Rate and Estimated Absolute Death Numbers per region

UDHS 2011 Region	Under-five mortality rate	under 5 estimated number of deaths
South West	128	22,491
Western	116	23,406
West Nile	125	18,208
Karamoja	153	7,966
East Central	106	21,235
Eastern	87	22,692
Central 1	109	15,663
North	105	17,944
Central 2	87	13,668
Kampala	65	3,323
Uganda	**90**	**166,595**

Source: UBOS and ICF International, 2012
Numbers are estimated by the author

We use the indicator Proportion of newborns that have low birth weight (less than 2.5 kg). The lowest percentage of children with low birth weight in Table 1 were in Eastern and Western regions in 2011 (6.8% and 8.3%, respectively),where the estimated number of new-borns that had low birth weights ranked among the highest (over 17,000 and 15,000, respectively) in the country. In comparison, the Kampala and West Nile regions performed relatively worse with new-born low birth weight rates of 10.5% and 10.6% respectively (which are very close prevalence rates) yet they

exhibited lower (and significantly different levels) of estimated numbers of new-borns with low birth weight (4,924 and 13, 930 respectively).
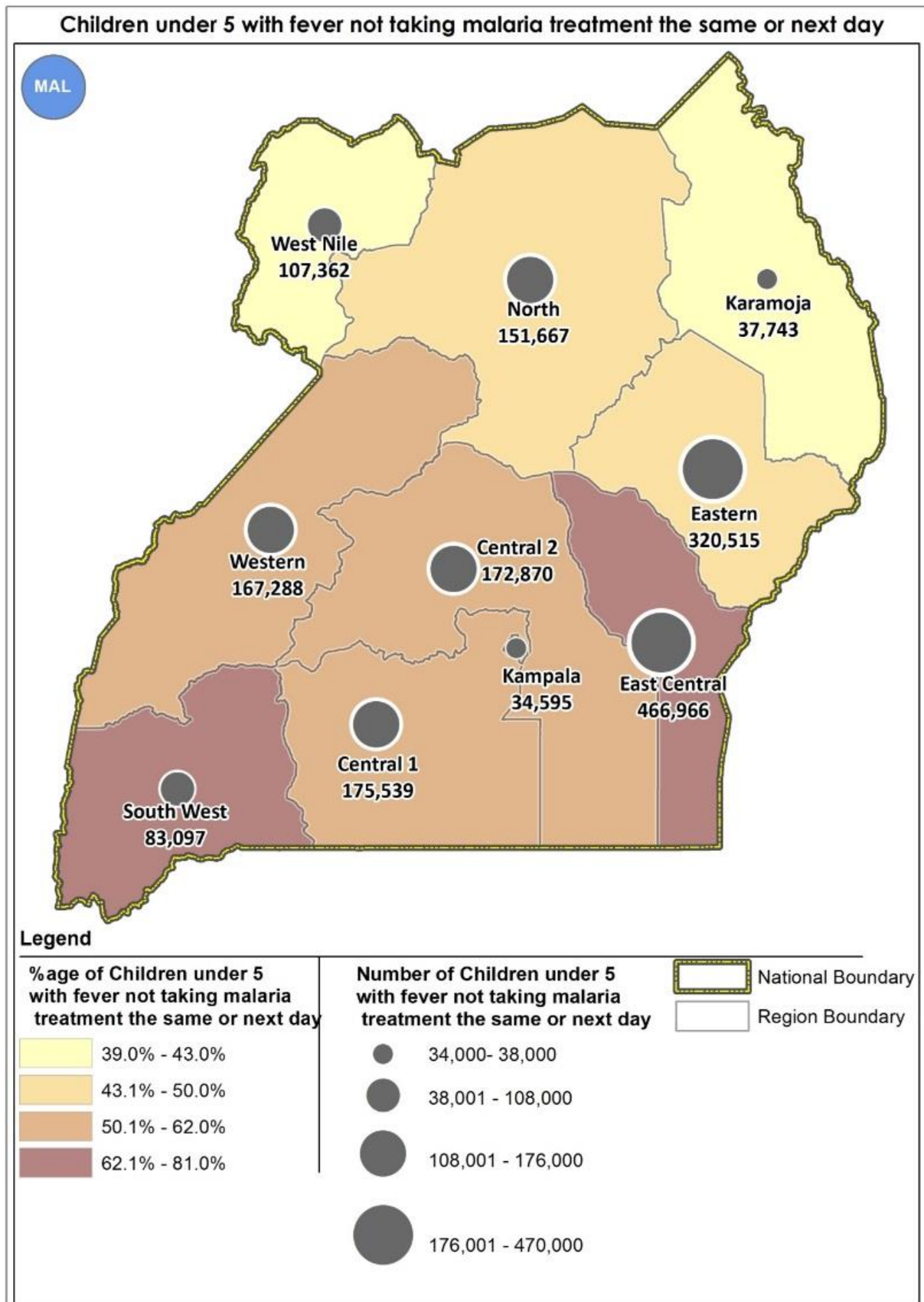
Similar observations hold for Table 2 where Karamoja region has the highest U5MR (which makes it a priority region for health interventions), but the second lowest number of estimated under 5 deaths annually because it is a region with low population numbers. On the other hand, Eastern region with the second lowest U5MR has the second highest number of estimated under 5 deaths annually.

The information in Tables 1 and 2 highlights the opportunity that could be lost if we prioritize geographical areas as recipients of development support solely on the basis of selected development indicator performance, without taking into account the absolute number of people not realising the indicator's corresponding right.

The fact that one or more of the geographical subdivisions of the country with better indicator levels could be heavily populated and, therefore, have significant proportions of the people left out despite apparently "better" indicator levels implies that we risk leaving out large numbers of people who live in parts of the latter when discussing targets and priority intervention areas. Therefore, while achieving set targets in the parts of the country that were prioritized for support, areas that had better indicator performance levels can fail to achieve their targets which would affect attainment of the national level target due to their high population numbers. Given the scarcity of resources and the commitment to leaving no one behind, decisions as to the parts of the country that we target for development support must be based on both indicator performance levels, as well as absolute numbers.

The above information can be presented visually using maps for quicker identification of the parts of the country that should be prioritized. For example, Figure 6 shows that although both East Central and South West regions have the two highest proportions of children under 5 years with fever who did not take malaria treatment the same or next day, the number of children not receiving malaria treatment within the same period are five times more in the East Central region (about 466,000) than they are in the South West region (about 83,000). Furthermore, the Eastern region has over 320,000 children, the second highest group of children not receiving timely malaria treatment who would benefit from an intervention on this issue, despite falling into one of the two better indicator performance bands. It is therefore evident that any intervention aiming to ensure that all children access timely malaria treatment should allocate resources based on both indicator performance levels and the number of children not receiving treatment if the country is to attain targeted national levels of the indicator.

Figure 6

Children under 5 with fever not taking malaria treatment the same or next day

MAL

West Nile
107,362

North
151,667

Karamoja
37,743

Eastern
320,515

Western
167,288

Central 2
172,870

Kampala
34,595

East Central
466,966

Central 1
175,539

South West
83,097

Legend

%age of Children under 5 with fever not taking malaria treatment the same or next day

- 39.0% - 43.0%
- 43.1% - 50.0%
- 50.1% - 62.0%
- 62.1% - 81.0%

Number of Children under 5 with fever not taking malaria treatment the same or next day

- 34,000- 38,000
- 38,001 - 108,000
- 108,001 - 176,000
- 176,001 - 470,000

National Boundary

Region Boundary

Source: Source: UBOS and ICF International, 2012
Numbers are estimated by the author

4   Recommendations

4.1   Target setting should take account of absolute numbers of people left behind

When determining targets for development indicators that are based on counts of people, we need to go beyond ensuring that they are SMART (specific, measurable, achievable, realistic and time-bound) in the traditional sense of the word. Under the new development agenda where no one should be left behind, an indicator target that is set without estimating the number of the people not realising the right associated with the target is inadequate because, as demonstrated in the examples above, the number of people left out could be increasing while the indicator is on track to be achieved and eventually achieved. Each indicator target must be set in consideration of the trend in absolute population numbers, and the impact this trend is likely to have on the number of people left behind. Furthermore, in order to ensure maximum efficacy, in countries where resources available to expand service delivery to match high population growth rates are limited, it is important for policy-makers to consider prioritizing family planning or birth spacing interventions along with those that directly address service delivery.

4.2   Geographical prioritization should look beyond indicator performance and consider population dynamics

It is a fact that there is no country where population distribution is even across the country. As a result, the number of under-served persons is not the same across regions – even when they exhibit the same indicator performance. A part of the country with relatively better indicator performance could have more under-served people than another part of the country with poorer indicator performance. We therefore need to take both indicator performance and absolute number of people left behind into consideration when selecting the geographical focus of development programmes.

4.3   Improved Population Projections and Family planning are critical for sustainable development

Even when both indicator performance and absolute numbers of under-served persons are considered, development decisions with regards to investment priorities and intensity of effort cannot contribute to sustainable development if the population projections on which they are based are not accurate. Therefore, due diligence should be given to the planning and implementation of population censuses and the production and dissemination of population projections.

Further, no country can afford to ignore the need for family planning or birth spacing, especially given the threat to development investments and achievements posed by high levels of population growth. Therefore to realise the worthy goal of leaving no one behind, developing countries will contribute significantly to realising the goals of Agenda 2030 by reviewing or putting in place family planning or birth spacing programmes that target the subset of their people that are in the reproductive age groups across the whole country.

5   Conclusion

Effective programme management that designs and implements interventions with a view to leaving no one behind requires a two-pronged approach to programme planning, implementation and monitoring that incorporates both indicator performance and absolute numbers of under-served persons. These dual considerations are important when making decisions on resource allocation and geographical prioritization. Development efforts need to prioritise both the regions/districts with poor indicator performance, as well as those with high numbers of people left behind even if the regions/districts have exhibit better indicator performance levels. This is the only way that improved indicator levels at the national level and universal coverage across the country can be equitably achieved.

Accurate census data and population projections remain a crucial foundation for effectively measuring indicator performance and estimating affected sub-population absolute numbers, and should be produced with the necessary due diligence.

Uganda has an average annual population growth rate of 3% and its population is projected to increase to 46.7 million by 2025. Unless the country plans for and ensures that an ever expanding service delivery structure is in place, rapid population growth will erode achieved development gains, and Uganda could end up with a population driven development disaster instead of a population dividend. Effective family planning programs should also be an important consideration for managing population growth.

Despite commendable progress in many development indicators, the absolute numbers of the under-served remain high and more needs to be done on the journey towards ensuring that nobody is left behind.

References

Uganda Bureau of Statistics (UBOS) and Macro International Inc. (1996) *Uganda Demographic and Health Survey 1995.* Kampala: UBOS and Calverton, MA: Macro International Inc.

Uganda Bureau of Statistics (UBOS) and Macro International Inc. (2000-01) *Uganda Demographic and Health Survey 2001.* Kampala: UBOS and Calverton, MA: Macro International Inc.

Uganda Bureau of Statistics (UBOS) and Macro International Inc. (2007) *Uganda Demographic and Health Survey 2006.* Kampala: UBOS and Calverton, MA: Macro International Inc.

Uganda Bureau of Statistics (UBOS) and ICF International Inc. (2012) *Uganda Demographic and Health Survey 2011*. Kampala: UBOS and Calverton, MA: ICF International Inc.

UNICEF (2011). Social And Economic Policy Working Briefs, UNICEF Policy And Practice; A Multidimensional Approach to Measuring Child Poverty