

# A Comparative Study on the Impact Evaluation of World Vision's Water, Sanitation and Hygiene Program in Malawi, Mozambique, and Zambia: Analyses Using Lives Saved Tool

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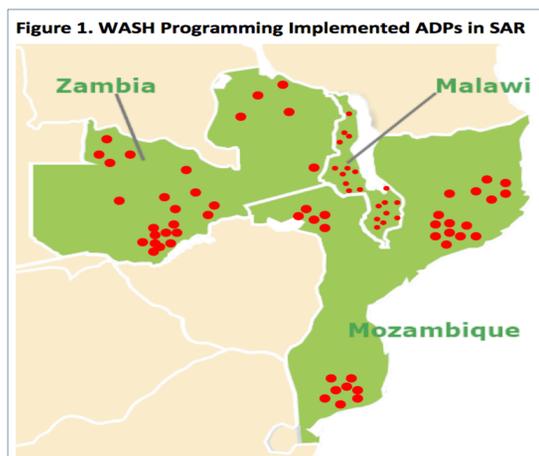
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## BACKGROUND

According to the World Health Organization, diarrheal disease is the second greatest killer of children under five years of age, claiming around 760,000 young children's lives every year, and 88% of diarrheal disease is attributed to unsafe water supply, inadequate sanitation and hygiene.<sup>1</sup> It is essential that safe drinking water, good sanitation and hygiene habits be promoted and practiced to prevent the majority of these deaths. With this aim, the humanitarian aid organization, World Vision, implemented For Every Child Campaign (FECC) community-based water, sanitation and hygiene (WASH) Program in 76 Area Development Programs (ADPs) for 506,019 target under five years of age (U5) population across Southern African Region: Malawi, Mozambique and Zambia from 2010/2011 to 2014.

## OBJECTIVES

The purpose of the comparative assessment is to estimate the impact of FECC WASH interventions on under-five child mortality from 2010/2011 to 2014 in three of World Vision's countries in the Southern African Region: Malawi, Mozambique and Zambia. WASH Program has been continuously implemented throughout 2010-2014 in ADPs, World Vision's primary unit for implementing its interventions at community level (20 ADPs in Malawi; 26 ADPs in Zambia; 30 ADPs in Mozambique).



## KEYWORDS

Diarrheal Disease – Southern African Region – Maternal, Newborn and Child health – Water, Sanitation, and Hygiene – Lives Saved Tool – Intervention Coverage – Retrospective & Quantitative Analysis – World Vision

## METHODS

The computer-based modeling software, Lives Saved Tool (LiST), was utilized to estimate the retrospective health impact of the FECC WASH Program between 2010/2011 and 2014 to measure how effectively WASH interventions were implemented. LiST is one component of the Spectrum software suite, a mathematical modelling package that estimates the effectiveness of the program with quantifiable results by scaling up the coverage of WASH interventions between baseline (2010/2011) and endline (2014).<sup>2-4</sup>

The effectiveness and scaled-up coverage of **five WASH interventions** were calculated by conducting ADP field visits and analyzing the Southern African Region's quantitative data.

1. Improved water source
2. Household water connection
3. Improved sanitation
4. Hand washing with soap
5. Hygienic disposal of children's stools

The combined effect of WASH interventions with four different scenarios were analyzed through LiST.

**Scenario I (SC I):** scaling up coverage of water interventions alone (improved water source + household water connection) while assuming coverage of sanitation & hygiene and WASH-related health interventions stayed constant over time

**Scenario II (SC II):** scaling up coverage of sanitation and hygiene interventions alone (improved sanitation + hand washing with soap + hygienic disposal of children's stools) while assuming coverage of water and WASH-related health interventions stayed constant over time

**Scenario III (SC III):** scaling up coverage of WASH interventions (improved water source + household water connection + improved sanitation + hand washing with soap + hygienic disposal of children's stools) while assuming coverage of WASH-related health interventions stayed constant over time

**Scenario IV (SC IV):** scaling up coverage of all WASH interventions + WASH-related health interventions

## RESULTS

SC III was the most feasible and realistic retrospective analysis that reflected World Vision's WASH-focused activities. Since SC III was basically the combination of SC I and SC II, it could show the comprehensive impact of World Vision's WASH Program. Also, most information about WASH-related interventions were not available in all three countries, so it was not possible to run SC IV.

The quantitative outcomes presented here are results from the SC III (combined effect of all five WASH interventions available in LiST) summary analysis for Malawi, Mozambique and Zambia.

WASH coverage from 2010/2011-2014	Malawi	Mozambique	Zambia
Improved water source	25% → 40%	40% → 55%	54.3% → 91.9%
Water connection in the home	0.1% → 1%	0.1% → 1%	2% → 2.8%
Improved sanitation	4% → 7%	5.3% → 9%	13.1% → 28.2%
Hand washing with soap	3% → 28%	3.3% → 28%	14% → 28.1%
Hygienic disposal of children's stools	2% → 5%	2.4% → 2.6%	13.1% → 16.5%

Figure 2. Under 5 Years of Age (U5) Diarrhea Cases Averted, 2010/2011 - 2014

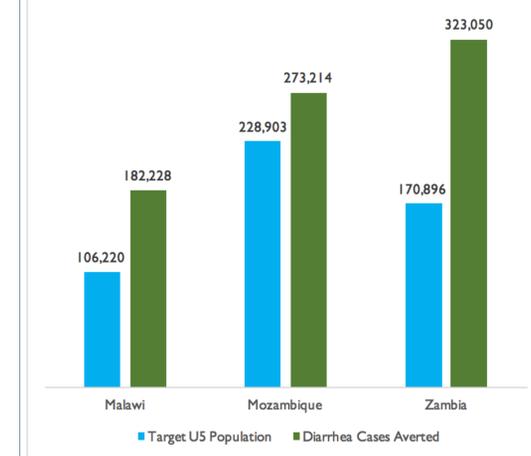


Figure 3. U5 Diarrhea Incidence Rates (case per child-year), 2010/2011 - 2014

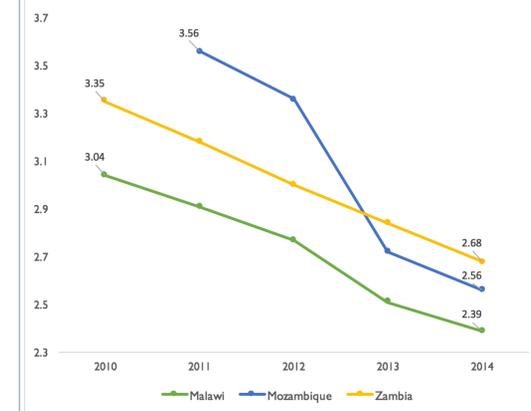


Figure 4. Percentage Increase of U5 Lives Saved from diarrhea, 2010/2011 - 2014

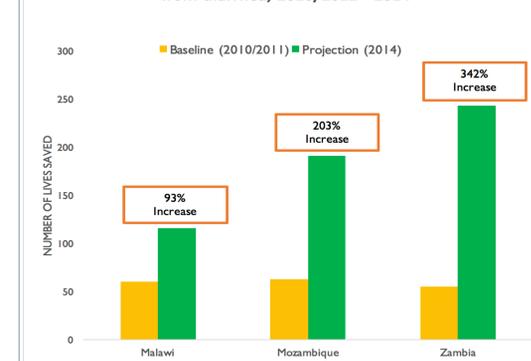
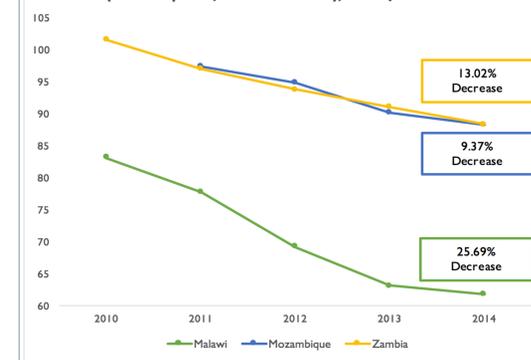


Figure 5. U5 Mortality Rate (deaths per 1,000 live births), 2010/2011 - 2014



## CONCLUSIONS

These results suggest that the program is achieving the organization's ultimate goal, "Every child deserves clean water," and that LiST acted as an effective tool for conducting the quantitative impact assessment of the project at the subnational level.

To reach universal coverage by 2020 to prevent all 3 cases of diarrhea per child each year, program activities should include promotion and facilitation of household-level water connection and regular availability of soap or equivalent, and WASH-related health interventions should be fully incorporated into future program.

## REFERENCES

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