Summative Evaluation of a project to eliminate trachoma, implemented by Orbis Ethiopia, in Gamo Gofa, Derashe, Konso and Alle in Southern Nations, Nationalities, and Peoples' Region Ethiopia from 2006-2016

Final Evaluation Report

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Disclaimer

The opinions expressed in this report are those of the Evaluation Team, and do not necessarily reflect those of Orbis. Responsibility for the opinions expressed in this report rests solely with the authors. Publication of this document does not imply endorsement by Orbis of the opinions expressed.

List of Acronyms

BCC – Behaviour Change Communication

CLTSH – Community Led Total Sanitation and Hygiene

DAC – Development Assistance Committee (of the OECD)

FDRE – Federal Democratic Republic of Ethiopia

FMoH – Federal Ministry of Health

GET2020 – Alliance for Global Elimination of Trachoma

GGDK – Gamo Gofa, Derashe and Konso

GTP II–Growth and Transformation Plan II

GTMP – Global Trachoma Mapping Project

HDA – Health Development Army (equivalent to a CHA)

HEW – Health Extension Worker

HSTP – Health Sector Transformation Plan

ICTC – International Coalition for Trachoma Control

IEC – Information, education, communication

IECW – Integrated Eye Care Worker

ITI – International Trachoma Initiative

PECU – Primary Eye Care Unit

MDA – Mass Drug Administration

NTD – Neglected Tropical Disease

ODF – Open Defecation Free

RE – Refractive Error

SAFE – Surgery, Antibiotics, Facial Cleanliness, Environmental Improvement

SAP zone – Segen Area Peoples Zone

SAP –Strategic Action Plan (for Hygiene and Sanitation)

SECU – Secondary Eye Care Unit

SMART – Specific, Measureable, Achievable, Realistic and Time bound (Objectives)

SNNPR – Southern Nations, Nationalities and Peoples' Region

TF – Trachomatous inflammation - Follicular

TT – Trachomatous Trichiasis

TI - Trachomatous inflammation - Intense

UIG – Ultimate Intervention Goal

VIP – Ventilated Improved Pit (Latrine)

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Executive Summary

A summative evaluation of the project to eliminate trachoma from the fourteen rural woredas of Gamo Gofa Zone and three of the five woredas in Segen Area Peoples Zone was undertaken in mid-2016 looking back over an implementation period that spanned ten years from March 2006 to May 2016. The evaluation was conducted by a team of two external consultants, one international (a specialist in environmental health) and one national consultant (a medical doctor and public health specialist) with a field visit undertaken during July and August 2016.

Purpose and Methodology of Evaluation

The purpose of the evaluation as stated in the Terms of Reference was two-fold.

1. To generate evidence of change (results at all levels) brought about through project interventions and of good stewardship (performance) to beneficiaries and donors (accountability).

2. To identify lessons from experience to better understand why certain results occurred or not and to provide independently validated evidence and recommendations to inform strategic and operational decision-making (learning).

The evaluation team, comprised of a balanced team with one focused on ***S**urgery* and ***A**ntibiotics* and the other focused on ***F**ace Washing* and ***E**nvironment*, all aspects of the Surgery, Antibiotics, Facial Cleanliness and Environmental improvement (SAFE) strategy. The team ably supported by a translator, with the full support of Orbis Ethiopia adopted a mixed methods approach to review a significant body of literature as listed under Appendix 3 and conducted a field visit to not only observe but consult with a wide range of over 100 stakeholders, listed under Appendix 4. The aim was to assess project performance as guided by a series of questions contained within a Terms of Reference. There were four main evaluation questions to be answered plus some additional questions framed against the Development Assistance Committee (DAC) evaluation criteria for development.

Key Findings

The following findings are clustered against the four key evaluation questions plus additional findings against the DAC criteria.

Question One.

Overall Outcome Targets:

- The prevalence of trachomatous follicular has been reduced substantially below the baseline figure in almost all woredas (Konso is the exception with a small reduction recorded) of the project area. Eight of the seventeen woredas have achieved a prevalence at or below the 5% threshold level.
- The prevalence of trachomatous trichiasis has been reduced in sixteen of the seventeen woredas (Arbaminch is the exception with a recorded increase).

None of the woredas have achieved the threshold prevalence of below 0.1% in adults aged 15 years plus.

Note: There are some questions marks over the validity of data, such as the baseline data where there may have been some overestimation of prevalence levels.

Specific Objectives:

- Access to trachoma treatment and surgery has been greatly enhanced over the project period. As the Government's primary health care system has expanded so too has the number of Primary Eye Care Units with 82 Primary Eye Care Units established, exceeding the target of 17 by 382%, within a total of 84 health centres. However, at this point in time only 58 or 70% of Primary Eye Care Units (PECUs) may be regarded as functioning.

- Health system capacity to deliver primary eye care including surgery, Mass Drug Administration (MDA) and behaviour change communication has hugely expanded over the project period. This is largely due to a very significant investment in training of people. Over 7,700 people including Integrated Eye Care Workers (IECWs), Health Extension Workers (HEWs), Health Development Armies (HDAs), Teachers and Religious Leaders have received training.
- During the project period a total of 41,555 surgeries were performed with almost half taking place in just five woredas. 70% of the surgeries were performed on females which is proportionate to the burden on females.
- All of the project woredas have completed at least four rounds of MDA with coverage for each round exceeding 80%. In the three years from 2012 – 2014 performance reports showed that about 95% of the eligible population received at least three consecutive doses of Zithromax well beyond the objective of 85%.
- While community behaviour with regard to MDA uptake is extremely good, awareness of the importance of sanitation, hygiene and eye care is limited with results from impact surveys indicating that no woreda reached awareness levels to the target of 85% on any one aspect of WaSH. Results varied considerably between woredas.
- Observations during the evaluation would indicate that attitudes and practices towards open defecation and latrine use in particular are changing. Every household visited had access to a latrine that was being used and many kebeles (nearly 50% of those visited) in woredas visited now have ODF (Open Defecation Free) status.
- There was significant under achievement with respect to water supply that was delivered through the WaSH partners, WaterAid and EECMY-DAASC, with just 28% - 37% of the target achieved. Those in receipt of water supplies were generally happy although there are problems with regard to sustained functionality of water schemes.
- School sanitation targets were met with approx. 75% of the school latrines constructed for females. Quality of construction and functionality varies.

- Only three of the six woredas targeted for communal sanitation had latrines and within woredas targets were not met. In high density villages like those in Konso woreda, communal latrines are appropriate and appear to be used.
- The training of people within and outside the formal health system formed a significant part of the project. Feedback on the quality of the training was positive and improved knowledge among trainees was reflected in pre-test and post-test scores. The training lacked sufficient balance on F&E, though this was being addressed at the time of the field visit.
- Many aspects of the project can be regarded as having performed efficiently. For example sanitation infrastructure was within guideline unit costs from Government. Per Diem rates for those attending training were in line with Government rates.
- The project lacked some measures of efficiency, notably around unit cost per surgery and unit cost for MDA. Unit costs for sanitation infrastructure were below Government expectation and water supply was efficiently delivered through rehabilitation of existing sources and significant community contributions.
- Expenditure by component of SAFE at times was unbalanced towards S&A to the detriment of F&E as is reflected in the achievements.

Question Two.

Strengths, Gap/Challenges and Lessons Learned:

- The project had many key strengths including but not limited to the dedication and commitment of Orbis Ethiopia staff to primary eye care, the quality of partnership with government and civil society partners plus a functioning referral system that can respond not only to trachoma but other eye care problems such as cataract and refractive error.
- The project would not have been able to perform so well without an enabling environment where primary health care is a core Government of Ethiopia commitment supported by comprehensive policies and strategies. Primary eye care also seems to be gaining political will as a priority issue though one could argue that the goal of eliminating trachoma by 2020 is perhaps a little ambitious considering the scale of the remaining problem in the Southern Nations, Nationalities and Peoples Region (SNNPR).
- The project faced a number of gaps and key challenges that have limited effectiveness to some extent. The attrition rate of staff, particularly IECWs is a problem with regard to maintaining services. There are particular challenges in Segen Area Peoples (SAP) zone, concerns over the future supply of Zithromax across the entire project area, physical access challenges, capacity challenges for Orbis Ethiopia to deliver on every element of the SAFE strategy and a challenge now to integrate trachoma elimination into wider Neglected Tropical Disease control and even wider communicable disease control.
- Orbis Ethiopia was not using it's Behaviour Change Communication strategy and capacity in this area, which cuts across all elements of the SAFE strategy was lacking.

- In order for progress to be sustained the F&E components of the SAFE strategy need to be strengthened.
- The trust and mutual respect built up with partners is paying dividends.
- Investment in staff is critical to success and Orbis Ethiopia is fortunate with the dedication of staff.
- The training of news IECWs in sufficient numbers to cope with attrition rates remains central to ensuring Primary Eye Care Units continue to function.
- The global and national will to address trachoma is strong and provides an enabling environment in which Orbis Ethiopia can function effectively.
- Project level data and data from the Regional Health Bureau for SNNPR indicates that trachoma remains a relevant public health problem in the project area and all across the SNNPR all be it relatively small in comparison to issues such as diarrhoea and respiratory infections.
- Trachoma Action Plans indicate that MDA is to be phased out in some woredas as the prevalence of Trachomatous Inflammation-Follicular (TF) is reduced below the threshold level. However the S, F and E elements of the SAFE strategy remain relevant.

Question Three

Notable Effects on Communities and Individuals:

- The effect on individuals in receipt of surgery is profound not only preventing blindness but impacting on their quality of life, freedom from pain and ability to be productive inside and outside the home. Attitudes and practices around hygiene are changing as evidenced by the increased presence and use of household latrines.

Note: There was a shortage of reported effects on communities and individuals perhaps linked to the absence of a wider objective to be achieved in this area.

Question Four

Future Sustainability:

- The project is widely regarded as moving towards sustainability with woredas indicating that services are now well established and demand for services has been created. Delivery through the existing health system with health authorities taking on more direct responsibility such as direct delivery of Zithromax to the woredas and some woredas now budgeting for primary eye care are indicators of a move towards great sustainability. However, all stakeholders want Orbis to remain supporting trachoma elimination and wider primary eye care for some time to come in order to strengthen the health system before Orbis Ethiopia could contemplate exit.

Overall Conclusions

Overall Orbis Ethiopia and their partners should be proud of the project and the achievements gained over the past ten years. Trachoma elimination targets have been met or are close to being met in the majority of woredas targeted under this project. However, more remains to be done to sustain the progress made and reach certified elimination status in all woredas by the Alliance for Global Elimination of Trachoma (GET) 2020 target date.

Future actions will need to retain all that has been good from this project, invest in rigorous surveillance to achieve certified elimination status alongside a renewed focus on the F&E components of the SAFE strategy. Orbis Ethiopia should expand geographical coverage to address those parts of SNNPR still experiencing high prevalence levels for TF and Trachomatous Trichiasis (TT) and invest in human resource capacity to improve effectiveness in all components of the SAFE strategy with a particular emphasis on enhanced capacity to deliver under the F&E components.

Recommendations

Strategic

<u>General</u>

1. Orbis Ethiopia should expand geographic coverage to at least the two other woredas of Burgi and Amaro in SNNPR and other underserved zones in the region.

2. Orbis Ethiopia should support comprehensive eye care in the region to include not only trachoma control but refractive error management and cataract services.

3. Orbis Ethiopia should adopt a more systematic and comprehensive approach to Behaviour Change Communication across all four elements of SAFE and learn from successful behaviour change under MDA activities.

4. Orbis Ethiopia should deliver more effective F&E at scale towards successful sustained elimination of trachoma.

5. Orbis Ethiopia should examine how to integrate trachoma control into wider Neglected Tropical Disease (NTD) control in accordance with global and national strategies/plans.

<u>Planning</u>

6. Orbis Ethiopia should develop a clear targeting strategy for trachoma control and elimination which should be based upon need, possibly linking high prevalence of active trachoma and TT with low water and sanitation coverage and low hygiene practices. Future projects should aim to have a wider objective or goal on wider health, well-being and development objectives in the context of the SDGs (Sustainable Development Goals) and Government of Ethiopia targets. Objectives must be Specific, Measureable, Achievable, Realistic and Time bound (SMART) within themselves and coherent across objectives.

Partnering

7. Orbis Ethiopia should consider including the Water Department in SNNPR as a formal partner in the same way Health, Education and Finance are partners.

8. Orbis Ethiopia should examine the feasibility of partnering with a civil society WaSH partner and should consider more than one civil society WaSH partner to add coverage and spread the risk.

International

9. Based upon significant under achievement in F&E and the experiences of the evaluation team during the evaluation process Orbis Ethiopia and Orbis International should perhaps reflect on the culture of the organisation and ask if the organisation is sufficiently balanced towards all aspects of the SAFE strategy.

Operational

General

10. Orbis Ethiopia should refocus effort to achieve the elimination targets set for this project and sustain them.

11. Increase surgical activity in the immediate future to help the Government of Ethiopia deal with the TT surgical backlog.

12. Orbis Ethiopia should focus more attention to support SAP zone and visit more frequently than previously.

Capacity Building

13. Orbis Ethiopia should work to support the capacity of partners in trachoma surveillance towards certified elimination status.

14. All training work to build capacity should be reviewed and adjusted to ensure greater balance of content across all four elements of the SAFE strategy with special emphasis to ensure WaSH is adequately covered. The evaluation team noted this work had already commenced in advance of the evaluation.

15. Orbis Ethiopia should do a review of the support needed for each PECU to function to its maximum including equipment and transport needs.

Surgical and Treatment of Trachoma

16. Orbis Ethiopia should set criteria to determine the functionality of PECUs.

17. Monitor, perhaps on an annual basis the cost per surgery to assess if it is in line with Federal Ministry of Health (FMoH) guidelines.

18. Orbis Ethiopia should strengthen their follow up systems. For TT surgery this should include monitoring of surgery quality and recurrence rates. There should be 3-6 month follow up on surgical patients in all PECUs complemented by senior and skilled eye care professionals. A follow-up system for Refractive Error is also required to ensure those prescribed glasses receive glasses in a timely manner.

19. All patient record forms, operative records, and follow up forms should be properly completed and stored together. The information collected on the different forms should be used as monitoring tools to assess the quality of the service, identify gaps and to plan for refresher training and improvement.

20. All TT case finders should be provided with a full set of patient counselling cards as well as a torch and trained to detect misdirected eye lashes through eye examination. The TT case finders should also be given a clear list of tasks that they are responsible for and their training must include the basic skills on how to counsel patients.

21. Monitoring visits to each PECU should be regular and feedback on the visit outcomes should be made available. Mechanisms should be put in place to check whether or not the feedback forwarded by the monitoring team is implemented.

22. Orbis Ethiopia should revise the TT backlog figures and communicate this information to the GGDK project office.

Antibiotic Distribution

23. Orbis Ethiopia should monitor the unit cost of Zithromax distribution to assess if it is in line with FMoH guidelines.

24. Phase out MDA in woredas per the decision making algorithm for the antibiotic treatment of trachoma[1], districts with different TF_{1-9} prevalence should continue implementing the A, F and E components of the SAFE strategy as follows:

Name of the districts	TF_{1-9} prevalence at Impact Assessment	Recommended actions (Intervention)	Recommended actions (Impact Assessment and surveillance survey)
Bonke, Dembe Gofa, Geza Gofa, Kutcha, Melekoza, Oyida, Uba Debre Tsehaye and Zala	< 5%	Stop MDA and Continue with F, E	Continue with districts level surveillance survey (after 24 months since Impact Assessment)
Chencha, Deremalo, Kemba, Ale and Derahse	5-9.9%	Continue working on A, F, E implementation, consider ≥ 1 round of MDA	Repeat district level Impact Assessment after 6 months from the last MDA
Arbaminch Zuria, Boreda, Dita and Kosno	10-29.9%	Continue working on A, F, E implementation, consider ≥ 3 round of MDA	Repeat district level Impact Assessment after 6 months from the last MDA

Table 1 Decision table for SAFE components in GGDK project

[1] Diagram on Decision making for the Antibiotic Treatment of Trachoma. International trachoma Initiative. Version 9, April 2015

Behaviour Change

25. Orbis Ethiopia should strengthen their capacity in Behaviour Change Communication.

26. Future KAP surveys to measure behaviour change should be undertaken in comparable areas and designed to measure against project objectives.

27. Hygiene indicators must focus on measuring behaviours and not just awareness.

Water Supply

28. All water points need to be tested in accordance with national guidance on water quality and records made available for review.

Sanitation

29. Orbis Ethiopia should prioritise household and community level excreta management (in high density villages like Konso) and work towards a phased approach enabling householders and communities move up the "sanitation ladder" that (a) eliminates open defecation, (b) achieves full coverage with respect to "basic" or "unimproved" sanitation and (c) moves towards full coverage of "improved sanitation". While prioritising household sanitation Orbis Ethiopia should aim to continue supporting institutional sanitation in schools and health centres/posts striving for full coverage within a school for example or across a woreda.

30. Orbis Ethiopia and partners should work towards delivery of a standardised effective VIP latrine design for communal latrines including separate male and female sections, the provision of urinals where feasible, incorporation of handwashing facilities while mainstreaming issues of disability and protection.

Staffing/Human Resources

31. Orbis Ethiopia should increase the number of field coordinators in order to cope with the functions that have to be filled across a vast geographically challenging environment and should invest in improving the WaSH capacity of all programmatic staff following a capacity assessment.

Management Functions

32. Orbis Ethiopia needs to strengthen aspects of its reporting to ensure consistent mechanisms are employed in the collection of data and to ensure accurate reporting. Reporting should also aim to report on the contribution of the project to the wider health and development agenda, perhaps through reporting of case studies.

33. Orbis Ethiopia needs to establish a robust management response mechanism in response to monitoring visits, evaluations and annual reviews setting out what actions are to be taken, who is responsible for those actions and timelines for completion.

Introduction

Purpose and scope of the evaluation

The purpose of the evaluation as set out in the Terms of Reference was twofold:

1. Generate evidence of change (results at all levels) brought about through project interventions and of good stewardship (performance) to beneficiaries and donors (accountability).

2. Identify lessons from experience to better understand why certain results occurred or not and to provide independently validated evidence and recommendations to inform strategic and operational decision-making (learning);

A technically balanced team was contracted by Orbis Ireland to conduct this summative evaluation, comprising one medical doctor with extensive clinical consultancy experience in Ethiopia and the other an international environmental health specialist.

The scope of the evaluation was to look back over an implementation period spanning ten years from 2006/07 to the present, review a range of relevant literature and engage with a wide range of stakeholders. Stakeholders included Orbis staff, Government and Non-Government partners and most importantly beneficiaries of the project. The objective was to assess the performance of the project and look forward and inform how future projects should be shaped.

Overview of the Project

The project has been operating for ten years and builds upon previous work implemented by Orbis in SNNPR of Ethiopia. It is one of several other projects implemented in SNNPR by Orbis Ethiopia that focuses on the elimination of trachoma and wider primary eye care including dealing with cataract, the leading cause of blindness in Ethiopia, and refractive error (RE). This particular project has been implemented in two of the fourteen zones of SNNPR, namely Gamo Gofo Zone and Segen Area Peoples Zone.

In SNNPR Orbis Ethiopia is one of only two partners (GTM is the other) listed by the Regional Health Bureau as supporting the regional government in addressing trachoma. Trachoma is endemic in 135 of the 157 woredas of SNNPR (source: Regional Health Bureau).

Note: The National Trachoma Action Plan list 4 partners working on S&A in SNNPR.

The project follows the full SAFE Strategy, the WHO recommended strategy for the Global Elimination of Trachoma by the year 2020. The four components of the SAFE strategy are:

- Surgery for in turned eyelids
- Antibiotics to treat infection
- Facial Cleanliness to remove discharge and prevent access by flies
- Environmental improvement to reduce transmission.

Financial data provided by Orbis during the evaluation process indicated a total spend over the project period of 108,694,613 Ethiopian Birr equivalent to US$4.87 million dollars or €4.33 million euro based upon mid-August 2016 exchange rates. Annual expenditure increased year on year over the project lifespan with significant spikes at year 2, year 6 and year 8 broadly in line with an expansion in primary eye care services as the primary health care system in Ethiopia expanded over this period.

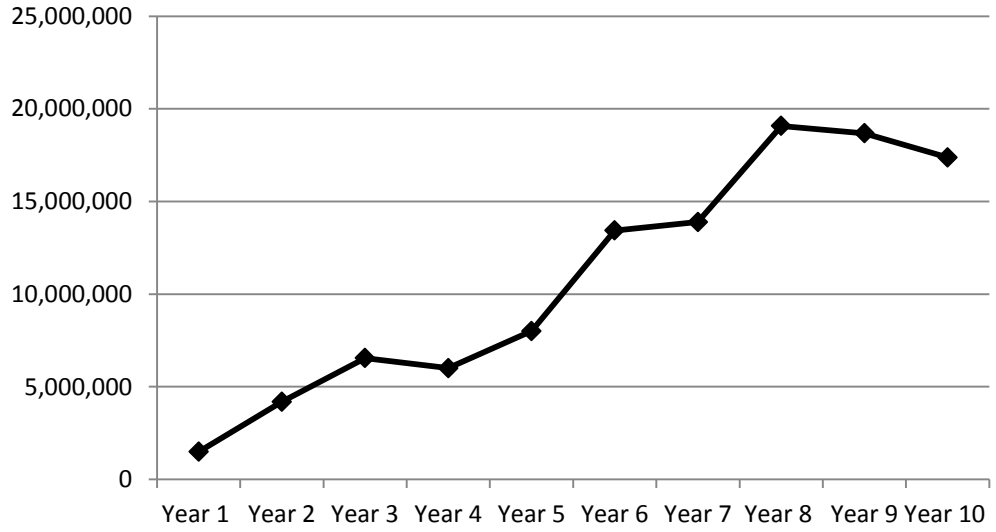

Figure 1 Project Annual Spend in Ethiopian Birr

Administratively the project area has undergone some changes during the project lifetime but at the time of the evaluation the project was being implemented in all 14 rural woredas/districts of Gamo Gofa (GG) zone and 3 of the 5 rural woredas that currently make up the SAP zone. It is important to note that SAP zone is a relatively new zone made up of several woredas previously designated as "special" woredas. The administrative changes are an important external influence on project performance which will be commented on later.

The target population in the project area at the time of project design was estimated at 2.2 million people, the vast majority of whom live in rural areas and are predominantly engaged in farming. Baseline surveys commissioned by Orbis confirmed high levels of prevalence for TF and TT in the project area confirming trachoma as a major public health problem. Baseline results versus impact results are graphically compared later in this report

It is important to note that the baseline surveys were conducted over a number of years with ten districts surveyed between 2007 and 2009 and seven surveyed in 2011. This was mainly due to the progressive scale up of the project into the two zones.

The results for the baseline surveys showed that the prevalence of TF in 1-9 year old children ranged from a low of 10.9% in Deramalao woreda, GG zone to an extremely

high 60.9% in Dita, GG zone. Eleven of the woredas, were reported as hyper endemic with a TF prevalence above 30%.

The results for baseline trachoma surveys showed that all surveyed districts had a high burden with TT prevalence which is greater than 1% among adults aged 15+ years. The number of districts with TT prevalence between 1- 1.9%, 2-2.9% and ≥3% were 7, 5 and 5 respectively. One of the surveyed districts, Dita, was reported to have a TT prevalence level as high as 6.3%.

Coupled with the baseline survey results on TF and TT prevalence as well as the results of the follow up situational analysis conducted by the project noted the key factors listed below among the underlying causes for the high burden of trachoma in the all the project districts:-

1. Low level of awareness of the communities about trachoma
2. Very low coverage for water and sanitation
3. Shortage of trained eye care professionals in the project districts
4. Very limited availability and access to eye care services
5. Very low affordability of available eye care services by the community

Some Notes on the Baselines

The evaluation noted the following gaps in the baseline survey methodology:

It was noted that during the baseline survey, the estimation of the TF prevalence in children age 1-9 years was done using different clinical parameters. In districts like Geza Gofa[2] and Melkoza[3], only the presence of TF in children age 1-9 years was used as the clinical parameter to calculate the prevalence of active trachoma. In districts like Kutcha[4] and Uba Debre Teshay[5] the estimation of the prevalence of active trachoma in the same age group was done using a combination of three clinical signs for trachoma namely: TF, Trachomatous Inflammation-Intense (TI) and combined TF and TI. Whereas in districts like Oyida[6] and Dembe Gofa[7] only two clinical parameters i.e. TF and TI were used to estimate the prevalence of active trachoma in children age 1-9 years. It was observed that in some instances the inclusion of "TI alone" with the other clinical parameters i.e. "TF" and "TF+TI" in the estimation of active trachoma has raised the prevalence of active trachoma by 17.3% in Uba Debre Tsehay and by 12.3% in Kutcha. Thus, the review team would like to emphasize that the variation in the use of different clinical parameters for the estimation of active trachoma in some districts might have contributed to an over estimation of the prevalence figures at the baseline and this might have affected programmatic

[2] Final Report on Comprehensive Baseline Trachoma Survey in Geze Gofa Woreda, Gamo Gofa Zone, SNNPR, December 2009

[3] Final Report on Comprehensive Baseline Trachoma Survey in Melekoza Woreda. Gamo Gofa Zone, SNNPR, December 2009

[4] District Based Comprehensive Baseline Trachoma Survey in Kutcha Woreda, SNNPR, December 2009

[5] District Based Comprehensive Baseline Trachoma Survey in UbaDebretshay Woreda, SNNPR, December 2009

[6] Report on the Baseline Trachoma Survey in Oyida Woreda, SNNPR, November 2009

[7] District Based Comprehensive Baseline Trachoma Survey in Dembe Gofa Woreda, SNNPR, November 2009

decisions made by Orbis Ethiopia including the number of MDA rounds conducted in some of the project districts involved.

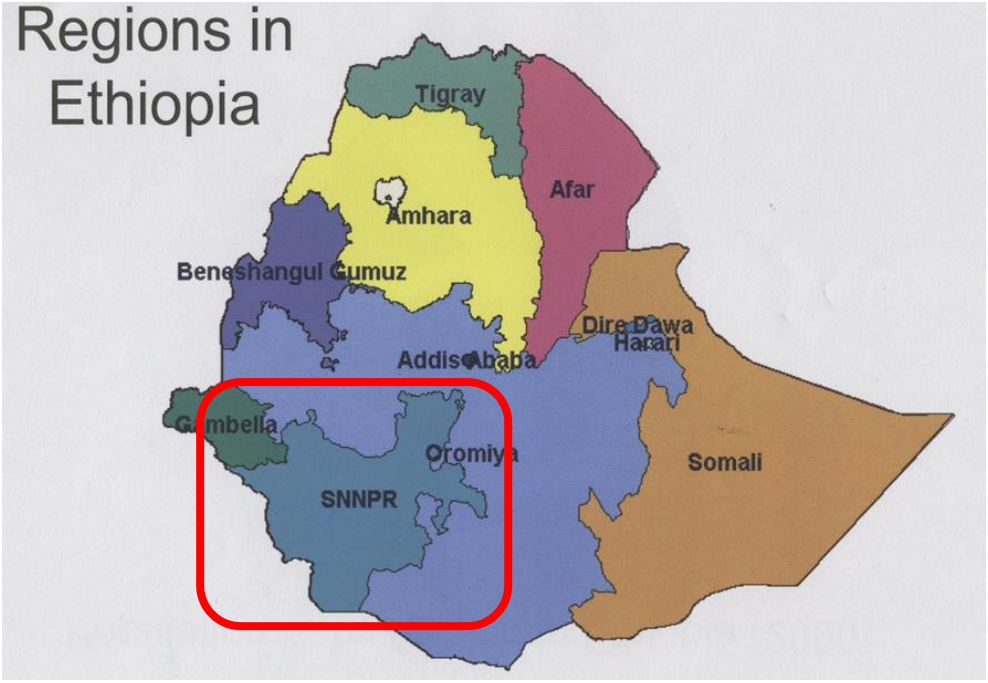

Figure 2 Gamo Gofa and Segen Area Peoples' Zones located in the SNNPR region

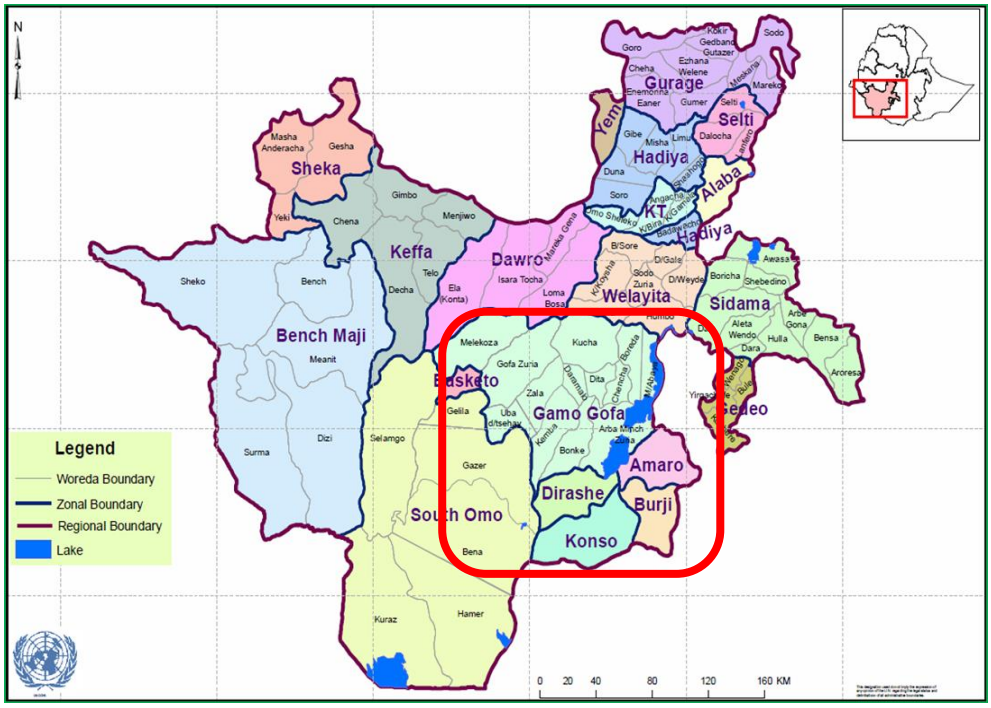

Figure 3 Map of SNNPR Region

Orbis works in Gama Gofa, Dirashe and Konso. Note Dirashe is now sub-divided into Derashe and Alle Woredas. Burji and Amaro make up the remainder of the 5 woredas currently in SAP zone.

The Results Frameworks

The evaluation team were provided with two Results Frameworks that provided direction for implementers over the course of the project period. The overall aim of the project, to eliminate blinding trachoma by 2020 remained the same as did the two expected outcomes to reduce the prevalence of TT to below 0.1% in the total population and to reduce the prevalence of TF to below 5% in 1-9 year old children.

Note: During the lifetime of the project the targets set by WHO changed to lower targets from a TF prevalence below 10% to 5% and a TT prevalence below 1% to 0.1%.

The more specific objectives, 8 in the first results framework and 6 under the second results framework were different in their wording but still broadly in line with the project trying to address each of the four components of the SAFE strategy. The second results framework from 2013–2015 had a clear shift towards more quality indicators of performance such as "adequate numbers of high quality TT surgeries".

For the evaluation it was important for the evaluators to clearly understand how to interpret objectives and indicators of success such as "access to trachoma treatment", "functional PECU", "access to clean water" etc. This was done following consultation with senior Orbis Ethiopia staff and review of the project literature which indicated that for example the interpretation of access to clean water has changed following changes in Government standards.

International Development Context

Globally new development targets known as the Sustainable Development Goals (SDGs) have been set for 2030. These replace the Millennium Development Goals (MDGs) that ended in 2015. The most relevant SDGs with respect to this and future projects are:

- SDG 3 : to ensure healthy lives and promote well-being for all at all ages
- SDG 3.3 : to end by 2030 epidemics of neglected tropical diseases
- SDG 3.8 : to achieve universal health coverage including access to quality essential health care services
- SDG 6: to ensure availability and sustainable management of water and sanitation for all

Outside of the SDGs there is a whole host of relevant policies and strategies etc. that help guide this and future projects. They include:

- WHO 2020 Roadmap on Neglected Tropical Diseases
- London Declaration on Neglected Tropical Diseases
- Federal Democratic Republic of Ethiopia (FDRE) Health Sector Transformation Plans
- FDRE National Master Plans for NTDs
- National Trachoma Action Plan towards the Global Elimination of Trachoma by 2020 (GET 2020)
- All you need for F&E, a practical guide to partnering and planning,
- Trachoma control, a guide for programme managers

- National Hygiene and Sanitation Strategic Action Plan

A comprehensive list of relevant literature is captured within Appendix 3.

Globally and within Ethiopia a great deal of progress has been made towards the Ultimate Intervention Goal (UIG) which is to eliminate blinding trachoma by 2020. As the target date for elimination looms large the challenge for those in trachoma control is to sustain the progress made and make the final push to achieve elimination status in all countries and all regions within countries.

International, National and Regional Trachoma Context

Globally there are at least 1.3 million people blind from trachoma (National Trachoma Action Plan). Roughly half of the global burden of active trachoma is concentrated in five countries, including Ethiopia. TT is concentrated in just four countries with Ethiopia being one of them. (National Master Plan for NTDs 2013-2015). In addition to the burden of disease trachoma has a significant economic cost resulting in GDP loss in Africa of around $3-6 billion US dollars annually.

Ethiopia has the highest burden of blinding trachoma in the world with more than 76 million people living in trachoma endemic areas and around 800,000 individuals at risk of blindness (SNNPR Draft Trachoma Action Plan April 2014). At the time of the National Survey on Blindness, Low Vision and Trachoma in 2006 the SNNP Region (one of nine regional states) had the third highest prevalence rate for active trachoma in the country at 33.2% behind Amhara and Oromia. According to the SNNPR Draft Trachoma Action Plan of April 2014 trachoma is confirmed to be endemic in 135 of the 157 woredas in the region with over 137,918 people living with trichiasis. Over 33.3% (45/135) of the rural woredas in SNNPR are hyper endemic, defined as having a TF prevalence over 30%, and will require a minimum of five years of SAFE interventions.

The national and SNNPR response to trachoma is guided by Trachoma Action Plans with support from GET2020 (The Alliance for the Global Elimination of Trachoma). In Ethiopia there are a number of main stakeholders focused on trachoma namely the FMoH, Regional Health Bureaus, the International Trachoma Initiative (ITI) and several NGOs including The Carter Centre, Light for the World, Fred Hollows Foundation in addition to Orbis Ethiopia and others. In the context of F&E there are 182 NGOs listed as being active in WaSH all across Ethiopia. At SNNPR level only four NGOs are listed as working on the S&A components of SAFE, namely GTM (Girabet Tehadso Mahiber), LfW (Light for the World), World Vision and Orbis Ethiopia. Twelve NGOs are listed as operational in WaSH covering F&E.

At the national level Orbis Ethiopia participate in two fora that work to plan and coordinate work. The first is the National Committee for Prevention of Blindness (NCPB) and the second is the National Taskforce for Trachoma Control. Outside of this project which is focused on service delivery in rural areas Orbis Ethiopia is also engaged in Advocacy, Research and Capacity Building.

Lessons and good practice from International Experience

Internationally, the global approach towards the 2020 target to eliminate trachoma is to follow the full SAFE strategy as referred to earlier on page 11 and 12. A number of documents were provided by Orbis Ireland and Orbis Ethiopia to assist the evaluation team draw out the lessons and good practice from international experience.

Central to this was a systematic review conducted on the epidemiology and control of trachoma (Epidemiology and control of Trachoma, Hu et al, 2010). In summary this systematic review indicated that trachoma is the commonest infectious cause of blindness and is largely found in poor, rural communities in developing countries, particularly in sub-Saharan Africa.

Transmission is through a number of routes but the relative importance of each varies from context to context. For example in some contexts eye seeking flies probably contribute to the transmission of infection and in others they don't appear to contribute to transmission. Most transmission events occur within the household.

Globally there is a downward trend in the number of people affected by trachoma with overall improvements in living standards contributing in part to this. Risk factors for trachoma are numerous but include, limited access to sufficient quantities of safe water, crowding especially if living in close proximity to children, hygiene practices especially frequency of face washing and presence of eye seeking flies (*Musca sorbens*) that breed in human excreta. From a gender perspective women have a higher rate of scarring complications as a result of living in close proximity to children who are the main reservoir of infection.

In terms of controlling trachoma the SAFE strategy is prescribed. However, as articulated in another systematic review (Antibiotic Treatments of Trachoma: A Systematic Review, Monash University, 2010), the evidence base underlying the implementation of the full SAFE strategy is not as strong as that supporting the use of azithromycin specifically. That said some studies show independent protective effects of education programs endorsing facial cleanliness and latrines against active trachoma.

Surgery: The WHO recommends the bilamellar tarsal rotation method for surgery as it has been found to give the best results. Recurrence rates are an issue under the Surgery component with recurrence rates ranging from 20% in the first two years to 60% after 3 years. Factors contributing to recurrent trichiasis are related not only to the type of procedure used but also the surgeon's experience, the severity of the pre-operative disease, suture type and infection status.

Uptake of surgical services at a global level has been relatively low and patient barriers to uptake can include cost, fear of surgery, transport difficulties, need for an escort, lack of awareness about the need for treatment or how to access care. Community based surgery has greater attendance rates (66%) than health centre surgery (44%). Provider level barriers include lack of training, auditing, availability of sterilised equipment and supplies and lack of surgeons.

Antibiotics: As concluded in the Monash University systematic review "there is substantial evidence supporting the use of azithromycin therapy in the control of trachoma" (Antibiotic Treatments of Trachoma: A Systematic Review, Monash University, 2010). Mass treatment is considered the most cost-effective strategy, especially in high prevalence areas (Epidemiology and control of Trachoma, Hu et al, 2010). WHO recommends that treatment coverage should be between 80% - 90% and to maximise coverage, it is important to understand the community's perceptions, conduct a pre-distribution assessment and community education, provide advance notice of the distribution, build a good relationship with the community, create and follow standardised distribution guidelines and improve distributor training.

Treatment should be stopped once the prevalence has fallen below 5% and socio-economic improvements may then allow the disease to be permanently eliminated.

As stated in the report of the 17th meeting of the WHO alliance for the global elimination of trachoma of April 2013 (Report of the 17th meeting of the WHO Alliance for the Global Elimination of Trachoma, WHO, 2013) that as a rule of thumb, if baseline prevalence is over 30%, at least 5 rounds of treatment (preventive chemotherapy) are needed before an impact survey is conducted. If baseline prevalence is between 10% and 30%, three rounds of treatment should be conducted" As with any antibiotic there are concerns that widespread use might lead to drug resistance.

There is some research (Effect of Mass Distribution of Azithromycin for Trachoma Control on Overall Mortality in Ethiopian Children, A Randomised Trial. JAMA, September 2, 2009 – Vol 302, No. 9) as provided to the evaluation team that Azithromycin (known in Ethiopia by the trade name "Zithromax") also impacts on other causes of childhood mortality in Ethiopia.

Facial Cleanliness: Improving facial cleanliness (the absence of ocular and nasal discharge) aims to reduce auto-transmission and transmission to others by removing a potential source of infection. Health education and improved water supply promote facial cleanliness but the evidence base for this control strategy is limited. Measuring face washing is difficult but certain indicators (discharge and flies) are more reliable than others (dust and food on the face). A cross sectional study in Mexico reported that the frequency of face washing (>7 times a week) was negatively correlated with the likelihood of children having active disease.

Environmental Improvement: The elimination of trachoma from Europe and North America in the 19th century in the absence of any specific intervention, demonstrates the importance of environmental improvement components of the SAFE strategy. The transmission of trachoma should be interrupted through increasing water supply and quality, improving access to latrines, decreasing fly density, reduced crowding and providing health education. Latrines will only improve environmental sanitation if they are used consistently by a large proportion of the community.

As stipulated under the International Coalition for Trachoma Control (ICTC) principles for F&E "successful sustained elimination will not be achieved without effective and integrated F&E at scale". "Not implementing the full SAFE strategy where needed will delay progress. A fragmented approach leads to duplication of efforts and waste of precious financial and human resources, and undermines sustainability" (Principles for F&E, ICTC, No Date).

At a wider level beyond SAFE the trachoma control community is moving towards greater integration with Neglected Tropical Disease (NTD) control as highlighted by the following quote:

> "Work continues to integrate trachoma into overall WHO neglected tropical diseases (NTD) policy" (Report of the 17th meeting of the WHO Alliance for the Global Elimination of Trachoma, WHO, 2013)

Evaluation Methodology and Limitations

The evaluation was well resourced with both consultants allocated a total of 65 days between them. The field visit totalled 17 days from arrival in Arbaminch, the capital of Gamo Gofa zone to return to Addis Ababa.

An extensive review of the national and international literature was conducted. Much of the literature was provided by Orbis Ireland and Orbis Ethiopia but some was acquired independently. A full list of the literature reviewed is included under the Appendix 3.

The evaluation employed a mixed methodology which involved the gathering of secondary data from existing sources and primary data collected through interviews with key stakeholders to help triangulate and validate reported outputs, outcomes and impact of the project. Direct observations supported with photographs offer further evidence. Utilising the Terms of Reference an Evaluation Matrix was developed. See Appendix 2. The Evaluation Matrix outlined four main evaluation questions and questions under each of the five DAC criteria sub questions the project was to be evaluated against.

Because of time limitations not all woredas could be visited, therefore a sample number were selected as representation of the whole project. As a basis for the woreda selection Orbis Ethiopia provided a data sheet ranking the performance of each woreda under a number of different headings as bad, good or very good. The evaluation team selected a total of five woredas to visit, broadly looking for woredas ranked within the range of bad to very good. The evaluation team picked four in Gamo Gofa Zone and one in SAP Zone to ensure representation from each zone. Special effort was made to visit Konso as this was specifically targeted by Orbis Ethiopia for WaSH activities and represented a different challenge (low lying area, prone to drought with high density housing in villages) to the more common highland woredas seen elsewhere in the project area.

Orbis Ethiopia provided a provisional list of intended stakeholders to be consulted within the Terms of Reference and early versions of the visit schedule. This was added to by the evaluation team during planning prior to the field visit. At the field

level stakeholders were for the most part accessed via convenience sampling. Some success was achieved in accessing stakeholders outside the main population centre within each woreda. The provision of a second car and translator enabled the team to split up and extend the reach of the evaluation to more remote areas as far as was feasible in the timeframe available. In total approximately 116 different individuals (67% of whom were male) were consulted during the course of the evaluation either individually or in small groups of two or three people together. At all times the evaluation team were allowed to conduct interviews in a private space and confidentiality was respected at all times. A full list of the people consulted in to be found under Appendix 4.

Particular emphasis was placed on trying to gather gender disaggregated data not only because it should be the norm but also in light of the fact that women, who care for children in particular carry the bulk of the burden with regard to trachoma.

Limitations

The evaluators faced a number of limitations that hindered the process to some extent. There were difficulties in accessing some of the basic data with respect to project outputs such as water points and latrines and there were difficulties in accessing some of the baseline reports in a timely fashion. As the evaluation was looking back over a 10 year period it was perhaps not surprising that there were gaps in availability of some data.

There were physical access problems at the time of the evaluation it was the rainy season and also the school holidays. One woreda, namely Kemba could not be reached due to a landslide on the road but this was overcome by visiting Dita instead. The schools were closed limiting engagement with school children and members of eye care clubs. There was also limited engagement with those who deliver the training to IECWs, HEWs, HDAs and Teachers etc. which limited examination of the training aspect to the project. Overall the limitations had a relatively minor impact on the evaluations findings.

Evaluation Findings

Evaluation Question 1

How effective and efficient has the project been in achieving (i) its two overall outcome targets and (ii) its specific objectives?

Overall outcome targets

The evidence of change with respect to TF prevalence in children aged 1-9 is presented in Figure 4 below. The district level impact assessment results showed that the TF prevalence has declined in all the project districts. Considerable reduction in the TF prevalence was observed in districts like Bonke, Demebe Gofa, Zala, Uba Debre Tsehaye, Geza Gofa and Melekoza. However, the reduction of TF prevalence was very minimal in districts like Konso where the TF prevalence has reduced by only one percentage point between the baseline and impact assessment i.e. from 23.7% at baseline to 22.7% at the impact assessment which was conducted in 2015.

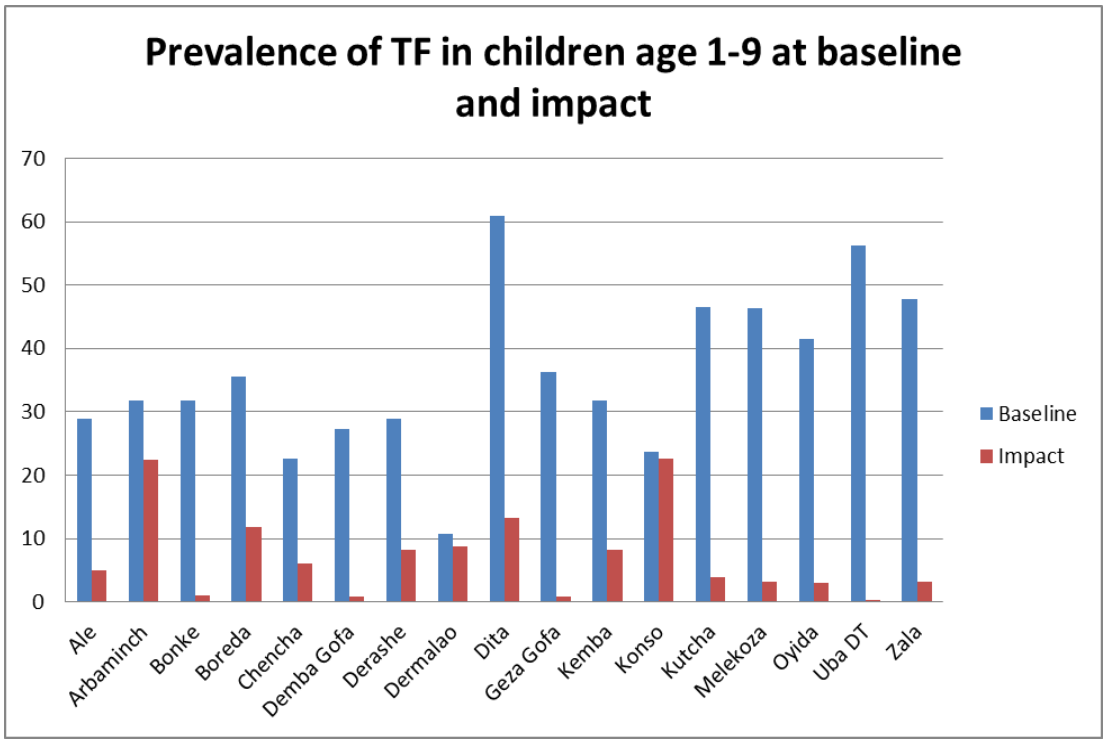

Figure 4 Prevalence of TF in children aged 1-9 years at baseline and impact

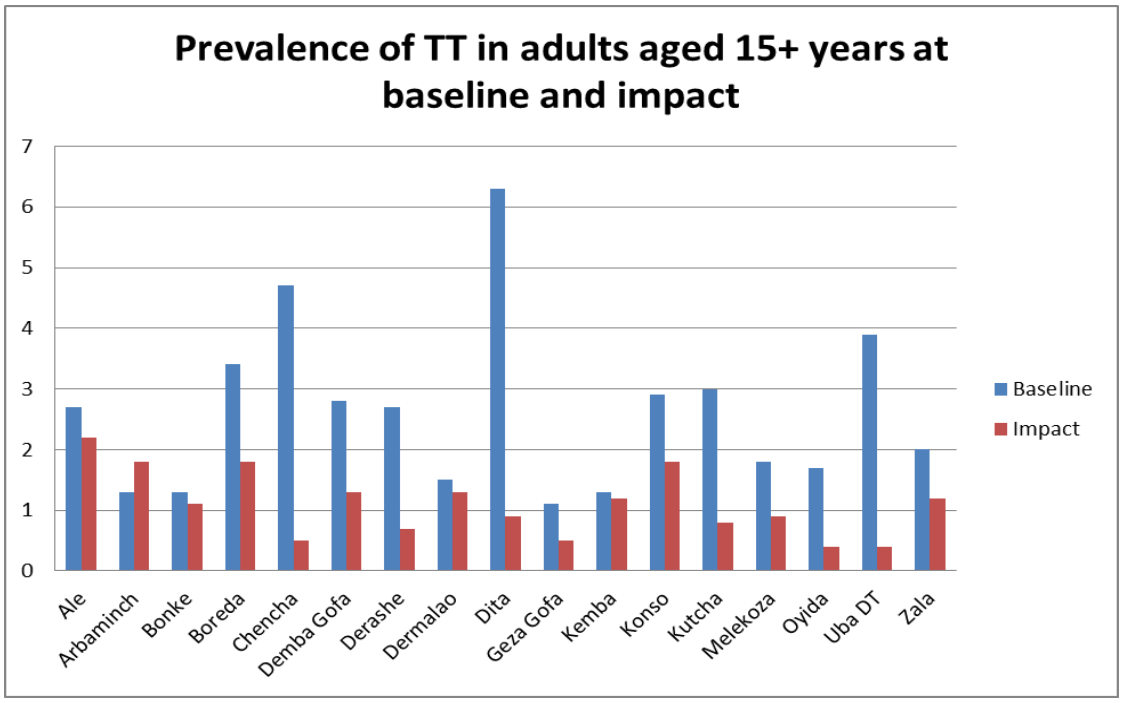

Figure 5 Prevalence of TT in adults aged 15 years and older at baseline and impact

It was further noted that eight of the project districts have lowered their TF prevalence to below the 5% elimination threshold level, five have reduced it to between 5% and 9.9% and the remaining four to between 10% and 29.9%.

The evidence of change with respect to TT prevalence, presented in Figure 5 above is also very significant with prevalence declining in all the project woredas except Arba

Minch Zuria woreda where it showed increment from 1.3% at the baseline to 1.8% at the impact assessment. The fact that the increment in TT prevalence in Arba Minch Zuria district was observed after 2,481 TT surgeries can only be explained by the difference in methodology used during the baseline and impact assessment leading to the possible underestimation of the TT prevalence at the baseline survey.

As shown in Figure 5 above, eight of the project districts have lowered their TT prevalence below the level where it is no longer considered a public health problem.[8] However it was noted that despite this remarkable achievement none of the project districts has managed their TT prevalence below the elimination threshold level which is < 0.2% in adults aged ≥ 15 years.[9] This may relate to the significant backlog that still exists which the Government want to address and clear by November 2016.

Note: All the impact assessments followed the Global Trachoma Mapping Project (GTMP) methodology. The available information shows that for those districts that take the GTMP survey results the new GTMP guidelines been used to confirm trichiasis is TT and that TT cases are 'new' cases to the system. However, for the other district level impact surveys conducted by external contractors there is no evidences whether or not such considerations were taken to calculate TT prevalence.

Specific Objectives

Surgery Related Objectives

- All 17 health centres in the project area to offer trichiasis surgery (RF 1)
- The number of trichiasis surgeries performed annually in each of the 17 health centres in the project area to increase from 240 to 1,200 (RF 1)
- Every individual in the project area will have access to trachoma treatment in their local health centre (RF 2)
- Each health centre in the project area will perform adequate numbers of high quality TT surgeries based on district level surveys (RF 2)

Effectiveness

Quantifiable achievements with respect to the establishment of primary eye care services, that includes access to trachoma treatment and within that trichisasis surgery is significant. At the start of the project only 8 primary eye care units had been established in the project area. By the end of the project Primary Eye Care Units (PECUs) had been established in an additional 74 of the 84 health centres within a hugely expanded primary health care system.

Accessibility for potential patients has been greatly enhanced by the Government-led initiative to expand the primary care health system that aims to provide one health centre for every 25,000 people and one health post for every 5,000 people. In the woredas visited these ratios were achieved enhancing physical access by bringing

[8] According to WHO, a TT prevalence of ≥ 1% in the population aged ≥ 15 years constitutes a public health problem.

[9] WHO/HTM/NTD/2016.8: Validation of Elimination of Trachoma As a Public Health Problem

fixed services closer to the people. Access is further enhanced by outreach with IECWs indicating they provide both static (often 4 days per week) and outreach (1 day per week) primary eye care services. The final key point regarding accessibility for potential patients is the fact that primary eye care services at this level are provided free of charge.

Planned No. PECUs	Actual	% Achievement
17	74	436%

Table 2 Planned versus achievement in establishing Primary Care Eye Care Unit, Orbis GGDK project 2006-2016

In order to establish access to trachoma treatment for people in their local health centre Orbis Ethiopia supported the move towards a functioning primary eye care system primarily through capacity building at a range of levels within the formal health system. The capacity building focused on training in primary eye care of IECWs (who perform trichiasis surgery), HEWs (who are health workers based at the health posts) and HDAs (who are voluntary health care workers from within the community).

The training of IECWs was mainly focused on enabling them to treat common eye infection, conduct TT surgery and refer those cases that need speciality care to secondary eye care units. Whereas HEWs and HDAs are trained to provide basic information to the community on trachoma prevention, to mobilize the community for MDA and to screen and refer suspected TT cases to the IECWs for final screening and TT surgery.

Outside the formal health system capacity building was also conducted for teachers, religious leaders, women's group representatives and the media.

Category of Worker	Trained	Female
IECW	147	10%
Trainers in Primary Eye Care	48	None
HEWs	2,709	100%
HDAs	2,054	22.8%
Teachers	2,804	20.7%
Religious Leaders	51	None
Women's Group Reps	30	100%
Media People	20	None

Table 3 Summary of capacity building achievements, Orbis GGDK project, 2006-2016

Note: It is normal for the vast majority of IECWs to be male as this is consistent with the profile of primary care nurses in SNNPR. All HEWs are female. No clear understanding emerged as to why the numbers of females trained under the HDA, Teacher and Media categories was as low as indicated above.

Note: The above figures relate to the numbers of people trained regardless of how often they have been trained. Some of the people above have received refresher training on multiple occasions.

In addition to capacity building of those engaged in primary eye care Orbis support extended to the provision of equipment and supplies such as TT surgery sets, sterilising equipment and other supplies to treat common eye infections and perform the trichiasis surgery that the IECWs were trained in.

As mentioned above the mere establishment of PECUs is no guarantee that they will function properly or remain functioning for a sustained period of time. One measure of functionality adopted by the evaluation team was to look at reporting of activity. At the time of the evaluation 58 or 70% of the 82 established PECUs regularly send activity reports. In one of the districts visited two out of the seven established PECUs did not report TT surgeries to the woreda focal point for about 12 months and 4 of the 9 IECWs did not report a single TT surgery for about 6 months. The reasons for this could not be established.

While the number of surgeries is not the only indicator of functionality for PECUs (as one might expect the number of surgeries to decline as the backlog is cleared) effectiveness in terms of functioning PECUs was affected by a number of reported issues. Issues such as high staff turnover, competing priorities in the health facilities (some IECWs are working as Health Centre heads), shortage of equipment and supplies like lid clamp, shortage of transport (some IECWs travel up to 7 hours on foot to provide services at outreach sites), inadequate budget for fuel to do outreach and inadequate supervision and technical support for new IECWs were all mentioned as factors impeding the functionality of PECUs to provide TT surgeries and other primary eye care services.

Note: For the evaluation team measuring functionality was somewhat subjective and the above only gives an indication of functionality at a given point in time. Future monitoring by Orbis may have to set criteria to measure functionality within a range of not functioning, partly functioning and fully functioning.

Regarding the TT surgeries specifically during the project a total of 41,555 TT surgeries (this doesn't equate to number of people as it relates to the number of lids) were conducted in the project districts. Data that show both the number of people operated for TT and number of lids surgeries conducted was not consistently available for the period covered by the project. TT surgeries were carried out at PECUs and at outreach TT surgery camps. The average number of TT surgeries performed per district during the project life was 2,444.

Name of the district	Population Estimate for 20015/16	TT prevalence at baseline (%) (Age 15+)	Number of TT surgeries (2006-2015)			TT prevalence at Impact assessment (Age 15+)	Estimated TT backlog at the 2015/16
			Male	Female	Total [10]		
Ale	76,324	2.7	8	148	156	2.0	826
Arba Mich	181,069	1.3	745	1,660	2,481	1.8	1,694
Bonke	180,799	1.3	784	1,744	2,709	0.2	128
Boreda	82,701	3.4	552	1,224	1,831	1.8	758
Chencha	139,024	1.5	839	1,866	2,747	0.5	0
Demba Gofa	114,291	2.6	494	1,094	1,644	0.3	0
Derashe	127,753	2.7	240	540	780	0.7	376
Dermalao	98,394	1.5	927	2,066	3,098	1.3	53
Dita	104,025	6.3	1,232	2,747	4,194	0.9	0
Geza Gofa	84,976	1.1	551	1,226	1,789	0.5	145
Kemba	189,890	1.3	1,805	4,021	5,826	1.2	995
Konso	257,209	2.9	1,131	2516	3,714	1.04	825
Kutcha	187,015	3	810	1,805	2,692	0.8	604
Melekoza	156,882	1.8	1,070	2,376	3,446	0.9	586
Oyida	43,120	1.7	111	248	595	0.4	30
Uba DT	90,249	3.9	847	1882	2,729	0.4	91
Zala	96,943	1	290	647	937	1.2	537
Total	2,210,664		12,436	27,680	41,555		7648
			(29.9%)	**(70.1%)**			
			Percentage				

Table 4 Prevalence of Trachomatous Trichiasis at baseline and impact surveys, number of TT surgeries and estimated TT backlog for districts covered by the project 2006-2015

The total number of TT surgeries performed in the project districts during the project life ranges between 5,826 in Kemba Woreda, GG zone (population of 189,890) to 156 in Alle Woreda, SAP zone (population of 76,324) and almost half (49.2 percent) of the total reported TT surgeries were performed by the PECUs located in just five woredas, namely Kemba, Dita, Melekoza and Deremalo in Gamo Gofa zone and Konso in SAP zone. See Table 4 above.

The total estimated TT backlog for 12 project districts was reported to be 7,648. Three districts i.e. Chencha, Dembe Gofa and Dita are reported to have cleared their TT backlog. However, the review team has received two different sets of TT backlog figures, one from the GGDK project office in Arbaminch and the second from Orbis Ethiopia head office, and the variation between the two figures was nearly 4,000 TT cases. This calls for an agreed TT figure to be used for planning purposes.

From a gender perspective it is interesting and noteworthy that over two thirds or 70.1% of surgery recipients were women. The high TT surgery figure for women was consistent across the project districts. This would be in line with expectations, as

[10] Sex disaggregated data for people operated for TT was not made available for 2016 and as the result the figure for male and female is lower than the totalled number of TT cases operated

women are more susceptible to TT than men and indicates the project has been equally effective at reaching both men and women.

Effectiveness in terms of surgical quality was difficult for the evaluation team to assess as 3-6 month follow up and surgical audit are not conducted on a regular basis. The evaluation team learned that follow up after surgery is difficult as individuals do not present themselves once they are pain free and functioning normally.

Efficiency

Information provided by the FMoH indicate that the cost per surgery should be in the region of 732 Birr or US$42 dollars. Although Orbis Ethiopia could provide overall expenditure for the surgery component from 2006 – 2015 data did not exist that assessed the cost per surgery at any point in the project lifetime.

Orbis Ethiopia followed Government guidelines on per diem rate per day (150 Birr) which helped contain costs of the many training days conducted.

Relevance

Going forward a surgery component remains relevant in all existing districts while TT prevalence remains above the threshold and there is a backlog.

Antibiotics Related Objectives

- 85% of the eligible population to receive at least 3 consecutive doses of Zithromax the required number of annual doses of Zithromax (RF 1)
- More than 85% of the population in each woreda will receive the required number of annual doses of Zithromax (RF 2)

Effectiveness

There is no doubt this component of the project has been extremely effective with some quite remarkable success. All of the project districts have completed at least 4 rounds of MDA (4 districts have actually had 8 rounds) specific to Zithromax for trachoma prevention with over 11.5 million doses distributed benefiting a total of 2.1 million people. Coverage for each round of MDA ranged between 80.1% and 119.1% and in the three years from 2012 – 2014 performance reports showed that about 95% of the eligible population received at least 3 consecutive doses of Zithromax which is well beyond the objective of 85%. It should be noted that the more than 100% coverage figure could be due to the incorrect population estimate used for the MDA planning.

Considering the systematic reviews evidence presented earlier it is logical to assume that the successful uptake of MDA has played a major part in reducing the prevalence of active trachoma or TF in so many districts. However, the fact that eight woredas are still above the threshold level after up to 8 rounds of MDA indicates other elements of the SAFE strategy and broader economic development are not contributing in the way they might.

Efficiency

Through the generosity of Pfizer, "Zithromax" is free and this is a major factor towards keeping costs down for an intervention that reaches so many people totalling over 11 million doses since the project began.

As with many other aspects of this project the fact that the distribution is done through the existing health system also makes it more efficient. It is hoped that if MDA is extended to provide preventive chemotherapy for other NTDs efficiencies can be even greater.

Unit cost for MDA should according to Govt. information be $0.20. Unit cost data for MDA under this project did not exist to help compare Orbis Ethiopia spend on MDA in accordance with national guidance.

Relevance

In line with the Trachoma Action Plan MDA is no longer considered relevant in some woredas and is to be phased out. However, the S, F and E elements of the SAFE strategy remain relevant and will be retained.

Behaviour Change Related Objectives

- 85% of the population in the project area are aware of the importance of sanitation, hygiene and eye care (RF 1)
- 85% of the Orbis trained community stakeholders practice good hygiene and sanitation (RF 1)
- The proportion of the population aware of the activities necessary to prevent infection with trachoma will increase by 50% from the baseline in 2007 (RF 2)

Effectiveness

The key sources of information used to determine effectiveness in relation to the Behaviour Change aspect of the project are the Baseline (March 2008) and follow up KAP survey and baseline on socio-economic status (April 2015) and the trachoma impact surveys.

The baseline and follow up KAP surveys were not directly comparable as they took place in different geographic areas with only Konso and Derashe known to be common to both studies.

The baseline KAP for community members took place in six woredas though these are not clearly named (listed as Gamo Gofa zone, Konso and Derashe). The baseline percentage figure with respect to awareness on the importance of sanitation, hygiene and eye care was not recorded. Instead an overall figure was provided that 80% of the respondents claimed to have health information on trachoma with the best scores on types of information being related to Prevention (75% approx) and Transmission (just under 70%)

The follow up KAP took place in 8 woredas (Konso, Derashe, Alle, Arba Minch, Zalla, Demba Gofa, Boreda and Gezegofa) found that 63.6% of household respondents

know about the disease trachoma, 77.5% know that trachoma is contagious and 57.1% know at least one prevention method for trachoma.

Note: While the results of the two KAP surveys are not directly comparable they highlight a gap in linking the results of the KAP surveys to the objectives that were set. The objectives set were not well articulated partly because they were not SMART and partly because they failed to put enough emphasis on key hygiene behaviours that could be measured as a proxy indicator supportive of delivering on the outcomes desired by the project.

The impact surveys reveal that overall awareness (which should be noted is only the first step towards behaviour change) is not high. Awareness about trachoma is less than 70% in 11 woredas and varies between woredas from as low as 44% in Demba Gofa Woreda, to 97% in Bonke Woreda. This is consistent with the evaluation teams findings where knowledge of trachoma and prevention mechanisms was very high in Bonke compared to other districts visited.

Knowledge about the importance of sanitation, hygiene and eye care for prevention of trachoma was also found to be variable in the different districts. None of the 17 districts achieved the project target of 85% as can be seen from the table 5 below.

The data above has no clear pattern other than the fact that the effect of behaviour change communication specific to trachoma seems to be inconsistent in the results it is achieving across the project districts.

Project reports detail the types of communication used to impart knowledge to the target population with reference made to 288 radio messages disseminated in four local languages, over 1.1 million leaflets distributed with key prevention messages in Amharic, 787 billboards with different messages on trachoma and the SAFE strategy with approximately 5.8 million people reached with different messages on how to protect sight.

Districts	Have information about trachoma	Respondents who mentioned the importance of sanitation, hygiene and eye care for prevention of trachoma			
		Face washing	Latrine Usage	Clean environment	Fly control
	(%)	(%)	(%)	(%)	(%)
Ale	67.7	81.7	19.5	74.7	61.2
Arba Minch	66.7	34.4	5.4	27.2	13.5
Bonke	97	63.7	30.8	12.6	28.9
Boreda	51.4	33.3	6.2	28.3	9.9
Chencha	45.2	34.7	0.8	7.8	12.6
Demba Gofa	44.4	27.2	8.6	22.1	7.8
Derashe	54.5	51	7.7	29	17.6
Dermalao	77.4	32.1	2.9	6.4	8
Dita	53.9	33.5	8.3	29.3	13.1
Geza Gofa	58.2	36.6	6.5	22.5	10.0
Kemba	78.3	79.1	12.1	23.3	28.4
Konso	82.3	38.2	2.1	15	2.3
Kutcha	66.2	79.1	20	41	28
Melekoza[11]					
Oyida	56.4	38.3	6.0	23.4	15
Uba DT	84	44.9	23.9	6.9	16.3
Zala	60.5	83.7	21.3	34	14.1

Table 5 Awareness about trachoma and the importance of sanitation, hygiene and eye care for trachoma prevention: trachoma impact surveys in GGDK project

Despite the apparently impressive quantity of mass media communication materials referred to in the previous paragraph often less than 10% of respondents in the impact surveys cited the mass media as a source of information on trachoma and the evaluation team found little tangible presence of Information Education and Communication (IEC) materials in homes and health posts. Respondents surveyed and interviewed by the evaluation team indicated that the key sources of information on trachoma have been HEWs and Schools. This is consistent with reports that indicate up to 7,728 people (HEWs, HDAs, Teachers etc.) have been trained in health promotion as a part of their training in Primary Eye Care. Every district visited indicated that every school had an eye health club, though this was difficult to verify while schools were closed.

In the opinion of the evaluation team effectiveness with regard to behaviour change communication is limited. It is partly limited because the objective was restricted to raising awareness and not behaviour change. Behaviour change does not necessarily follow awareness particularly in the absence of enabling factors, such as access to soap and sufficient quantities of water (many households visited were only accessing

[11] No information

6-14 litres per person per day) to engage in hygiene practices. Effectiveness is also limited because despite Orbis Ethiopia having a Behaviour Change Communication (BCC) strategy for many years it was not utilised.

That said information gathered during the course of the evaluation would seem to indicate that there is considerable knowledge among the population and health care workers on what are the key behaviours to protect ones health from communicable disease. Communicable diseases such as diarrhoeal diseases were observed (from posters on the walls of health centres) in every district to be the most common cause of morbidity and 11 of the 16 elements that make up a "Model Household" are hygiene related and therefore there is considerable impetus within the primary care health system to promote good hygiene if not specific to trachoma prevention.

Note: A "Model Household" in the context of the Strategic Action Plan (SAP) "is defined as a house having latrine, handwashing, water storage and treatment facilities" (National Hygiene and Sanitation Strategic Plan, FMoH, 2011).

There is clear evidence of behaviour change with respect to household sanitation and open defecation. Many kebeles (near 50% in those visited) in woredas now have ODF status and every household visited possessed a latrine all be it an "unimproved" latrine.

Note: Comment on BCC above is restricted to the effectiveness of it with regards to hygiene awareness and behaviours. As is referred to in other parts of the report BCC with respect to the uptake of MDA was highly effective and lessons can be taken from this successful component.

Relevance and Sustainability

Behaviour Change Communication will remain relevant for future trachoma and wider communicable disease control interventions. However, future interventions must target behaviour change to help sustain progress towards trachoma elimination.

Water Supply Related Objectives

- At least 80,000 additional households to have access to water (RF 1)
- An additional 24,000 households will have access to clean water by 2016 and act as demonstration projects (RF 2)

Effectiveness

It is important to note that the water component was delivered indirectly through implementing partners namely WaterAid, EECMY-DASSC and the Government Water Dept. although the latter was not a formalised Orbis partner. It is also important to note that the WaSH targets were never intended to be part of a wider target to contribute towards MDG or the new SDG targets for universal coverage.

Note: No information was gathered on how the water supply work acted as a demonstration project. The effect does not appear to have been measured and no impact was recorded by the evaluation team.

Quantifying achievements in the area of water was difficult due to the absence of good records on what was done over the entire project period. The figures compiled by the Orbis team and provided to the evaluation team on the 16th August 2016 indicate that a total of 124,896 people were reached with a water supply. This equates to 24,979 households based on a family size of 5. The reports from Orbis Ireland to Irish Aid (9 reports 2007 – 2015) do not provide information on the number of people served.

While an accurate picture is difficult to gauge it is clear that the project did not meet the objectives set for water supply. Using the 104,000 cumulative household target the project achieved 28% of the target.

Planned Water Objective	% Achievement
104,000 Households	28%

Table 6 Planned versus achieved in water supply

It is clear from the figures presented in reports and interviews that initial progress towards the first 80,000 household target was good with over 25,000 households reached in 2007 and 2008 (as reported to Irish Aid) but thereafter progress in this area declined significantly. The reasons stated verbally by Orbis Ethiopia for the rapid decline in progress were primarily financial as the global financial crisis hit in 2008 and 2 sanitation staff that had been employed were let go in the face of financial constraints.

The reports provided indicate that water supply was provided in 5, possibly 6 of the 17 woredas in the project area and within woredas only certain kebeles could be reached with an improved water supply. While the project did not set out to provide universal access to safe water throughout the project area it was unclear from the literature and discussion as to what exactly the targeting criteria were for targeting certain woredas and kebeles over others. Generally woredas seem to have been targeted based upon trachoma prevalence rates (i.e. Bonke and Dita) and low water coverage (i.e. Konso).

While the numbers of people reached were well below target those that were reached and spoken to during the evaluation responded with a general level of satisfaction with the water that has been supplied. Householders spoken to were happy with the quantity of water provided and the quality of the water which in many cases was conveniently accessible.

The unavailability of data with respect to water quality results made it difficult to verify that all water supplied was fit for human consumption. Chemical and Microbiological test results were provided for a number of the water schemes, namely those in Dita and Kemba Woredas and these results indicated the water supplied was fit for human consumption from a chemical and microbiological perspective.

There were many positives witnessed with respect to the water infrastructure viewed and communities spoken with. Critical towards sustainability of supply has been the process followed by the implementing partners. Many of the aspects regarded as

important for sustainability appear to have been implemented including but not limited to issues such as

- Full community participation in every stage of the project process including the community deciding the location of water distribution points
- Community contribution to the capital costs be it labour or materials
- The establishment of Water Committees with male and female members to manage and maintain water schemes and water distribution points.

Other positives include the adoption of appropriate technologies that aim to minimise running costs (i.e. gravity water schemes and solar powered pumping from the borehole in Baayide Kebele, Konso Woreda), the fencing of water points to protect the infrastructure from damage or contamination, adequate drainage and a good ergonomic design that enables jerry cans to be more easily lifted.

Negatives that impact on effectiveness and contribute to poor functionality of water points include fractured supply pipes that have not been repaired for 2 months as reported to us in Bula Kebele, Bonke Woreda (Picture 1), a water supply that was completely shut off for the 3 months prior to our visit as reported in Baayide Kebele, Konso Woreda, tap points closed off or broken and poor flow rates at some water points.

Picture 1 Fractured water supply pipe (HDPE) in Dheshkele Kebele, Bonke Woreda, GG Zone

Note: one functioning tap (the other 3 were not functioning at all) in Bula (Picture 2) was measured to have a flow rate of 2.85 litres per minute which is approximately one third of the flow rate (7.5 litres per minute) expected for this type of water system.

Picture 2 Low flow rate from the only functioning tap of four, Bulla Kebele (beside Bulla Health Post), Bonke Woreda, GG Zone

Efficiency

From an efficiency perspective the approach to water supply was efficient partly because the approach was to rehabilitate existing water schemes rather than build new infrastructure from scratch. Community contributions, in the opinion of EECMY-DASSC often in the order of 10% (in line with SNPPR Rural Water Supply and Sanitation Manual) to the construction phase also helped to lower input costs.

An example that helps to illustrate the efficient use of resources in the supply of water relates to the borehole supply in Baayide Kebele of Konso Woreda in 2015. The cost of this scheme was 1.5 million Birr to supply water to 4,080 people plus 430 school pupils. This equates to a spend of 333 Birr per person. The scheme has an expected lifespan of 15 years which equates to 22.2 Birr (approx. 1 US dollar equivalent) per person per year. This in the opinion of the evaluators is an efficient use of resources for potentially significant long term impact.

Each water scheme will have different costs depending on the type of scheme be it a borehole or gravity fed scheme. Even schemes of the same type can't be compared as for example the length of pipeline on gravity fed schemes will vary. The Gamo Gofa Zonal Finance Bureau indicated the expected spend per 4 tap water distribution point should be in the region of 25,000 – 30,000 Birr and Orbis can use this as a basis for comparing costings from partners in the future.

Relevance

Water coverage in many of the woredas visited was less than 50% with the Government target aiming for 98% coverage in rural areas under the SAP. Remaining active in water supply is relevant not only to help sustain progress towards trachoma elimination but also to contribute to wider Government objectives.

Sanitation Related Objectives

- At least 2 additional villages and two additional schools per woreda in the project area to have access to communal latrines (RF 1)
- At least 19 additional Kebeles in Konso to have access to communal latrines (RF 1)
- Additional communal latrines in six woredas will act as demonstration projects (RF 2)

Effectiveness

Note: No information was gathered on how the work acted as a demonstration project. The effect does not appear to have been measured and no impact was recorded by the evaluation team.

As with the water component quantifying the outputs in relation to sanitation was difficult due to the absence of good records. Data provided by Orbis on August 16th 2016 in relation to school sanitation indicates the target for providing two additional schools per woreda with access to communal latrines was achieved except Mirab Abaya Woreda where only one school in this woreda is listed as having been targeted

with school sanitation. The maximum number of schools provided with sanitation was six schools in Demba Gofa woreda.

An interesting aspect to the data provided is that far more latrine holes were provided for females students (338) than male students (107). Perhaps this is a reflection of the greater need that exists in schools for sanitation for girls compared to boys but as with water the criteria for targeting certain schools or targeting services for a particular gender was not clearly stated.

With regard to communal latrines the data sheet provided by Orbis Ethiopia on August 16th indicates communal latrines were constructed in just 3 woredas and not 6 as planned and comes nowhere close to the target of communal latrines in two villages of every woreda as was originally planned. The Woredas were Dita, Konso and Derashe. The objective was underachieved in Konso where only 10 Kebeles were provided with communal latrines, not 19 as targeted.

While the outputs were well below target the evaluation also examined the effectiveness of school and communal sanitation from a number of different angles. Observations of school sanitation viewed during the evaluation indicated that the quality of construction and functional effectiveness of the latrines provided varied. On the positive side the latrines are solidly built with pit capacity to allow use for many years. The floors are washable to maintain hygiene and the doors provided are functioning on the majority of those seen. See Picture 3 below.

However, there were some inconsistencies with regard to quality of construction. While all the latrines were described as Ventilated Improved Pit (VIP) latrines many were not built in accordance with good design principles for effective VIP latrines. See Picture 4 below. In some cases there were not enough vent pipes, the pipes were located internally and not externally to be in direct sunlight, wire mesh was missing from the top of vent pipes, vent pipes were too short above the roof and air flow was not sufficiently well designed to limit odours.

In one case (Zada Garsahaile in Dita Woreda) many of the doors were off their hinges and on the ground and in another case (Karat Secondary School) the doors were missing and reported as stolen indicating the schools have maintenance issues.

Other inconsistencies included the absence of internal locks to aid privacy and protection, the absence of consideration for disability, the absence of handwashing facilities included in the design and lack of consideration for menstrual hygiene. In the experience of the international evaluator it was unusual not to see the inclusion of urinals, particularly for males included in the design of school latrines.

As the schools were closed during the evaluation period it was difficult to tell if the latrines were used and how pupils felt about the quantity and quality of sanitation facilities in their schools. The communal latrines do appear to be valued and used as witnessed in Jarso Kebele of Konso although we were told that the 10 block VIP latrine constructed in this Kebele was constructed for male members of the population only. The reason stated was the men are outside the village more than women and therefore their need was greater.

Picture 3 Well constructed school latrine for girls with working doors, incorporating disability access and handwashing facilities, Deshkele Primary School, Bonke Woreda, GG Zone

Picture 4 Communal latrine in Geldime village, Jarso Kebele, Konso Woreda, SAP Zone

Note: This latrine was reported as being built for males only. Also note: the poor application of the VIP design – not enough vent pipes, vent pipes too short above roof and vent pipes missing wire mesh at the top.

Efficiency

As with water supply the input costs were reduced due to the level of contribution from the communities targeted. As was reported in the 2011 report to Irish Aid:-

"Community contributed by providing water, sand and labour"

While it is not clear from the raw data provided, the evaluation team learned that some of the communal latrines were made accessible through rehabilitation of existing latrines rather than constructing new latrines. In the 2012 report to Irish Aid it is reported that 8 communal latrines were emptied and became operational immediately. This was an efficient way of lowering costs.

The Gamo Gofa Zonal Finance Bureau provided information on expected unit cost for a communal latrine. They indicated that an eight block communal latrine, providing four squat holes for males and four squat holes for females should cost in the region of 200,000–300,000 Ethiopian Birr. Orbis Ethiopia data provided by email on the 6th September indicated expenditure on eight block communal latrines in Dita and Konso during the years 2009–2013 ranged from a low of 122,000 Birr to a maximum of 177,000 Birr, well below the range given by the finance bureau.

Relevance

Going forward the issue of institutional sanitation remains a relevant issue at community level, at school level and health posts/centre level as gaps remain in coverage.

Evaluation Question 2

What have been the strengths, gaps/challenges and lessons learned to date with respect to results achievement (and distribution of results) and implementation of the different components of the SAFE strategy.

Strengths

The project has a number of important strengths both externally and internal to Orbis Ethiopia.

Externally the project benefits from

- Ethiopian Government leadership towards Primary Health Care,
- Significant expansion of the health system to make primary health care more accessible
- Establishment of the Health Extension Programme in 2002/03 where trachoma is one of the 'packages for HEWs as is WaSH.
- A strong international policy environment for Trachoma elimination. This includes technical and other guidance from WHO.
- A strong policy environment in Ethiopia with the Growth and Transformation Plan (GTP II), the NTD Master Plans, ONEWaSH Programme etc.

Internally the project benefits from

- Orbis Ethiopia staff who are notably committed with high energy levels, many of whom have worked with Orbis Ethiopia on this project for many years.
- Quality of the partnership between Orbis and partners where Orbis Ethiopia are clearly valued and trusted. Responses such as the following illustrate this critical strength:-

"One of our best partners", "very good partnership…role of Orbis is huge in Trachoma Control" and Orbis Ethiopia deliver "more than expected"

- A functioning referral system developed and supported by Orbis Ethiopia, along with Government health managers (from the HDAs and HEWs, health posts and schools right through to health centres and hospitals)
- Availability of other primary eye care services to deal with referrals for conditions such as cataract and refractive error.
- Investment into training a number of different stakeholders.
- A cascade effect of the training where one HDA for example will cascade the training down to 5 other HDAs.

Broadly speaking within the components of the SAFE strategy the project has demonstrated considerable strength under the S and A components as demonstrated by the effectiveness and impact delivered.

Gaps/Challenges

A number of highlighted gaps/challenges are as follows which are sub-divided into those that are largely external to Orbis Ethiopia and some that are internal challenges or gaps.

External

- Attrition rate of staff, estimated by the national Ministry of Health at between 30 – 40% per year. IECWs in particular are vulnerable in this regard and despite having to commit to 2 years of work following training the project has to train many IECWs on an annual basis to replace those that are lost.
- The political situation in SAP zone and the absence of regular dialogue between the zonal and woreda authorities there is a difficulty.
- Ensuring supply of Zithromax in the right amounts at the right times has been a challenge in the past and may be a challenge again in the future.
- Physical access to remote households, to ensure everyone has access to primary health care is a challenge for health workers in the absence of adequate transport (vehicles or bicycles) and/or passable roads.
- Two of the five woredas in SAP zone, namely Burji and Amaro are not served by the current project and according to the regional health bureau trachoma prevalence rates are high at above 40%.

Internal

Management Issues:

- Reporting which lacked hard data on what was achieved and where, thus limiting accountability. Inconsistencies in country level annual reports and Orbis Ireland reports where some reports failed to report on water activities. Repeatedly reporting the same lessons learned in annual reports to Irish Aid.
- Absence of a clear management response mechanism to respond to the 2009 Mid-Term Evaluation.
- There is an absence of regular dialogue between the zonal authorities of SAP zone and Orbis Ethiopia as illustrated by the quote “Orbis come but don’t regularly come”.
- In conjunction with the access issue is to ensure coverage to reach the poorest and most underserved. In Bonke for example water coverage varies from a low of 11% in one Kebele to over 90% in another Kebele. If future targets are to achieve full coverage targeting will have to be directed to those areas and

those people most in need but are often the hardest to reach. This will also have an effect on unit costs which one can expect to be higher.

- A key challenge linked to WaSH relates to finding and holding on to WaSH partners. While it is uncertain where the policy change lies senior Orbis Ethiopia staff are of the opinion that the rules are changing and that partnerships with non-state partners will no longer be feasible. This is an added complication to the already difficult and time consuming task of finding suitable WaSH partners.

Human Resources:

- Orbis Ethiopia lack sufficient numbers of staff at field level. Two field officers are unable to cope with the level of support and supervision needed.
- Orbis Ethiopia staff capacity in F&E is limited. Orbis Ethiopia has one full time WaSH officer based in Addis Ababa and field staff do not have the required level of WaSH expertise to plan and monitor WaSH activities. The challenge of F&E capacity will become more acute if, as was referred to following the partners' evaluation in 2016, Orbis Ethiopia will no longer be able to work in partnership with WaSH agencies such as EECMY-DASSC.

Programmatic Issues:

- Orbis Ethiopia lacks a systematic and comprehensive approach to Behaviour Change Communication across all elements of the SAFE strategy. This was evident from the IEC materials used to communicate hygiene messages which were viewed as quite generic to the four elements of the SAFE strategy but lacked for example specific messages on key hygiene behaviours for people to adopt and a clear plan on which communication channels to deliver those messages.
- In the area of sanitation a gap exists with respect to sanitation at other institutions such health posts where there is an absence of facilities.
- While there was some activity around household sanitation through Community Led Total Sanitation and Hygiene (CLTSH) this was not one of the stated project objectives under review and much work remains to be done getting householders onto the sanitation ladder with unimproved latrines and from there up the sanitation ladder to "improved" latrines. One may anticipate that the social marketing of sanitation and the development of a private sector, as set out in the SAP, to meet expected demand will become the way forward as ODF status in all Kebeles is achieved.
- The training materials have up to now been overly focused on eye care and lacking content specific to wider environmental health and the role of WaSH in preventing trachoma, other NTDs and other communicable diseases. This was seen through a review of the training manuals for a variety of stakeholders (HEWs, HDAs etc), the timetable and course breakdown for training various stakeholders and even the pre-test, post-test questions. An expanded WaSH

component has been added recently to the teachers PEC training manual and the HEWs PEC training manual. This needs to be completed across the board to ensure WaSH, reflecting the relative importance of F&E within SAFE is captured not only in the training manuals, the course schedules, the pre-test and post-test questions but also the training materials used by trainers and resource materials provided after to trainees.

Lessons Learned

The key lesson quoted by everybody spoken to was the need to deliver on the F&E elements of the SAFE strategy. Practically every stakeholder spoken to repeated to the evaluators that in order for trachoma to be dealt with in the long term and for progress to be sustained greater attention and investment is needed on the F&E elements of the SAFE strategy.

A lesson that has long been learned is that constant training of new IECWs is needed to deal with the attrition rate and keep PECUs functioning.

There is insufficient data available or gathered with respect to the surgical quality including recurrence rates to hold IECWs and the wider health system to account for surgical quality.

From a behaviour change perspective one of the big successes of the project and lesson to be learned comes from the implementation of MDA. At the beginning uptake of MDA was difficult with rumours abounding about the negative impacts of Zithromax such as “it causes diarrhoea, it causes headaches, it causes infertility”. However uptake improved to the very high levels recorded now through a very successful mobilisation of the community. Critical success factors are the use of respected members of the community (Kebele leaders, Religious Leaders as well as Health Care Workers) to disseminate messages, better enabling householders to access MDA by setting up accessible distribution points and utilising takers of MDA as advocates of the beneficial effects. Future MDA campaigns, perhaps targeting a wider range of NTDs should learn from this as should other BCC work promoting hygiene behaviours.

Evaluation Question 3

Has the project had other notable effects (or impact) on communities and individuals of a positive/negative nature – whether planned or not.

Orbis didn’t set objectives for the project to contribute in a wider way to general health and development and therefore didn’t report on this wider impact. One stakeholder felt future projects need to show “greater maturity” and actively report on the contribution of projects to the wider health and development agenda. That said some of the feedback gathered from those who benefited from this project indicated some profound and meaningful impacts for individuals and their families. All individuals interviewed who were operated on for TT indicated that the TT surgery had positively impacted on their health and livelihoods. One 48 year old woman from Dita Woreda in GG zone said:-

> "Before the surgery I used to have severe and sharp pain while opening and closing my eyes. Tears were continuously flowing from both of my eyes and as the result I could not see light properly and due to the pain, I could not properly tend my kids, go to the market or perform other household chores. Thanks to the eye care worker, who operated my lids, I am no more having all those problems after the surgery and now I am leading a pain free and active life."

Four recipients of eyeglasses in Kucha Woreda, GG zone also had positive stories to tell by reflecting on the fact that the initial screening by their trained teacher had identified their impaired vision and subsequently they received glasses that has enabled them to remain in school and gain an education they wish to have. Note: when glasses were broken the time taken to replace them was up to a year and two of those spoken to lost a year of schooling waiting for replacement glasses.

Child mortality has fallen in Ethiopia. This is reflected in the Health Sector Transformation Plan (HSTP) 2015/16–2019/20 where it is reported that under 5 mortality has dropped by 67% since 1990. It was not possible to access information demonstrating the improvement in child mortality in the project area but it is a reasonable to assume there have been improvements in this regard over the lifetime of the project due in no small part to the expansion of the primary care system during this time period and the role Orbis Ethiopia has played within the primary care system.

Evaluation Question 4

What are the prospects for, and recommendations in regard to, future sustainability of the project's benefits as well as scale up or replication of all or some of the project interventions?

Many of the factors that currently contribute towards future sustainability should be retained. They include the collaborative partnership that has already been established with key Government departments (Health, Education and Finance) although consideration should be given to formally including the Water Dept. into the partnership. Also key to retain is the way of working with partners in planning, implementing and evaluating together, the process of routing funds through zonal offices for onward disbursement to the woredas, supporting training activities but not directly delivering the training which is left to Govt. health care staff, the distribution of MDA drugs centrally from the PFSA Dept. of the MoH to the regions and as has happened in one woreda (Bonke had a 50,000 Birr Budget in 2015 – EC 2008 for primary eye care) and separate budget lines for primary eye care are being established within the health system.

At this point in time the opinion gathered from stakeholders was that if Orbis Ethiopia pulled out now the primary eye care system would not fall apart and could continue to some limited extent at least for a while. However, in the opinion of the evaluators the roots of sustainability are still fragile and continued investment to support the primary eye care system is needed in the medium term particularly when one considers the scale of the challenge in other underserved parts of SNNPR.

The goal should be to expand the project to other areas of need but remain in the existing project area to achieve elimination targets and ensure greater sustainability of the primary eye care system. This may entail setting milestones for a gradual withdrawal of support as primary eye care becomes more established and resourced within the primary health system.

At the field level much progress towards the elimination of trachoma has been achieved but in order to sustain progress and prevent recrudescence Orbis Ethiopia should keep working on all elements of the SAFE strategy but perhaps adopt a different approach to F&E where the focus is more on Advocacy and Coordination than direct implementation with or without partners.

Other DAC Criteria Findings

The following are additional findings not previously captured.

Effectiveness

The training is targeted at a range of people within and outside the formal health system and therefore cuts across all the elements of the SAFE strategy. The quality of the training is to some extent reflected in pre-test and post-test scores demonstrating improved knowledge at the very least. Samples of pre-test and post-test scores viewed indicated improvements in knowledge such as HEW scores in Dita where the minimum score was 50% in pre-test and 70% in post-test. As highlighted elsewhere the training was overly concentrated on eye care without sufficient attention to the F&E elements of the SAFE strategy.

Efficiency

It is difficult to assess whether human and financial resources have been used optimally without some sort of benchmark to measure performance against. Reflecting back on a total spend of €4.33 million Euro providing primary eye care services to a target population of 2.2 million people for 10 years equates to a spend of €0.19 Euro cents per person per year. Considering the number of people who have received surgery, access to other trachoma treatment services, Zithromax as preventive chemotherapy (that according to one research study impacts on a wide range of other communicable diseases (Effect of Mass Distribution of Azithromycin for Trachoma Control on Overall Mortality in Ethiopian Children, A Randomised Trial. JAMA, September 2, 2009 – Vol 302, No. 9), improved water supply, school and communal sanitation and knowledge to support healthy behaviours this in the opinion of the evaluators is a highly efficient project.

However some comment can also be made on the balance of expenditure per component of SAFE and the achievement of objectives by SAFE component.

Broadly speaking it is clear that the majority of funds were spent on the S and A components of the SAFE strategy and the F and E components were significantly under-resourced both financially and in human resource terms. This is reflected in the project achievements outlined earlier under main evaluation question one.

Table 7 below, taken from financial data supplied by Orbis, illustrates the balance of expenditure by SAFE component from selected years at the beginning, middle and end of the project. In year 6 for example 83% of expenditure was on Antibiotics with only just over 8% spent on Facial Cleanliness and Environmental Health.

SAFE	Year 2	Year 6	Year 10
	%	%	%
Surgery	22.5	7.1	11.6
Antibiotics	34.8	83.0	65.0
Facial Cleanliness	19.0	3.2	9.8
Environmental Health	23.5	5.8	12.6

Table 7 Financial spend by SAFE component

In the opinion of the evaluation team there was a lack of balance in spend and human resource capacity to ensure optimal use of resources, particularly when it comes to sustaining achievements, reaching elimination targets throughout the project area and contributing to wider health and WaSH goals for the people of Ethiopia.

The other aspect of efficiency to reflect on is Orbis' achievements with respect their 70:30 obligations where 70% of spend must be on direct costs with up to 30% allowed for indirect or administration costs. In this regard data was provided by Orbis covering the period 2010 –2015. Note: The 70:30 ratio requirement only started in 2010. Table 8 below illustrates reported achievements in this regard and clearly demonstrate that the proportionate spend on indirect costs was within the agreed limits.

Note: the ratio of spend on indirect costs for 2014 and 2015 is extremely low. The reason given by the finance staff for such a low proportion is that Gift in Kind donations for those years were regarded as a part of project expenditure.

Year	Direct Costs	Indirect Costs/Admin.
2010	72	28
2011	81	19
2012	77	23
2013	79	21
2014	99	1
2015	99	1

Table 8 Proportion of spend on direct and indirect costs 2010-2015

Partnering with the Government Departments of Health, Education and Finance in order to provide access to Primary Eye Care services through the existing health system and not set up a parallel system was the most efficient way to deliver the project. The Water Department need to be included as a formal partner if the water supply component is to be invested in substantially for the future.

Relevance

The evaluation shows that the project interventions were relevant throughout the project time frame and remain relevant into the future. Of additional relevance at this point in time is for Orbis Ethiopia and partners to engage in surveillance towards validation of elimination status.

The initial objectives set for the project lacked appropriateness and could have been better written. Generally they were not SMART objectives. No timeframe was set for the achievement of objectives. An objective to raise awareness is limited in its scope towards achieving impact and should really have aimed for behaviour change with regard to specific hygiene practices such as face washing or handwashing. The water supply and sanitation objectives were too numeric and lacked a denominator to give a sense of perspective on what level of "coverage" in percentage terms the project was aiming to achieve.

As observed during the evaluation much of the housing in SNNPR lacks ventilation and the cooking facilities are extremely basic giving rise to concerns about the role household air pollution plays in the development of cataracts (see page XV WHO's Preventing Disease through Health Environments). If Orbis wishes to engage in work that looks to prevent cataract and address one of the biggest single risk factors to respiratory health in rural Ethiopia then work in this area should be considered.

Sustainability

As mentioned elsewhere in this report Orbis should continue its current way of working to support the Ethiopian Health System to ensure all people have access to primary eye care services within the public health system. Orbis should reassess which aspects of the health system need strengthening support utilising the WHO Building Blocks framework. Current indications suggest training to build and retain human resource capacity will remain central to the Orbis Health Systems Strengthening approach.

Conclusions and Recommendations

Overall Conclusions

Outcomes and Objectives

In terms of achieving the planned for outcomes and objectives the conclusion to draw is that Orbis and partners have been significantly successful overall. Massive progress toward the outcome elimination targets for 2020 have been achieved as seen in the results for reduced prevalence of TF and TT in the project area. Of the two outcome targets progress in relation to TF appears better as many districts have already reached elimination status though this has to be maintained for a period of three years before elimination status can be certified.

In relation to specific objectives access to primary eye care services and not just trachoma treatment has been hugely expanded since the project began with the majority of the 84 primary health centres having functioning primary eye care units

staffed with trained health workers, equipment and consumables. Beyond the health centres an outreach network exists and functions not only to the health posts (5 per health centre) but into wider society through for example schools and religious institutions. However the project had limited success on the delivery of objectives with respect to the F&E elements of the SAFE strategy.

Effectiveness

In general one can say that the project has been extremely effective in MDA uptake with figures as high as 95% spread evenly across the project area: over 41,500 surgeries have taken place benefitting in the main women who are particularly vulnerable to trachoma, some limited effectiveness with regard to hygiene awareness but a noted general trend away from open defecation towards the use of latrines.

The disappointing aspect to the project is the relatively weak effectiveness with respect to water supply and sanitation, namely provision of latrines at schools, communities and public areas. Approximately 30,000 Households equivalent to 150,000 people have been supplied with improved access to safe water but this is well short, approximately 60% short of the target set.

Efficiency

The project has demonstrated some efficient aspects. One could argue that meeting the 70:30 obligations is a measure of efficiency. In practical terms the provision of hardware such as communal latrines below the Government's expected unit cost and rehabilitating water supply instead of constructing new water points indicate efficient use of funds.

Relevance

The situation with respect to trachoma in the project area is clearly improving but trachoma elimination still remains relevant within the wider context of NTD control and the need to address wider communicable disease control in a situation where diarrhoeal diseases and respiratory infections are two of the leading causes of morbidity and mortality (as reported in several of the woredas visited). Beyond the boundaries of the project area trachoma remains endemic in the vast majority of woredas in the Southern Region and therefore trachoma prevention and elimination activities remain relevant.

Impact

The project has delivered tangible impact to so many people and is reflected in the testimonies of people in receipt of surgery. They have expressed how the surgery has impacted on their sight, their ability to engage in productive and household activities as well as freedom from pain.

As a proxy of wider impact the reduction in TF and TT prevalence coupled with behaviours towards MDA and sanitation, improved water supply and access to communal and school sanitation have all contributed to wider health and well-being impacts and possibly wider economic impact.

Sustainability

Many of the building blocks towards sustainability of trachoma elimination services and wider primary eye care have been laid down by this project. Central to this is how the health system has been strengthened through a process of continual training to ensure skilled human resource capacity continues to exist for primary eye care despite staff attrition rates. The health system is also taking on more and more of the direct responsibility for delivery of services through aspects such as providing the training to health staff through eye care focal points in each district, channelling funds and supplies such as Zithromax through the existing health system and even developing dedicated budget lines for primary eye care. Lastly the demand for primary eye care has been created amongst the community.

Lessons learned and good practices

The following outlines some key lessons learned from within the project and outside the project relevant to trachoma control and wider primary health care.

1. A key lesson repeated in several of the Orbis Ireland Annual Reports to Irish Aid is captured in the following quote taken from the 9th Annual Report in 2015 "….the programmatic and financial commitment and dedication of the local and international community towards strengthening the F&E components of the SAFE strategy is irreplaceable if we really mean to eliminate trachoma from the community".

2. Investment in the building of trust and mutual respect with Government and Non-Government partners is paying dividends illustrated by a cooperative working relationship between Orbis Ethiopia and partners.

3. Investment in staff is critical to success and Orbis Ethiopia is fortunate to have such a dedicated and wholly committed group of staff.

4. Until solutions are developed to retain IECWs beyond the current 2 year commitment training of new IECWs to replace those lost is the way to ensure PECUs continue to function.

5. Trachoma elimination has global and national backing and political will exists to provide an enabling environment for organisations like Orbis Ethiopia to deliver on its mandate.

Recommendations

Strategic

<u>General</u>

1. Orbis Ethiopia should expand geographic coverage to at least the two other woredas of Burgi and Amaro in SNNPR and other underserved zones in the region.

2. Orbis Ethiopia should support comprehensive eye care in the region to include not only trachoma control but refractive error management and cataract services.

3. Orbis Ethiopia should adopt a more systematic and comprehensive approach to Behaviour Change Communication across all four elements of SAFE and learn from successful behaviour change under MDA activities.

4. Orbis Ethiopia should deliver more effective F&E at scale towards successful sustained elimination of trachoma.

5. Orbis Ethiopia should examine how to integrate trachoma control into wider Neglected Tropical Disease (NTD) control in accordance with global and national strategies/plans.

Planning

6. Orbis Ethiopia should develop a clear targeting strategy for trachoma control and elimination which should be based upon need, possibly linking high prevalence of active trachoma and TT with low water and sanitation coverage and low hygiene practices. Future projects should aim to have a wider objective or goal on wider health, well-being and development objectives in the context of the SDGs (Sustainable Development Goals) and Government of Ethiopia targets. Objectives must be Specific, Measureable, Achievable, Realistic and Time bound (SMART) within themselves and coherent across objectives.

Partnering

7. Orbis Ethiopia should consider including the Water Department in SNNPR as a formal partner in the same way Health, Education and Finance are partners.

8. Orbis Ethiopia should examine the feasibility of partnering with a civil society WaSH partner and should consider more than one civil society WaSH partner to add coverage and spread the risk.

International

9. Based upon significant under achievement in F&E and the experiences of the evaluation team during the evaluation process Orbis Ethiopia and Orbis International should perhaps reflect on the culture of the organisation and ask if the organisation is sufficiently balanced towards all aspects of the SAFE strategy.

Operational

General

10. Orbis Ethiopia should refocus effort to achieve the elimination targets set for this project and sustain them.

11. Increase surgical activity in the immediate future to help the Government of Ethiopia deal with the TT surgical backlog.

12. Orbis Ethiopia should focus more attention to support SAP zone and visit more frequently than previously.

Capacity Building

13. Orbis Ethiopia should work to support the capacity of partners in trachoma surveillance towards certified elimination status.

14. All training work to build capacity should be reviewed and adjusted to ensure greater balance of content across all four elements of the SAFE strategy with special emphasis to ensure WaSH is adequately covered. The evaluation team noted this work had already commenced in advance of the evaluation.

15. Orbis Ethiopia should do a review of the support needed for each PECU to function to its maximum including equipment and transport needs.

Surgical and Treatment of Trachoma

16. Orbis Ethiopia should set criteria to determine the functionality of PECUs.

17. Monitor, perhaps on an annual basis the cost per surgery to assess if it is in line with Federal Ministry of Health (FMoH) guidelines.

18. Orbis Ethiopia should strengthen their follow up systems. For TT surgery this should include monitoring of surgery quality and recurrence rates. There should be 3-6 month follow up on surgical patients in all PECUs complemented by senior and skilled eye care professionals. A follow-up system for Refractive Error is also required to ensure those prescribed glasses receive glasses in a timely manner.

19. All patient record forms, operative records, and follow up forms should be properly completed and stored together. The information collected on the different forms should be used as monitoring tools to assess the quality of the service, identify gaps and to plan for refresher training and improvement.

20. All TT case finders should be provided with a full set of patient counselling cards as well as a torch and trained to detect misdirected eye lashes through eye examination. The TT case finders should also be given a clear list of tasks that they are responsible for and their training must include the basic skills on how to counsel patients.

21. Monitoring visits to each PECU should be regular and feedback on the visit outcomes should be made available. Mechanisms should be put in place to check whether or not the feedback forwarded by the monitoring team is implemented.

22. Orbis Ethiopia should revise the TT backlog figures and communicate this information to the GGDK project office.

Antibiotic Distribution

23. Orbis Ethiopia should monitor the unit cost of Zithromax distribution to assess if it is in line with FMoH guidelines.

24. Phase out MDA in woredas per the decision making algorithm for the antibiotic treatment of trachoma[12], districts with different TF_{1-9} prevalence should continue implementing the A, F and E components of the SAFE strategy as follows:

Name of the districts	TF_{1-9} prevalence at Impact Assessment	Recommended actions (Intervention)	Recommended actions (Impact Assessment and surveillance survey)
Bonke, Dembe Gofa, Geza Gofa, Kutcha, Melekoza, Oyida, Uba Debre Tsehaye and Zala	< 5%	Stop MDA and Continue with F, E	Continue with districts level surveillance survey (after 24 months since Impact Assessment)
Chencha, Deremalo, Kemba, Ale and Derahse	5-9.9%	Continue working on A, F, E implementation, consider $\geq$ 1 round of MDA	Repeat district level Impact Assessment after 6 months from the last MDA
Arbaminch Zuria, Boreda, Dita and Kosno	10-29.9%	Continue working on A, F, E implementation, consider $\geq$ 3 round of MDA	Repeat district level Impact Assessment after 6 months from the last MDA

Table 9 Decision table for SAFE components in GGDK project

[12] Diagram on Decision making for the Antibiotic Treatment of Trachoma. International trachoma Initiative. Version 9, April 2015

Behaviour Change

25. Orbis Ethiopia should strengthen their capacity in Behaviour Change Communication.

26. Future KAP surveys to measure behaviour change should be undertaken in comparable areas and designed to measure against project objectives.

27. Hygiene indicators must focus on measuring behaviours and not just awareness.

Water Supply

28. All water points need to be tested in accordance with national guidance on water quality and records made available for review.

Sanitation

29. Orbis Ethiopia should prioritise household and community level excreta management (in high density villages like Konso) and work towards a phased approach enabling householders and communities move up the "sanitation ladder" that (a) eliminates open defecation, (b) achieves full coverage with respect to "basic" or "unimproved" sanitation and (c) moves towards full coverage of "improved sanitation". While prioritising household sanitation Orbis Ethiopia should aim to continue supporting institutional sanitation in schools and health centres/posts striving for full coverage within a school for example or across a woreda.

30. Orbis Ethiopia and partners should work towards delivery of a standardised effective VIP latrine design for communal latrines including separate male and female sections, the provision of urinals where feasible, incorporation of handwashing facilities while mainstreaming issues of disability and protection.

Staffing/Human Resources

31. Orbis Ethiopia should increase the number of field coordinators in order to cope with the functions that have to be filled across a vast geographically challenging environment and should invest in improving the WaSH capacity of all programmatic staff following a capacity assessment.

Management Functions

32. Orbis Ethiopia needs to strengthen aspects of its reporting to ensure consistent mechanisms are employed in the collection of data and to ensure accurate reporting. Reporting should also aim to report on the contribution of the project to the wider health and development agenda, perhaps through reporting of case studies.

33. Orbis Ethiopia needs to establish a robust management response mechanism in response to monitoring visits, evaluations and annual reviews setting out what actions are to be taken, who is responsible for those actions and timelines for completion.