



Final report

**External Evaluation of UNICEF's
"Scaling Up Nutrition and
Immunization implemented in 13 sub-
Saharan African countries over the
course of 2013- 2016" - RFPS-USA-
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KIT Health Knowledge Unit

Pam Baatsen, Ankie van den Broek, Albertien van der Veen, Mirjam Bakker, Sandra Alba, Gloria Moshá, Angèle Randrianaivo and Mohamed Sankoh

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KIT - Health and Education Unit

Mauritskade 63
1092 AD Amsterdam
Telephone +31 (0)20 568 8711
Fax +31 (0)20 568 8444
www.kit.nl

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Acronyms and abbreviations

ACC/SCN	(United Nations) Administrative Committee on Coordination, Sub-Committee on Nutrition
BCC	Behaviour Change Communication
BMGF	Bill and Melinda Gates Foundation
CAR	Central African Republic
CD	Child Day
CDN	Canadian Dollars
CHD	Child Health Day
CHNM	Child Health Nutrition Month
CHW	Child Health Week
CIDA	Canadian International Development Agency
CSO	Civil Society Organisation
DFATD	Department of Foreign Affairs, Trade and Development (Canada)
DHMT	District Health Management Team
DHS	Demographic Health Survey
DPT	Diphtheria, Pertussis, Tetanus
DPT3	3rd consecutive dose of DPT
DRC	Democratic Republic of Congo
EAP	External Advisory Panel
EMT	Evaluation Management Team
EOS	Enhanced Outreach Strategy
EPI	Expanded Programme on Immunisation
ESAR(O)	East and Southern Africa Region(al Office)
FGD	Focus group discussion
GAC	Global Affairs Canada
GAVI	Global Alliance for Vaccines and Immunization
GMP	Growth Monitoring and Promotion
GO	Governmental Organization
HKI	Helen Keller International
HMIS	Health Management Information System
HPV	Human Papilloma Virus
IEC	Information, Education and Communication
IFA	Iron Folic Acid
IMCI	Integrated Management of Childhood Illness
I/NGO	(International) Non-Governmental Organisation
ITN	Insecticide-Treated bed Nets
IYCF	Infant and Young Child Feeding
KIT	Royal Tropical Institute
LiST	Lives Saved Tool
LQAS	Lot Quality Assurance Sampling
MCHW	Maternal and Child Health Week
MCV1	First dose of measles containing vaccine
MDG	Millennium Development Goal
MI	Micronutrient Initiative
MICS	Multiple Indicator Cluster Survey
MOH	Ministry of Health
MOHCDGEC	Ministry of Health, Community Development, Gender (formerly MOHSW)
MOHS	Ministry of Health and Sanitation
MOPH	Ministry of Public Health
MOHSW	Ministry of Health and Social Welfare
MoRES	Monitoring and Reporting for Equity System
MDC	Medical Drug Store
MUAC	Mid Upper Arm Circumference
NID	National Immunization Day
OECD/DAC	Organisation for Economic Cooperation and Development/ Development Assistance Committee
PEC survey	Post Event Coverage survey
PMF	Performance Management Framework
PPT	PowerPoint
RED/REC	Reaching Every District/ Reach Every Community
RO	Regional Office

SIA	Supplementary Immunization Activity
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SSME	Semaine de la Santé de la Mère et de l'Enfant/Mother and Child Health Week
SUN	Scaling Up Nutrition
TFNC	Tanzania Food and Nutrition Centre
ToC	Theory of Change
ToR	Terms of Reference
Tsh	Tanzania Shilling
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Fund
UNICEF ESARO	UNICEF Eastern and Southern Africa Regional Office
UNICEF WCARO	UNICEF West and Central Africa Regional Office
USD	United States Dollars
VAS	Vitamin A supplementation
WASH	Water, Sanitation and Hygiene interventions
WB	World Bank
WCAR(O)	West and Central Africa Region(al Office)
WHO	World Health Organization

Glossary of central concepts

Child Health Day

Child Health Days are **periodically provided interventions** which entail provision of a package of (free of charge) integrated preventive and curative services delivered directly to children and their care takers in the area where they live. At a 'one stop shop', children can receive a combination of different services that will improve their health status such as vitamin A supplements, de-worming tablets; routine immunization, monitoring of their nutritional status; referral to therapeutic feeding centres; insecticide-treated mosquito nets or any other intervention that would improve their health and wellbeing. The combination of services differs per setting/country.

Integration

Integration is an important concept in the Theory of Change of Child Health Days. In this evaluation, we use the term for two types of integration, namely in service delivery, and in policy and management in relation to CHDs. The description of both types – based on WHO¹ documents is provided below:

1. Integrated service delivery:

WHO's working definition of integrated service delivery is *"The management and delivery of health services so that clients receive a continuum of preventive and curative services, according to their needs over time and across different levels of the health system."*² For CHDs this definition is too wide, so we have redefined it – based on the WHO Technical brief – as: *"The management and delivery of a package of preventive and curative child health services for children under five with the aim that they receive appropriate interventions and coordinated care at one location and under one overall manager periodically"*.

2. Integrated policy and management:

WHO's Technical Brief states: "Integration can also refer to integrated policy-making and management which is organized to bring together decisions and support functions across different parts of the health service".³ The Ministry of Health in an integrated system would have the overall responsibility for the health status of the under-fives in the country and will simultaneously contract services from various stakeholders in the sector to provide these services. This integration is strongly linked to the issue of sustainability in relation to the CHDs.

Outcomes⁴

Short(er) term or immediate outcomes: Changes in capacities (skills, attitudes and knowledge

¹ WHO (2008). *Integrated health services – what and why?* Technical Brief No.1, 2008 (1–8).

² See footnote 1

³ See footnote 1

⁴ Center for Theory of Change <http://www.theoryofchange.org/what-is-theory-of-change/> and CHD program documents

(competencies) of service providers or children under five and their caretakers which can be attributed to and is being reached from the first or second year of implementation (the first building block of the Theory of Change)

Medium term or intermediate outcomes: Changes in behaviour, practice or performance of service providers or children under five and their caretakers which can be attributed to and are being achieved during the second half of the implementation period that is from about year three – five onwards (the second building block of the Theory of Change)

Long(er) term outcomes: changes in status of nutrition and health status which can be attributed to the programme achieved at the end of the initiative (the third building block of the Theory of Change) that will continue beyond the life-span of the initiative

Ultimate outcome: Changes in life condition/ well- being beyond the initiative which can't be attributed to the initiative but to which the initiative contributes

Theory of Change

A Theory of Change (ToC) is "***a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context***". It includes the articulation of underlying beliefs, assumptions, conditions, interventions and strategies that are critical for change to happen⁵

⁵ See footnote 4

Executive summary

UNICEF has contracted the Royal Tropical Institute/KIT to conduct an external evaluation of the Child Health Day (CHD) activities implemented in 13 different sub-Saharan African countries in different stages and contexts. These CHDs were supported through the “Scaling Up Nutrition and Immunization” project covering the period March 2013 – December 2016.

The evaluation started in September 2015 with an inception phase during which the Theory of Change of the Child Health Days was reconstructed and the mixed methods evaluation methodology further developed and agreed upon. Qualitative data collection in selected case study countries, being Tanzania (June 2016), Madagascar (October 2016) and Sierra Leone (November 2016) coincided with ongoing Child Health Days/Week/Month. In those countries, interviews and/or focus group discussions took place at the national (46 respondents spread over the three countries), district (40 respondents), health facility (17 Interviews/Focus Group Discussions with in total 40 respondents) and community (36 Focus Groups Discussions with in total 213 respondents) level. In the interaction with all respondents, ethical standards for evaluation as documented in the UNEG Ethical Guidelines for Evaluation were followed. Preliminary case study findings were validated by key stakeholders within each country, and also with UNICEF New York and Regional Advisors from ESARO/WCARO through Skype calls. Alongside the case studies and document review, quantitative data analyses were conducted on a comprehensive database including HMIS, CHD campaign records and data from nationally representative population-based surveys for all 13 countries. The recommendations were developed in a participatory manner with Evaluation Core Group members and the final draft report discussed with Evaluation Core Group members as well.

The **objectives** of the evaluation were twofold, namely to determine to what extent the project contributed to increased coverage and effectiveness of the CHDs, and how this was realized; and to gather evidence on what worked well and through which mechanisms, to facilitate evidence-informed and policy decision making.

The evaluation has a number of limitations: 1) in the absence of counterfactuals, it is not possible to indicate whether achievements realized are entirely the result of the Child Health Days only; 2) primary data collection took place in only 3 case study countries out of the 13 total evaluation countries (case study countries were sampled purposefully to learn from innovation and lessons learned) while it is realized that there are contextual and systems differences between all 13 countries; 3) while much support was received from country and regional offices to bring data together, there are still data gaps, including related to 2016 data. The evaluators tried to address some of these limitations through amongst others data review of all countries and optimizing triangulation opportunities.

Key Findings

For the findings, the data from the country case studies, the database analyses and document and literature review have been brought together in line with the evaluation framework. These findings have been grouped around relevance, effectiveness, efficiency, sustainability and lessons learned and promising practices.

Relevance

The activities of the CHDs are in line with Government plans, and UNICEF policies and international best/promising practices and evidence-informed. The CHD interventions address major causes of child morbidity and mortality at large scale. The package of health and nutrition services is flexible and can be adjusted to contextual needs. However, there is also a tension between the numerous needs and some indications that the effectiveness of CHD may be compromised if too many services are being co-delivered.

Considerable efforts have been made to reach under-served populations and low performing districts. Limited focus has been given to zooming-in on particular vulnerable children such as children who belong to the lowest wealth quintiles and/or who are not having/living with biological parents, and/or are living in households where none of the adults have had at least primary education⁶.

Campaign data is not systematically disaggregated by sex, only by age (under and above 1 year of age), which means that analyses of gender equity at the level of the children cannot be systematically done based on campaign data but need to rely on surveys conducted after the campaigns e.g. PECS or LQAS). CHDs have not been used to address gender inequity at the level of parents or care takers. This applies both for its design and implementation.

Community structures are used for sensitization and mobilization, but not for planning and implementing activities.

In the case study countries, CHDs are implemented at national scale, and not just in areas with coverage challenges, irrespective of the country being classified as early transitioning, late transitioning or fragile state country.

Efficiency

Micro-planning is an useful tool to facilitate planning, mobilize resources and ensure smooth implementation. Data from previous CHDs and surveys are being used to address gaps and improve coverage. The Reach Every District/Every Community strategy is used to ensure that also remote and isolated communities are prioritised. CHDs are also used to reach children who missed one or more or all vaccinations. Support from Government, NGO and private sector partners during the actual implementation (social mobilization, logistics, human resources and supplies) is crucial for successful increasing coverage.

In the three case study countries, overall timely and appropriate support is provided by UNICEF in planning, procurement logistics and delivery leading to earlier planning, centralized (annual) purchase of supplies and strong(er) MoH leadership. In spite of this, funds/supplies are sometimes delayed as result of not optimal functioning government systems.

In practice, CHDs are in effect replacing regular preventive health services, primarily because VAS and albendazole are not available in the right quantities in regular services or not free of charge outside campaign dates. Children are thus unlikely to receive VAS and albendazole during regular services and this attracts parents to take their children to campaign days. As a result, children below one year of age are at risk to receive their first dose of vitamin A up to 5 months too late.

Country budgets for CHDs vary greatly, as do contributions from other donors, NGOs or contributions in kind (staff over-time, coordination, supervision) making a cost-efficiency analysis difficult. Funding of per diems is one of the biggest financial challenges both for supportive supervision and outreach work.

Effectiveness

CHD campaigns, or similar campaigns where vitamin A was also administered, were conducted in every year in every evaluation country in 2014 and 2015. Three countries did not conduct 2 campaigns per year where VAS was provided: CAR (only one campaign in 2014 and one in 2015), Sierra Leone (only one campaign in 2014) and South Sudan (only one in 2015). Most

⁶ Idele, P.A. et al. (UNICEF NY 2012). *Redefining "Vulnerable Child" in the Context of HIV/AIDS*. <http://paa2013.princeton.edu/papers/132002>

countries saw an increase in the average number of children supplemented per semester when they did conduct campaigns apart from Burundi, CAR and Senegal and Sierra Leone. Despite these improvements, by analysing coverage data from the UNICEF database, VAS coverage in the evaluation countries decreased in the project years (2013 S2-2015) compared to before (2010-2013 S1) by around 7 percentage points, or 9% decrease, from baselines ranging between 55.7% and 99% coverage. This overall decrease is mainly caused by decreases where campaigns could not be conducted as well as countries where the number of children supplemented dropped. These are the countries which experienced security crises (South Sudan, CAR, Burundi) and Sierra Leone which had to cancel its second campaign in 2014. It also includes Senegal, which experienced the most severe decrease in coverage, attributed to low coverage of VAS through routine services in the 12-59 months age group.

With regards to immunization rates in the project years (2013 S2 – 2015) and prior to this (2010 – 2013 S1), according to WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), there was no change in DTP3 rates, and slight decrease in MCV1 rate. Immunisation rates per se are not central to the evaluation of CHD efforts, but offer a useful barometer against which to gauge the performance of CHDs. Mostly, decreases in VAS coverage attributable to political instability, humanitarian crises or the Ebola epidemic were not correlated with decreases in immunisation coverage. This can be seen as attesting to the resilience of routine system delivery in these countries for child health interventions and further strengthens the argument for integration of VAS in routine systems.

Analysis of country reported data by district showed that for vaccinations low performing districts are generally decreasing (except in South Sudan) and most countries see an increase in the number of districts with coverage above 90% (apart from Sierra Leone, South Sudan and Zambia). Trends are even more encouraging for Vitamin A data, with hardly any country reporting coverage less than 50% in rounds when VAS is conducted and generally coverage above 90% reported in all countries. However, it is important to note that this analyses are based on coverage derived from HMIS/campaign data and thus overestimations.

Analysis of DHS survey data at the individual level (comparing vaccinated/supplemented individuals versus those who were not) confirmed that campaigns appear more successful at reaching out to more vulnerable children than regular services, although there can be substantial differences across countries (e.g. in Senegal campaigns are more equitable than in Tanzania). They also highlighted that even in countries with relatively good geographical equity, the most vulnerable children are still less likely to be reached. In all three case-study countries supportive supervision contributed to enhanced coverage.

Sustainability

There are many factors that point towards the sustainability of CHD activities. The initiative builds on institutional and organizational governmental capacity and activities. It also capitalizes on community structures including by-laws, civil society capacity and in some cases also private sector capacity. CHD activities have been included in relevant national policies and plans. Core CHD activities have been included in well-established interventions in the health and nutrition sector. Micro-planning processes result in district level work plans and budgets with two contact points per year. District health teams take up local responsibility for the implementation which enhances ownership and pro-actively seeking collaboration with other players. Capacities of community health workers are being strengthened where CHDs receive bi-annual trainings and supportive supervision processes enhance local (problem solving) capacity.

There are also a number of challenges to ensure sustainability. None of the three case study countries, including Tanzania as early transitioning country, is able to finance the CHD from

their regular Health (System) Budget (although Tanzania does support operation costs under the basket fund funding including through the decentralized budgets), which means that financial sustainability seems still far off. There are also challenges with integrating CHDs into regular services such as the fact that extra supplies of Vitamin A, albendazole, and vaccines and resources for this are needed, that are now only being made available for campaigns.

No real negative effects as result of the programme were identified, other than opportunity costs, as the mass campaign approach targeting everybody uses energy and resources that could be used to focus on those further away or the most vulnerable while strengthening the regular system.

Lessons learned/promising practices

The evaluators also developed a short overview of key lessons learned and promising practices:

Supportive supervision

In all three case-study countries, supportive supervision resulted in enhanced coverage, by moving things into the right direction or supporting prompt decision-making. A number of measures were identified that make supportive supervision more effective: regular orientation and/or training on how to conduct supportive supervision; building-in meetings during which challenges identified can be shared and joint solutions found; using a supportive supervision checklist to help make the process more efficient; and ensuring reporting mechanisms on the outcomes of the supportive supervision activities immediately following the supportive supervision has taken place.

Micro Planning

The micro planning process, in which the district health teams and health facility staff take up local responsibility for the implementation of the CHDs is another factor for success. It contributes to local ownership of CHDs, and ensures that district teams are really in the “driving seat” for the planning, especially there where the districts are able to make tailor made plans.

Capacity development

Repeated capacity development was mentioned to be a major success factor. The strength of repeating the training prior to the CHDs was considered especially helpful for cadre with relatively limited training such as nursing aides or community health workers, but also helpful for new staff.

Research and bottleneck analysis

The LQAS and PEC surveys are helpful in understanding the reasons why people are not making use of CHDs, such as not being well informed about the need for the intervention, or the existence of CHDs, long waiting time, long distance, etc. This can then subsequently be addressed. However, not in all countries such research is undertaken that helps identify bottlenecks from the demand side. Furthermore, in some countries, such as Tanzania, bottleneck analyses are undertaken that can help to identify supply side factors in low performing districts.

Moving from week to month

In Tanzania the challenge that health staff of regular health services are often overstretched by the additional CHDs activities has been much reduced by the introduction of the Child Health Nutrition Month. Having the CHDs stretched out over four instead of one week has diminished the tension for health staff and for parents/caretakers who mentioned that the waiting time was much diminished compared to the past. There are voices within the department of reproductive health to install 3 monthly Child Health contact points for children of the age group 2 to 5 years; this links better to new guidelines for weighing children between 2 and 5 years on a

quarterly basis to keep track of their nutritional status. VAS and albendazol distribution can be integrated in the activity package for these 3 month contact points. This would ensure a better fit between organizational capacity of the health system and the daily workload, and therewith help Tanzania towards integrating CHDs into the regular services.

Social mobilization

An important success-factor in increasing coverage is social mobilization. MOHs with support of UNICEF have been in particular successful in finding new partners for social mobilization including telecom companies, but also religious and community leaders as well as other ministries. Such collaboration assists with sharing resources including for supportive supervision activities, with having a wider network for social mobilization and dissemination of information including through mobile phones, and enhanced referral mechanisms. Involvement of such partners also helps to bolster ownership, especially at community level.

Tracing those missing services

Another factor for success was the finding of those who are missing services (children who do not come for vaccinations or have missed some, children who are not attending community MUAC screening and pregnant women who do not attend ANC). In doing so, CHDs contribute to higher attendance at integrated health and nutrition services during the CHDs and by referring this group to health facilities. In **Sierra Leone**, data indicated that the vast majority of pregnant women identified during the CHDs who had missed ANC visits, attended ANC at the first opportunity.

Integrating CHDs in the health system

In **Sierra Leone** in an effort to further institutional sustainability, piloting of VAS and the provision albendazole through a package of services at 6 monthly contact point is being considered, following positive evidence in a pilot undertaken by MoH and HKI. Also in **Tanzania** discussion takes place about integration of CHD within the regular services versus institutionalizing the campaign. Nutritional experts indicate thereby to be more in favour of an institutionalized campaign approach, while reproductive health experts are more in favour of integration.

Key recommendations

The key recommendations below that follow from the findings, and which can help strengthen the Enhanced Child Health Days supported by a follow on grant from Canada covering 15 countries in Sub Saharan Africa, are as follows:

For UNICEF New York and Regional Offices

Continuation CHDs like activities in fragile settings/weak health system settings

- In the context of the new round of funding for the Enhanced Child Health Days (ECHD) grant from Canada, **continue providing support for Child Health Day type of activities in contexts where regular service delivery is weak or in fragile settings**, and to bridge interventions **while the health system is being strengthened**.

Advocacy for integration into Health system

- In those countries that are supported by the ECHD grant **where the regular health services allow** this, provide support for the development and use of **advocacy packages to advocate for**
 - a. **Availability of Vitamin A and albendazole** (free of charge) **through primary health care systems** for all children under five;
 - b. **Inclusion of VAS and deworming within national budgets** for all children under five, and
 - c. **A separate budget for especially vulnerable children and those missing services** for which additional efforts are needed and for which micro planning, outreach, community participation and supportive supervision would be required.
 - d. Advocate for strengthening **involvement of community leaders and community health workers in micro-planning** at health facility and community level and in jointly conduct bottleneck analysis.

Capacity building

- In the context of the ECHD grant, provide capacity building support for
 - a. **strengthening routine supply systems** to ensure that Vitamin A, albendazole and other essentials, can be provided through this to both regular services and campaigns.
 - b. Strengthening **forecasting and supplies management capacity** at decentralized levels.
 - c. Facilitate technical support to transitioning countries that are planning to **integrate campaign data into HMIS**, with real time data collection systems from the community level and up. This would facilitate to better track which children of what age and what sex have received what service, and provide better data for decision making.
 - d. Support UNICEF Country Office in their efforts to build capacity around **evidence-informed decision making** during for example country data review meetings
 - e. Facilitate technical support for independent monitoring and/ or PECS after each CHD.
 - f. When CHDs are required, provide technical support and advocate for moving towards integration in the medium to long term.
 - g. Provide support for tracking costs of ECHD on the basis of pointers provided by this evaluation
 - h. Provide technical support for documenting how technical support has strengthened systems to improve planning, centralized purchase of supplies and leadership by Ministries of Health.

Gender Transformative planning

- Provide guidance on gender transformative planning⁷ within the CHDs, this as there is evidence that this could contribute to improved health outcomes and assist with

⁷ Gender transformative planning implies transforming unequal gender relations towards a situation whereby power, control of resources, and decision making are shared, which also works towards achieving positive development outcomes. Adapted from Gupta et al. "Integrating gender into HIV/AIDS Programs: review Paper for expert Consultation, 3–5 June 2002," Geneva

addressing gender related barriers during mobilization; in accessing and demand for services.

For Country Offices

Capacity building

- Within the context of the ECHD grant, utilize the two yearly capacity building activities in preparation for the CHDs to strengthen the overall system, including for strengthening the capacity of Health Facility Staff and Community Health Workers to interactively provide information, instead of the one-way communication currently provided. This could potentially also assist with enhancing health promotion around stunting beyond CHDs.
- Provide technical support for an evidence-informed communication plan on how to best go about collaboration with different partners around social mobilization, outreach, logistics, human resources and supplies.
- Provide technical support to conduct equity assessments and/or bottleneck analysis around under- served populations and low performing areas focused both on the demand and the supply sides that could further inform such evidence-informed communication plan.
- Strengthen supportive supervision through
 - a. regularly providing orientation and or training on supportive supervision at different levels;
 - b. using a supportive checklist to help make the process more efficient;
 - c. ensuring sharing meetings and finding joint solution meetings; and
 - d. creating reporting mechanisms on the outcomes of the supportive supervision activities.

Advocacy

- Advocate that micro-planning:
 - a. Uses a **bottom-up** approach so that the micro-plans are tailor made and able to reach out to those not accessing the regular system;
 - b. In fragile states settings where bottom-up planning is not always feasible, take geographical diversity and population density into account in resource allocation.

1 Introduction

UNICEF has contracted the Royal Tropical Institute/KIT to conduct an external evaluation of the Child Health Day activities implemented in 13 different sub-Saharan African countries in different stages and contexts under the "Scaling Up Nutrition and Immunization" project. This project was initially scheduled to cover the period March 2013 – March 2016, but was later extended to the end of December 2016.

The evaluation started in September 2015 with an inception phase during which the Theory of Change of the Child Health Days was reconstructed and an inception report developed which included the evaluation methodology, the evaluation framework, case study country sampling, plans for data collection, a work plan and timeline, and contextual information on the CHDs. Data collection in the selected case study countries, being Tanzania (June 2016), Madagascar (October 2016) and Sierra Leone (November 2016) coincided with ongoing Child Health Days / Child Health Weeks in the respective countries. Preliminary case study findings were validated by key stakeholders at the end of each data collection period. In addition, preliminary findings were also discussed with UNICEF New York and Regional Advisors from ESARO/WCARO through Skype. Alongside the case studies, large scale data bases data was collected for all thirteen countries for secondary data analysis and modelling purposes. In this report, the case study (2016 data) and the secondary data analysis and modelling findings (up to the end of 2015) have been brought together in an integrated manner. The recommendations have been developed in a participatory fashion with experts of UNICEF New York and Regional Advisors from ESARO.

The evaluation was conducted by an experienced multidisciplinary team from KIT which included expertise around impact evaluations; nutrition; primary health care; public health; epidemiology; statistics and modelling. In addition to this core team, national experts were selected in each of the case study countries to help contextualize the information, collect information upfront, as well as to assist with making logistical arrangements. For more information on the team, please see annex III.

This final draft report brings together all evaluation results, as well as feedback obtained from UNICEF New York, ESARO, WCARO and country offices.

2 Background and context

2.1 Child health in Africa

Between 1990 and 2015, mortality rates among children under five years of age almost halved in Africa. In spite of this success, of the 16000 children under five who die on a daily basis, 8.000 do so in Africa⁸⁹. In 2015 Africa was the only region with countries with under-five mortality rates above 100 death per 1000 live births, being Angola (157); Chad (139); Somalia (137); Sierra Leone (120); Mali (115) and Nigeria (109).¹⁰¹¹

Pneumonia, malaria and diarrhoea are major causes for this under-five child mortality. 34% of all under-five death in Africa takes place at the neonatal stage¹².

While in other parts of the world stunting - low height for age - has reduced, this is not the case in Africa. The minimal success in stunting reduction has been offset by population growth, so the absolute number of children who are too short for their age has significantly increased. This while stunting has a negative effect on being successful in school or living a healthy or productive life. Stunting is also associated with diabetes and other non-communicable diseases. The poorest are thereby the most affected¹³.

That child health and nutrition is a problem that needs attention is acknowledged by national governments. With exception of the Central African Republic, all other countries have joined the Scaling Up Nutrition (SUN) initiative. The Assembly of Health Ministers of the Economic Community of West African States (ECOWAS) has called its member states to move towards universal coverage for VAS for children between 6 – 59 months of age and to include VAS in the Health Information System. ECOWAS also called its member states to institutionalize twice-yearly child health events and coordinate these with other programmes that can be integrated in these child health events¹⁴. The ECOWAS resolution builds upon a pan-African consultation organized by the Global Alliance for Vitamin A (GAVA) in 2009 during which governments pledged to consider institutionalization of Vitamin A supplementation (VAS) into their national health system¹⁵.

2.2 Child Health Days

Against this background, one of UNICEF's core objectives is to improve the health and nutrition of children in order to enhance child survival and development. This is done through activities

⁸ United Nations Inter-agency Group for Child Mortality Estimation (UN IGME) (2015). *Levels and Trends in Child Mortality 2015*". https://data.unicef.org/wp-content/uploads/2015/12/IGME-report-2015-child-mortality-final_236.pdf

⁹ WHO Global observatory data http://www.who.int/gho/child_health/mortality/mortality_under_five_text/en/

¹⁰ World Bank <http://data.worldbank.org/indicator/SH.DYN.MORT>

¹¹ WHO Global observatory data http://www.who.int/gho/child_health/mortality/mortality_under_five_text/en/

¹² United Nations Inter-agency Group for Child Mortality Estimation (UN IGME) (2015). *Levels and Trends in Child Mortality 2015*". https://data.unicef.org/wp-content/uploads/2015/12/IGME-report-2015-child-mortality-final_236.pdf

¹³ United Nations Inter-agency Group for Child Mortality Estimation (UN IGME) (2015). *Levels and Trends in Child Mortality 2015*". https://data.unicef.org/wp-content/uploads/2015/12/IGME-report-2015-child-mortality-final_236.pdf

¹⁴ Economic Community of West African States Assembly of Health Ministers (2009). *Resolution on Action for Nutrition. Yamoussoukro, Cote D'Ivoire*: ECOWAS: 2009. http://www.fao.org/fileadmin/user_upload/wa_workshop/docs/AHM_2009_-_Resolution_on_Nutrition_-_20_July_09_FINAL.pdf

¹⁵ GAVA (2009). *Capitalizing on the integrated approach of child health days to increase vitamin A supplementation coverage to improve child survival and achieve Millennium Development Goal 4 in sub-Saharan Africa*. Meeting consensus statement 2009. http://www.hki.org/file/upload/HKIrelease_GAVA_statement_032309.pdf

such as immunization; nutrition-specific high impact interventions; water, sanitation and hygiene interventions (WASH); distribution of insecticide-treated bed nets (ITNs) etc. Where communities and their children are difficult to reach due to geographic conditions and/or weak health systems, child health days (CHDs) are organized usually twice a year. Through these CHDs a mixture of interventions is delivered, consisting of a minimum of 2 but more often 3 to 4 interventions at a time. The range of possible interventions includes VAS, deworming, immunization, but also WASH, nutritional screening for acute malnutrition (MUAC) and referral to therapeutic feeding centres. The aim of CHDs is to complement the delivery of regular primary health care services when access to these services is impaired by local conditions. The ultimate aim of CHDs is to reduce child morbidity and mortality.

The "Scaling up Nutrition and Immunization" project funded by Global Affairs Canada (GAC) - formerly the Department of Foreign Affairs, Trade and Development - enables UNICEF to strengthen investment in CHDs by providing in-depth technical support and resources to 13 countries in sub-Saharan Africa (Figure 1) to implement innovative approaches in the positioning, delivery and sustainability of CHDs.

At strategic level the project aims to support national governments SUN countries in their efforts to deliver integrated nutrition, immunisation and other health interventions to their populations; as well as support the SUN movement through proactive advocacy and communications at community, national, regional and global levels to increase awareness for nutrition, and its broader development agenda.

At operational level the project aims to (i) support the inclusion of CHD activities and child survival and development within countries' health and nutrition strategies; (ii) tailor approaches for the institutionalisation of CHD activities into health systems; (iii) foster innovation in the scale up of nutrition, immunisation and other health interventions through CHDs; (iv) maintain high-coverage of current child survival and nutrition interventions, and scale up of other priority nutrition interventions, as appropriate; (v) scale-up efforts to reach the poorest and most vulnerable populations with key child survival and development interventions; and (vi) promote synergies between child survival and development interventions. The project focuses therefore on enhancing national ownership upstream (objectives (i) and (ii)) as well as downstream through increasing scaling up and coverage (objectives (iii) and (iv)).

Figure 1: Countries included in the "Scaling-up Nutrition and Immunization" project



2.3 Purpose, objectives and scope of the evaluation

This external evaluation has the following purposes: 1) to inform program and policy decisions, including through a UNICEF management response, and 2) to ensure accountability against the expected results.

The **objectives** of the evaluation are:

- 1) To determine to what extent the project has contributed to increased coverage and effectiveness of the CHDs, and how this was realized (**accountability**);
- 2) To enable evidence-based and policy decision making, to gather evidence on what works well, and through which mechanisms (**Learning**).

Specific objectives of the evaluation are:

To assess to what extent and how the project was able to:

1. Increase coverage of vitamin A supplementation; and measles and DTP immunizations

- (or Pentavalent, where relevant);
2. Improve successful planning, procurement, logistics, and delivery by national and sub-national governments as result of (technical) support by the programme;
 3. Develop tested innovative approaches that maximize impact, including approaches that intensify efforts to reach underserved populations and ensure the right package of essential child health and nutrition services is delivered in different environments;
 4. Improve integration of child nutrition and immunization services and linkages between outreach and treatment services; and
 5. Ensure continuous uninterrupted delivery of interventions in fragile states while ensuring lessons are learned on how best to engage in these environments;

and;

To provide findings, conclusions, recommendations and lessons learned.

The evaluation thereby also had to look at the extent to which gender, poverty, child development and well-being (including hunger and disease) disparities are integrated in the design, activities and the monitoring and evaluation framework of the project.

The **scope** of the evaluation are CHD activities across the 13 target countries (five fragile states; three early transitioning countries and five late transitioning countries) over the period March 2013 - December 2016.

The main **audiences** of the evaluation report are the CHD country governments, GAC as the main supporting partner, UNICEF country, regional and HQ office staff and development partners.

2.4 Background to and rationale of CHD interventions – desk review

2.4.1. Co-delivered services

Since the late 90's CHDs have been implemented in a number of sub-Saharan African countries (and other parts of the world) with support from UNICEF and other development partners. A review on CHDs conducted in the period 1999-2009 (UNICEF 2011) indicated that in 2009 all but two countries (South Africa and Gabon) in Sub-Saharan Africa implemented CHDs (or another integrated event).¹⁶ The same review showed that around 25 – 35 per cent of the CHDs in the period 2003-2009 delivered a combination of two services, while the proportion that included five or more services increased from 10 per cent in 2005 to 30 per cent in 2009.¹⁷ The mean number of co-delivered services was four in 2009, whereby VAS, deworming and immunization were the most common.

2.4.2 CHDs and coverage

An evaluation carried out in six countries (UNICEF 2008) showed that VAS, deworming and measles immunization often achieved high coverage, while other interventions, particularly health/nutrition education and provision/ promotion of insecticide-treated mosquito nets, achieved lower coverage (that is reaching a lower number of beneficiaries). The evaluation also found that certain services like health/nutrition education did not receive adequate attention and that such education was rarely conducted.¹⁸ Analysis from population-based sample

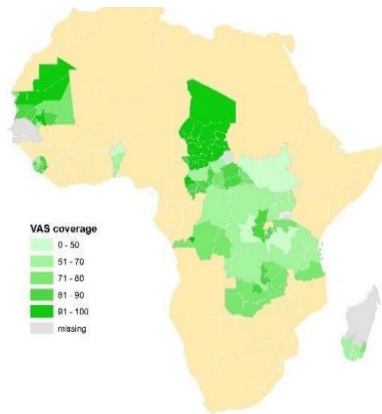
¹⁶UNICEF 2011. *Child Health Days 1999–2009: Key Achievements and the Way Forward, A report prepared for the UNICEF Joint Working Group on Child Health Days UNICEF Headquarters*; New York July 2011

¹⁷See footnote 14

¹⁸UNICEF (2008). *Multi-Country Evaluation of Child Health Days in Eastern and Southern Africa*; 2008 United Nations Children's Fund Eastern and Southern Africa Regional Office

surveys and administrative records, in the same six countries, revealed that CHDs contributed to improving measles immunization coverage by about 10 percentage points and provided an opportunity for a second dose. CHDs also contributed to high coverage of VAS and deworming, improved access to insecticide-treated nets and contributed to reaching and sustaining a high

Figure 2: VAS coverage among children 6-59 months (DHS/MICS 210-214)



enough proportion of the child population to achieve herd immunity¹⁹ and prevent measles transmission. CHDs were found to be an effective strategy for increasing coverage of high-impact child health and nutrition interventions²⁰. In view of these and similar positive findings on the effectiveness of CHDs in terms of increasing coverage, UNICEF and other development partners (MDG Health Alliance, 2014) have advocated for an increase of the annual number of CHDs in the four countries in which nearly 40 percent of all under five deaths in 2012 occurred, including Uganda and Ethiopia in sub-Saharan Africa.²¹ Interestingly, the calculation of children's deaths prevented shows that some of the biggest gains can be achieved through interventions which are not commonly part of CHDs such as the provision of ORS and zinc (79,000 deaths prevented) and ready to use supplementary food

for moderately malnourished children (17,000 deaths prevented)

2.4.3 Rationale and effectiveness of services delivered at CHDs

The rationale and potential effectiveness of common CHD interventions is summarized in the inception report. Evidence based effective interventions include micro-nutrient supplementation (vitamin A, zinc and IFA for pregnant women), immunizations in particular also of measles and against the rotavirus, deworming, screening for acute malnutrition, growth monitoring and promotion (GMP) and Behavioural Change Communication (BC).

2.4.4 Improving equity

The literature presents a mixed picture on the positive effects of CHDs on improving coverage of the most deprived/ hardest to reach populations, although most demonstrate that CHDs contribute to equitable coverage. The six country evaluation found that intervention coverage increased more in countries and subnational regions which started at lower levels of coverage, suggesting improved equity²². However, the same evaluation also mentions that data from Demographic and Health Surveys (DHS) in most countries suggest CHDs are less effective at reaching children aged six to twelve months than older children, children in rural areas (as compared to urban areas) and children of mothers with no primary education (who are likely to be poorer).

Findings from the 2003-2009 analysis of CHDs and other events showed an apparent improvement in coverage with increasing household wealth with the gap in coverage between the wealthiest and the poorest appearing to be larger in cases of non-CHD integrated events (10 percentage points) as compared with CHDs (2.5 percentage points). An analysis of data

¹⁹For measles herd immunity 90-95% coverage of the **whole population** is needed. The aim is therefore to immunize all children under five.

²⁰Nicholas P. Oliphant, et al. (2010). *The contribution of Child Health Days to improving coverage of periodic interventions in six African countries*; Food and Nutrition Bulletin, vol. 31, no. 3 (supplement) © 2010, The United Nations University

²¹The MDG Health Alliance (2014). *No more missed MD4 opportunities: Optimizing existing health platforms for child survival*; 2014

²²Nicholas P. Oliphant, et al. (2010). *The contribution of Child Health Days to improving coverage of periodic interventions in six African countries*; Food and Nutrition Bulletin, vol. 31, no. 3 (supplement) © 2010, The United Nations University

from 25 demographic and health surveys (DHS) conducted in 20 countries since 2002 showed that in several countries as well as in pooled analyses, poverty-related inequalities in 3-dose OPV coverage were significantly lower among children who had participated in an integrated event over the 2 years before a DHS than among other children. The overall conclusion was that integrated events are an important approach to ensuring equitable access to immunization services and possibly other health services²³. However, a coverage survey in Ghana revealed that some 47 per cent of children in the highest wealth quintile participated in the event, compared to 31 per cent of children from the poorest households. Participation also increased when mothers had more education (49 per cent of children whose mother had secondary education or higher versus 38 per cent for no education). In Malawi, in one survey participation was significantly higher among children from wealthier households but the absolute difference in participation rates between the wealthiest versus the poorest children was only 5 per cent (statistical significance was driven by a sample size of almost 23,000 children), but in the other there were no important differences across any of the variables: child's sex, wealth quintiles or maternal education. Neither the survey in Ghana nor in Malawi found significant differences in coverage between girls and boys. An analysis of the coverage of the Mother and Child Health Week (MCHW) in Sierra Leone showed that the MCHW in May 2013 reached 90% of children with equitable coverage (i.e. with no significant differences by age group, sex, religion or occupation²⁴. Results confirmed a post-event coverage survey carried out in 2011 in the same country which found that in 2011 VAS coverage was high (nearly 92%) and equitable among all districts and between age groups (98.5% for infants ages 6–11 months and 90.5% for children ages 12–59 months)²⁵.

A nationwide cross-sectional survey in Madagascar to estimate measles vaccination coverage, nationally, and in districts with and without ITN integration showed that integration of ITN distribution with a vaccination campaign might improve measles vaccination coverage among the poor and in doing so improving protection of the most difficult and hard to reach children.²⁶ However, another recently published analysis of 14 mass distribution campaign surveys in five countries in Sub-Saharan Africa including Senegal, South Sudan and Uganda revealed that the most important factor for receipt of at least one ITN from the campaign was a successful registration process (reaching also the most difficult to reach households). The distribution approach (integrated versus stand-alone) did not show a systematic impact on registration or owning any ITN.²⁷

²³Stéphane HELLERINGER, Jalaa Abdelwahab, and Maya Vandenent (2014). *Polio Supplementary Immunization Activities and Equity in Access to Vaccination: Evidence from the Demographic and Health Surveys*; JID 2014:210 (Suppl 1) p S531-S539

²⁴Fatmata F. Sesaya, et al (2014). *High coverage of vitamin A supplementation and measles vaccination during an integrated Maternal and Child Health Week in Sierra Leone*; Int Health Advance Access, doi:10.1093/inthealth/ihu073

²⁵Mary H Hodges et al. (2013). *High and equitable mass vitamin A supplementation coverage in Sierra Leone: a post-event coverage survey*. *Global Health Science and Practice*, doi 10.9745/GHSP-D-12-00005

²⁶Goodson, JL., Kulkarni, MA., Vandenent, Eng JL., Wannemuehler, KA., Cotte, AH., Desrochers, ME., et al.(2012). "Improved equity in measles vaccination from integrating insecticide-treated bednets in a vaccination campaign, Madagascar." *Tropical Medicine and International Health* 17, no.4: 430-437.

²⁷Celine Zegers de Bey et al. *Multi-country comparison of delivery strategies for mass campaigns to achieve universal coverage with insecticide-treated nets: what works best?* *Malaria Journal* 2016, 5:58; DOI: 10.1186/s12936-016-1108-x

3. The Reconstructed Theory of Change

Based on the literature review, a desk review of key programme documents^{28 29 30} as well as interviews and discussions with UNICEF Head Quarters and Regional staff, the evaluation team reconstructed a Theory of Change (TOC) during the inception phase. This as ToCs are helpful to analyse programmes and policies that have multiple strategies and activities at different levels, with different variables and assumptions, taking into account the contexts in which programmes are implemented. The advantages of a TOC over a Logical Model (LM) for evaluating programmes is that a LM list programme components, outcomes, inputs and activities, but does not explain how and why the desired change was expected to come about, while the HOW and WHY are central in TOCs.

3.1 Outcomes/Results

The ultimate outcome (impact) of the "Scaling Up Nutrition and Immunization" programme is decreased child mortality and morbidity (a) which corresponds to ultimate outcome in the global performance monitoring framework (GPMF): increased and sustained well-being and survival of children. We have split the (only) intermediate outcome of the GPMF in (i) maintained high coverage of nutrition and health services in children under five and; (ii) enhanced healthy nutritional practices children under five. In our opinion these are long(er) term outcomes (changes which will/ ought to continue beyond the life-span of the programme). These changes will be the result of a number of medium term outcomes realized over the course of the implementation of the programme. Four of the medium term results are the same in all 13 countries, while four others are different in fragile states, early transitioning and late transitioning countries. The shorter term (immediate) outcomes refer to the intended changes at the level of the main stakeholders (children aged 0-59 months, parents and health providers) and at system level (health system and governmental institutions (the latter not in fragile states)).³¹ The effectiveness of attaining immediate outcomes is being monitored through corresponding outputs. It is important to highlight that a key feature of the effectiveness is integration of service delivery: (i) integration of nutrition and other health services during CHDs; (ii) integrated delivery of these services at PHC level and (iii) integration of CHDs in the routine service delivery (not in fragile states). Another key feature related to both effectiveness and sustainability is the integration into policy-making and management, whereby decisions and support functions are brought together across different parts of the health system, and where the Ministry of Health would have the overall responsibility for the health status of the under-fives in the country in an integrated manner.

3.2 Assumptions

We have formulated twelve assumption in relation to the ToC. Most assumptions have been distilled from the approach and activities as elaborated in the proposal. For each of the shorter term outcomes the (numbers of the) underlying assumptions are listed in the arrows linking the strategies and outcomes. The assumptions are the following:

Assumption 1: Improving the coverage of immunization, nutrition and other child survival interventions is effective for decreasing the multiple risks children are facing for both mortality and morbidity.

Assumption 2: In fragile states and countries in transition, where capacity for basic primary

²⁸UNICEF (2012). *Revised proposal submitted to the Canadian International Development Agency (CIDA), Scaling Up Nutrition and Immunisation Through Child Health Days In Sub-Saharan Africa*; Programme Division UNICEF New York, December 2012

²⁹Global Performance Monitoring Framework for CHDs grant

³⁰UNICEF (2013). *Scaling Up Nutrition and Immunization. Second Inception Report to the Canadian International Development Agency (CIDA), Grant Reference Number: PO 7059509*; Submitted by UNICEF Headquarters, June 2013

³¹The effectiveness of attaining immediate outcomes is being monitored by reviewing corresponding outputs.

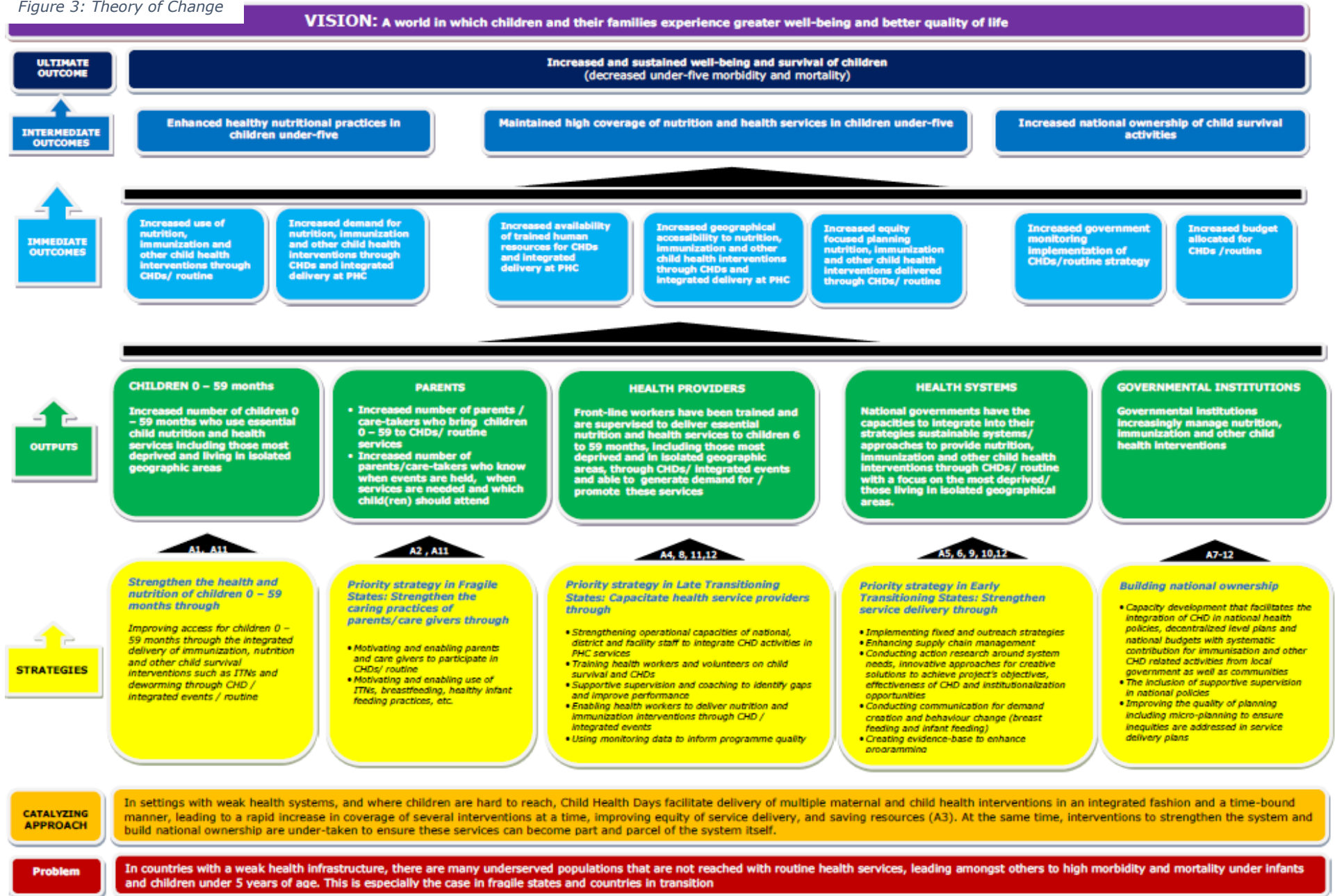
care services is weak and as such integrated service delivery of child survival interventions in the existing health system is lacking, CHDs (or alternative integrated events) provide an effective alternative.

- Assumption 3: The co-delivery of immunization, nutrition and other child survival interventions such as ITNs and deworming is best done through the integrated delivery of services at Primary Care level
- Assumption 4: Child Health Days contribute to system strengthening in transitioning states by focusing on enhancing logistic supply systems and creating national ownership
- Assumption 5: The MoRES approach facilitates reaching the most deprived and overcoming bottlenecks to service delivery
- Assumption 6: Reach Every District (RED) approach is effective in reaching the hard to reach age-groups and underserved areas
- Assumption 7: Transitioning states will develop and update national health plans and strategies
- Assumption 8: Supportive supervision is feasible in fragile and transitioning states
- Assumption 9: Action research will be used to optimize the effectiveness of CHDs and institutionalization opportunities
- Assumption 10: Vulnerable children (child headed households, children not living with their parents, orphans, etc.) have equal access to CHDs (through the use of the MoRES approach as per the proposal)
- Assumption 11: Monitoring data of CHD and other Child Survival Interventions are collected and usable.
- Assumption 12: Contextual factors (demographic, geographical, socio-economic, health system) influence use of CHD and coverage

The TOC functions as an analysis framework in tandem with the evaluation framework, and has been also been used to fine-tune the questions and sub-questions in the evaluation framework for the three country case-studies.

The reconstructed TOC is visualized in figure 3. The numbers in the visual relate to the underlying assumptions.

Figure 3: Theory of Change



4 Methodology

4.1 Introduction

In line with the evaluation proposal, the evaluation team ensured regular involvement of UNICEF New York, UNICEF ESARO and WCARO, several UNICEF country offices, different stakeholders and target group representatives throughout the evaluation process. This to enhance transparency, validity, reliability and usability of the evaluation results. Participation was achieved through regular emails and Skype calls with UNICEF New York and Regional Offices, and by working closely with the country offices in Tanzania, Madagascar and Sierra Leone for the preparation, implementation and validation of the case studies. Involvement of national consultants furthermore assisted in ensuring contextualisation of each case study.

The evaluation approach has been developed by the core evaluation team members, closely informed by the Terms of Reference and project documents, while taking principles such as independence; objectivity; transparency; validity; reliability; partnership and usability as basis.

4.2 Evaluation design

The goal of the evaluation was not only to appreciate *if* the intervention worked, but also how it worked: why, where and for whom. For this, a “mixed methods approach” approach was used combining quantitative (to look amongst others at increased coverage and effectiveness) and qualitative methods (to gather evidence on what worked and why).

The evaluation was divided into three phases, namely an inception, data collection and analysis, and product delivery phase.

4.2.1 Phase 1 – Inception phase

In phase 1, the evaluation team conducted a desk review; interacted and consulted with UNICEF regarding additional data needs; reconstructed the Theory of Change described earlier; fine-tuned the evaluation framework; developed a sampling plan for the case study countries; compiled available data for data-analysis and proposed options for large scale secondary data analysis; and prepared a detailed evaluation work plan, protocol and timeline.

4.2.1.1 Evaluation framework

The draft evaluation framework submitted in the original proposal was further fine-tuned. The evaluation framework builds upon the five well established OECD/DAC evaluation criteria (relevance, effectiveness, efficiency, impact and sustainability). The evaluation framework was set up to assess:

At *strategic* level:

- 1) The extent to which (i) the objectives of the project were consistent with beneficiaries’ requirements, with country policies, global priorities and donors’ policies (relevance) and (ii) equity including gender equality and reaching the hard to reach (RED) was mainstreamed (appropriateness)³²

At *operational* level:

- 2) Achieved coverage (also in terms of equity) of access to nutrition and immunization services in particular of vitamin A supplementation and immunizations (measles, DTP),
- 3) Level of operational efficiency (including timely support to national and sub-national governments in planning and technical support, continued delivery of interventions –

³²UNICEF’s innovative approach to the design, management and monitoring of programmes known as MoRES (the Monitoring Results for Equity System) is one of the guiding principles UNICEF’s current Strategic Plan (2014-2017) and has been / is being applied in programmes around the globe. Consequently, mainstreaming equity can be labelled as an appropriate strategy.

particularly in fragile states, monitoring and adequate adjustment, specific bottlenecks and/or enhancing factors during implementation) and coordination and complementarity (between stakeholders and with governments)

- 4) Results in terms of direct effects at beneficiary level (increased use of nutrition, immunization and other child health interventions through CHDs/ routine) that could be attributed to the program, including innovative approaches aimed at maximizing coverage and delivery of the right package (effectiveness in achieving short and medium term outcomes) and the extent to which positive and negative changes were produced by the project, directly, indirectly, intended or unintended such as enhanced nutritional practices in children under five (effectiveness in achieving long term outcomes)
- 5) Long-term benefits, including national ownership of child survival activities, the improvement in the integration of child nutrition and immunization interventions as well as strengthening of linkages between outreach and treatment services, capacity building of health providers and budget/ resource allocation for CHDs/ routine (sustainability).

For each of the expected results an inventory of **good practices** and **lessons learned** was compiled to inform evidence based decision making.

4.2.1.2 Sampling case study countries

A purposeful sampling frame was developed to help select the country case studies. Subsequently, three case study countries were purposefully selected – in close consultation with the UNICEF designated project manager, and UNICEF ESARO and WCARO - based on (i) monitoring data collected by the UNICEF offices in the thirteen countries (PMF data); (ii) preliminary findings from the quantitative analyses on coverage and equity indicators and; (iii) qualitative contextual data obtained through interviews by Skype with UNICEF Regional and Country Office staff, as well as desk review.

Criteria for case study country selection included:

- Representation of a fragile, a late transitioning, and an early transitioning states. This classification used by the programme relates to the expected ability of countries to achieve institutionalization of CHDs activities within existing health systems and the level of national ownership for this during the project lifecycle. It is foreseen that late transitioning countries will start to transition within the 5 year project life-cycle, and early transitioning counties transition within 1 to 2 years of the start of the project cycle.
- Representation of both the West Central Africa region, and the East South Africa region;
- Duration of implementation CHDs (instead of i.e. Polio NID days);
- The extent to which geographical coverage equity has been achieved
- Partnerships and collaborative mechanism;
- Opportunities from learning from success and innovation;
- Outcome results related to the coverage of VAS; coverage of immunization; ITN bed net use; exclusive breastfeeding;
- Logistical considerations (timing of CHDs; ability of UNICEF Country Office to provide support; feasibility (safety and time to be spent) to travel to the CHDs locations.

This resulted in the following selection:

- Fragile state, ESAR: Madagascar
- Late transitioning, WCAR: Sierra Leone
- Early transitioning, ESAR: Tanzania

Please see annex IV for an overview of how each of the 13 countries score against the criteria above.

4.2.1.3 Database compilation

In consultation with UNICEF HQ and country offices we compiled a comprehensive database of VAS in infants 6-11 months, children 12-59 months and overall, as well immunisation with the first dose of measles containing vaccine (MCV1) and with 3 consecutive doses of the Diphtheria-Pertussis-Tetanus vaccine (DTP3) for the 13 countries included in this evaluation. Our database included:

- Yearly data on measles, diphtheria, pertussis and tetanus caseloads (number of incident cases) obtained from the WHO vaccine-preventable diseases: monitoring system 2016 global summary³³, by country
- Vitamin A deficiency data according to latest available nationally representative surveys, as compiled in the review by Wirth et al (2017)³⁴
- Yearly routine (health facility) administrative data and campaign records for MCV1 and DTP3 and VAS, for the years between 2010 and 2015, by country, at the lowest available administrative level (including respective estimated population target denominators). These were obtained by reaching out to all country offices, with support and facilitation from UNICEF HQ and Regional Offices
- Independent estimates of national level population denominators (surviving infants), for the years between 2010 and 2015, by country, obtained from the UN DESA population prospects (2015 revision)³⁵
- WHO/UNICEF Estimates for Immunization Coverage (WUENIC) of MCV1 and DTP3 coverage, for all years between 2010 and 2015, by country³⁶ and estimates of VAS coverage by year and by round (1 and 2) provided by UNICEF Data and Analytics³⁷
- Immunisation and VAS coverage data as estimated by nationally representative surveys. This included: data reported from MICS and DHS surveys at lowest administrative level reported in publicly available study reports; all data from Post Event Coverage (PEC) surveys or Lot Quality Assurance Surveys (LQAS) which we could access in the public domain or that was shared by individual country teams (Benin and Madagascar LQAS 2015, Senegal PECS 2011, Sierra Leone PECS 2011, 2012 and 2015, Tanzania PECS 2010 and DRC PECS 2012); other estimates reported online by WHO Immunisation Monitoring and Surveillance data³⁸

In addition we compiled a dataset to analyse determinants of immunisation and VAS coverage at individual level based on data from the 2015 Tanzania and Senegal DHS surveys in order to analyse the relationship between non-vaccination and non-supplementation status of children and determinants of vulnerability UNICEF childhood vulnerability framework³⁹. We chose these two countries as they were the only two countries at the time of data compilation which had had a DHS/MICS survey in 2015, and could thus give the most updated insights into status quo at end-line.

From various publicly available sources shapefiles were downloaded for each country providing area data of the lowest available administrative level. The map data did not always match the routine administrative and campaign data. Small adjustments were necessary and a separate database for mapping was prepared. Where the administrative areas did not change over the years, maps were prepared for multiple years, otherwise only for 2015. For Zambia we were unable to obtain a shapefile with the 103 districts of 2014 and 2015 and data could not yet be

³³http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tsincidencemeasles.html

³⁴ Wirth JP, et al. *Vitamin A Supplementation Programs and Country-Level Evidence of Vitamin A Deficiency*. *Nutrients*. 2017 Feb 24;9(3). pii: E190. doi: 10.3390/nu9030190. <https://www.ncbi.nlm.nih.gov/pubmed/28245571>

³⁵ <https://esa.un.org/unpd/wpp/Download/Standard/Population/>

³⁶ http://www.who.int/immunization/monitoring_surveillance/data/en/

³⁷ <https://data.unicef.org/topic/nutrition/vitamin-a-deficiency/>

³⁸ http://www.who.int/immunization/monitoring_surveillance/data/en/

³⁹ https://data.unicef.org/wp-content/uploads/2015/12/Measuring-the-Determinants-of-Childhood-Vulnerability_Final-Report-5_8-LR-_172.pdf

mapped. For Burundi and CAR we received routine administrative data (HMIS) for DTP3 and MCV1 coverage at national level only. No HMIS data was received for Chad and Senegal.

4.2.1.4 Evaluability

As specified by the ToR, the evaluation team also looked at the evaluability of the programme during the inception phase. Evaluability thereby was taken as a systematic process to determine whether program evaluation is feasible and able to provide timely and relevant findings for policymakers. During the desk review we undertook such a systematic process, consisting of studying the program history, design and operation; assessing which actions took place in 2014 and 2015; reviewing data availability; assessing the likelihood that CHDs would reach their goals and objectives by the chosen strategy in each case study country; and assessing whether an evaluation would be feasible in practical terms (safety, transport, season, availability of local respondents etc.) so that timely relevant findings could be presented to stakeholders. Through this, we were able to conclude that it would be feasible to conduct the evaluation, and to deliver timely and relevant findings.

4.2.2 Phase 2: Data collection and analysis

During this phase, data was collected in the three respective case study countries. Following stakeholder mapping based on literature review, consultation with the national consultant and UNICEF country focal points, data collection schedules were made. Important stakeholders included governmental counterparts such as national and local Ministry of Health officials, development partners notably the WHO, Helen Keller International (HKI) and the Micronutrient Initiative (MI) and other GAVI partners as well as representatives from CIDA/ GAC/the Embassy of Canada. Other counterparts include training institutions and other donors (BMGF, WB) and other local and national NGOs. Data collection took place in Tanzania in June 2016, around the Child Health and Nutrition Month there, in Madagascar in October 2016, during and around the Mother and Child Health Week there, and in Sierra Leone in November 2016, again around the Child Health Week. The field visits took place during the preparation and implementation of CHDs event to minimize recall challenges. Data was collected at three levels: central, district and community level. In Tanzania and Sierra Leone three districts were visited, in Madagascar two districts. The sampling of the districts was purposeful based on different levels of success in terms of coverage, level of support received from UNICEF, rural and urban representation, and geographical accessibility (more central/more remote). Sampling and finalization of the itinerary was done in close consultation with UNICEF country focal points and with assistance of the national consultant. Prior to the start of the visit, the national consultant collected additional relevant documentation, including on other child health and nutrition activities, and prepared the ground-work for the district visits. In each of the case study countries, participation of UNICEF was welcomed in the start-up and end of visit workshops that were organized.

4.2.2.1 Tools for primary data collection

The tools for qualitative data collection for the case studies included:

- Topic guides for in-depth interviews (IDI) with key-informants at national level (UNICEF, MOH, development partners, other collaborators) and district level (service providers/MOH; NGOs, CBOs working on health and children's issues);
- Semi-structured interview questionnaires (SSQ) with (groups of) stakeholders (such as trainers and facility based health staff) which included also open ended questions
- Topic guides for focus group discussions (FGD) with various groups of primary beneficiaries (care-givers of children) and secondary beneficiaries (such as outreach workers or other health staff trained for/ participating in the CHDs including mobilizers, village health workers/members of village health committees and so on).

These tools were prepared based on the evaluation matrix and the reconstructed ToC. Because an important aspect of the evaluation is to define lessons learned, a recurrent issue was

reflecting on what goes well and why and what are challenges and ways to further improve outcomes. In line with the ToR, these tools have been included in annex VI.

4.2.2.2 Stakeholder involvement

Each country case study visit started and ended with a stakeholder meeting with participants selected by UNICEF and the evaluation team based on the mapping/ analysis. During the initial meeting the stakeholders discussed the evaluation methodology, central questions and issues to be looked at during the data collection, as well as potential lessons learned, good practices and practices which seem to work to a lesser extent as well as challenges. This helped the team to obtain a common vision and scope of the evaluation with the program team and its stakeholders.

The main aim of the stakeholder meeting at the end of each field visit was to share and validate preliminary findings, potential lessons learned, good practices and preliminary recommendations. Discussions, suggestions and comments provided during the presentations in each of the country case-studies helped to obtain deeper insight.

Representatives of the beneficiary target group (care-takers, parents, communities) were invited to participate in FGDs and interviews. This helped to obtain their perspectives on the CHD activities, potential changes they observed, and to contextualise the activities further. During interviews with project staff such as health staff, trainers and representatives of communities / community health committees, the most important domains of change were also discussed.

4.2.2.3 Qualitative respondent overview

The table below provides an overview of the respondents included in the three different case studies through a mixture of interviews and (focus) group discussions. A number of respondents were involved several times, namely as interview respondents but also through participating in the debriefing sessions that not only functioned to validate the data but also to collect new insights.

Table 1 Case study respondent overview

	Case study respondent overview							
	National level	District Level	Health Facility		Community			
	Respondents	Respondents	FGD/Interv	Respondents	FGD	Respondents	FGD	Parents Respondents
Tanzania	19	18	6 FGDs	29	6 FGDs	37	6 FGD	32
Madagascar	15	7	6 SSI	6	6 FGDs	36	6 FGD	36
Sierra Leone	12	15	5 SSI	5	6 FGDs	36	6 FGD	36
Total	46	40		40		109		104

4.2.2.4 Analysis

The case study notes and or tape recorded interviews/FGDs were all transcribed and coded on the basis of the questions in the evaluation framework, the ToC, as well as new emerging issues. The coded information was subsequently put in an Excel analysis frame. Relevant information of secondary qualitative research and reports was also included in this framework. The organized information was subsequently analysed per (sub)theme.

The qualitative data derived from the FGDs, interviews and workshops, helped to inform and complement quantitative data analysis and vice versa. This also facilitated data triangulation.

In order to determine whether coverage of VAS, measles and DTP immunisation increased we:

- Compared coverage (absolute number of doses given and rates per population) before and during the years of project support. The 2013 CHD annual progress report states that funds for the current grant were received in October 2013. We therefore compared figures in the “before” period defined the period from 2010 to 2013 S1 (First Semester) and “during” defined as the period 2013 S2 (Second semester) to 2015.
- Assessed whether participating countries were able to reach their predetermined coverage targets as recorded in the Project Monitoring Framework (PMF)
- Investigated why countries may not have reached their target (or by contrast have surpassed their target) by triangulating with other sources of data to determine possible causes.

To assess the extent to which underserved populations were reached we:

- Assessed whether participating countries were able to reach their predetermined geographical equity targets
- Investigated why countries may not have reached their target by mapping coverage estimates by district (or similar administrative level)
- Fitted individual level regressions to profile non-vaccinated children within the frame of the UNICEF vulnerability framework

4.2.2.5 Further validation of findings

In order to validate the findings from the case studies and the quantitative data analysis further, we obtained feedback from UNICEF New York, WCARO and ESARO and the three case study counties. This was done through the circulation of a draft report. Following that, the executive summary was shared with also non-case study country respondents for validation purposes. Also various Skype meetings, including with Evaluation Core Group members took place to discuss translation of findings into actionable recommendations and to obtain feedback on the final draft version of the report.

4.3 Human rights, gender and equity

Gender concerns were taken into account both in terms of access to services of boys and girls under 5 years of age, and at the caretaker/parent level. In addition, analysis was done against a framework developed by UNICEF⁴⁰ to see whether particular vulnerable children in terms of belonging to the lowest wealth quintiles, having parents with no formal education, not living with one’s biological parents, living in rural/urban areas, etc. had equal access to services delivered at CHDs, and equal health and development outcomes. In this sense, attention was given to rights as right to survival, development, and health.

4.4 Ethical considerations

This evaluation followed ethical standards for evaluation as documented in the UNEG Ethical Guidelines for Evaluation of March 2008. With respect to ethical standards, we adhered to the principles of respect for dignity and diversity, rights – especially compliance with codes for vulnerable groups - , confidentiality and avoidance of harm, including through the use of informed consent forms. By using informed consent forms, we ensured that respondents were well informed about the purpose of the evaluation, as well as that participation was truly voluntary, that they could stop the interview at any point in time and where under no obligation to answer all questions. The forms were translated in local languages to further ensure full understanding of the informed consent procedure. FGDs were also conducted in the local language.

⁴⁰ Idele, P.A. (UNICEF NY), et al. *Redefining "Vulnerable Child" in the Context of HIV/AIDS*. 2012 <http://paa2013.princeton.edu/papers/132002>

4.5 Limitations

The evaluation has the following limitations:

In all countries, CHD (likewise) activities have been implemented over a long period of time. Distilling what the exact effect is of the activities undertaken in the period covered by the evaluation – 2013 – mid 2016 – is not feasible due to likely spill-over effects of earlier efforts. Child Health Days and related capacity building activities take place in a setting where also other actors operate who amongst others provide support to health strengthening activities. In the absence of counterfactuals, it is not possible to indicate whether achievements realized are entirely the result of this programme, neither would that be likely. However, within the case study countries we have - as far as possible - mapped the relative contribution, and triangulated the case study country findings with the data base analysis.

The case studies were conducted in three countries only, this meant that for the other 10 countries the information obtained was much less in-depth and we had to rely on existing data and the insights of ESARO and WCARO staff. The case study countries were sampled purposefully while within the case study countries, the districts to be visited were also purposeful sampled. This meant that we looked at which countries could provide insight into innovation and lessons learned, as well as which districts could generate such insight. In consultation with UNICEF country offices, we included districts that were best case scenarios, but also districts that were facing challenges to optimise learning. Furthermore, each of the 13 countries is different in terms of systems and contexts, and therefore it is hard to generalize all findings for all these countries involved in the evaluation. We tried to address these limitation by triangulation with the quantitative data for all 13 countries, through sharing of executive summary with all countries for validation purposes; regular involvement/feedback from regional offices that have more in-depth information on all 13 countries, and through document review.

While much support was received from country and regional offices to bring data together, there are still data gaps. Campaign and HMIS data for 2016 could not be brought together in time to allow to be included in this report. Furthermore, as mentioned elsewhere in the report, the data quality and completeness of both campaign and HMIS varies and issues have been well documented (overestimated numerators and underestimated denominators contribute to inflated coverage estimates). Mitigation strategies have included the reliance on WHO and UNICEF official coverage estimates which make corrections of coverage estimates based on analyses of accuracy and completeness and triangulation with survey data.

While effort was made by UNICEF HQs and ESARO and WCARO to provide access to as many documents as possible through an online folder specially set up for this purpose, not all requested documents could be made available.

5 Findings

This section of the report focuses on the findings of the evaluation, and brings together the country case studies, the data base analysis and document and literature review. The evaluation framework has been used as an outline to describe the findings. We start with findings related to the relevance of the project, this is followed by sections on the effectiveness, the efficiency and the sustainability of the project.

5.1 Relevance

The evaluation question: ***To what extent is the initiative appropriate? (AI)*** is answered through four sub-questions –in line with the evaluation framework.

5.1.1 Are programme activities in line with the overall needs as expressed in relevant Government plans?

As mentioned in the background section of this report, mortality rates among children under five years of age have significantly reduced in the African region over the last decades. While in the 1990ies under five mortality in Africa was 160 per 1,000 live⁴¹, this reduced to 81 in 2015⁴². What is not changed however is that Africa keeps on having substantially higher under five mortality rates than any other regions in the world⁴³. **Sierra Leone's** under five-mortality is still among the five highest in the world, after Angola, CAR, Chad and Somalia. The need to further bring this rate down is acknowledged by Governments in the region. The three case studies show that CHD⁴⁴ activities are well embedded into national health and nutrition policies/plans and are therewith very much in line with government plans and priorities. In both **Madagascar** and **Sierra Leone** reference is made in national documents to the concept of child health days as such, while in **Tanzania** the principle of child health day is being referred to. For a detailed description on the references made in a range of documents in the case study countries, please see annex XI. It can be firmly stated that the case-studies show that CHDs are very much in line with the various relevant Government plans.

5.1.2 Are the programme activities in line with UNICEF policies and international best/promising practices and evidence-informed?

UNICEF is one of the driving forces behind the CHDs in all thirteen countries and the programme activities are very much in line with UNICEF's policies. Within UNICEF, the CHDs are seen as a "one stop shop" to cost-effectively deliver a package of health services to all eligible children and their mothers, including those in the most under-served areas, free of charge⁴⁵. Table 1 provides an overview of the interventions delivered in all thirteen countries in 2013, 2014 and 2015.

The different CHD activities are evidence-informed. VAS boost immunity, prevent blindness and contribute to a reduction of under-five child mortality by addressing vitamin a deficiency. There is also ample evidence that immunization is one of the most cost-effective public health interventions. Deworming results in gains in weight, height and MUAC. It is also associated with reduced anaemia and indirectly results in lower child mortality. MUAC screening for and treatment of acute malnutrition also has a positive effect on reducing child mortality. The provision of IFA to pregnant women contributes to a reduction in low birth weight and perinatal mortality and is therefore sometimes recommend. As can be seen from the overview below, in

⁴¹ [http://cdrwww.who.int/bulletin/archives/78\(10\)1175.pdf](http://cdrwww.who.int/bulletin/archives/78(10)1175.pdf)

⁴² http://www.who.int/gho/child_health/mortality/mortality_under_five_text/en/

⁴³ <https://data.unicef.org/topic/child-survival/under-five-mortality/>

⁴⁴ Throughout the findings section in the report we will refer to the integrated events as CHD or CHDs as much as possible.

⁴⁵ https://www.unicef.org/esaro/5479_child_health_days.html

2015 IFA has started to be included in the CHDs in Zambia, Uganda and CAR. IFA is there with a relatively new addition to the CHDs. An issue thereby may be that IFA needs to be taken on a daily basis over a longer period of time, and that pregnant women should be encouraged to go for routine ANC visits, where they can also receive a new blister pack of IFA.

Stunting due to chronic malnutrition resulting in long-term and irreversible damage to children's health and cognitive and physical development as well as an increased risk to develop non-communicable diseases later in life, can best be prevented in the CHDs setting through promoting exclusive breastfeeding for children under 6 months and appropriate infant and young child feeding practices. Although stunting is one of the issues in which not sufficient progress has been made in this part of the world, it does not receive attention in the health promotion activities during the CHDs.

Table 2: CHD (integrated event) interventions by country and by year

	VAS			Immunisation			Deworming			ITN			GMP			MUAC			WASH			BCC			IFA					
	'13	'14	'15	'13	'14	'15	'13	'14	'15	'13	'14	'15	'13	'14	'15	'13	'14	'15	'13	'14	'15	'13	'14	'15	'13	'14	'15			
Early transitioning																														
Senegal	0	0	0	0	0	0	0	0	0	0						0	0	0	0			0	0	0						
Tanzania	0	0	0	0	0		0	0	0							0	0	0				0	0	0						
Zambia	0	0	0	0			0	0	0				0									0		0						0
Late transitioning																														
Benin	0	0	0	0	0	0		0	0														0	0						
Mauritania	0	0	0	0	0	0	0	0	0							0			0	0		0	0	0						
Sierra Leone	0	0	0	0			0	0	0		0						0			0										
Burundi	0	0	0	0	0	0	0	0	0	0									0	0	0	0	0	0						
Uganda	0	0	0	0	0	0	0	0	0							0	0	0		0					0	0		0		0
Fragile states																														
CAR	0	0	0	0	0	0	0	0	0	0	0			0		0	0	0	0	0	0	0	0	0				0	0	
Chad	0	0	0	0	0	0	0	0	0										0	0										
DRC	0	0	0	0	0	0	0	0	0		0					0			0	0	0	0	0	0						
Madagascar	0	0	0	0	0	0	0	0	0					0	0	0	0	0	0		0	0	0	0	0	0	0	0		
South Sudan	0	0	0	0	0	0	0												0	0										

Source: *Scaling up Nutrition and Immunisation, Annual Progress Reports 2013, 2014 and 2015*

One particular activity that is presently also not part of the CHDs is zinc distribution. Zinc supplementation can reduce the risk of morbidity from childhood diarrhoea and acute lower respiratory problems and has a positive effect on linear growth. Distribution of ORS and zinc packages at CHDs so that care-givers could use these when their children experience a diarrhoea episode, could further help reduce under-five mortality particular in countries with high diarrhoea prevalence. This in turn also has a positive effect on linear growth. Adherence to the use of zinc supplementation for a period of 10 days can be difficult for caregivers according to studies in Bangladesh and India⁴⁶. Close cooperation with community based health workers to promote this adherence is may be needed to include the delivery of this service in the CHDs. A study from Bangladesh indicates that visits by such community based health workers are key to increasing adherence to micronutrient intake⁴⁷.

At the same time, an earlier evaluation found that there may be an optimum in the number of services co-delivered through CHDs as the coverage appears to decline with increasing numbers of integrated services⁴⁸.

⁴⁶ Ahmed S. et al., *Acceptability and Compliance to a 10-day Regimen of Zinc Treatment in Diarrhea in Rural Bangladesh*. Food and Nutrition Sciences 2013, 4, 357-364. <http://dx.doi.org/10.4236/fns.2013.44046>

⁴⁷ Angdembe M.R. et al., *Adherence to Multiple Micronutrient Powder among Children in rural Bangladesh: a cross-sectional study*. BMC Public Health 2015, 15:440.doi.10.1186/s12889-015-1752

⁴⁸ UNICEF 2011, *Child Health Days 1999–2009: Key Achievements and the Way Forward, A report prepared for the UNICEF Joint Working Group on Child Health Days*. UNICEF Headquarters New York July 2011

Concluding, it can be said that the programme activities are in line with UNICEF policies and international best/promising practices as well as evidence-informed. Thereby it can be mentioned that there is also room to further expand these activities through for instance including zinc and ORS distribution within the CHD package provided close cooperation with community based health workers could be arranged.

5.1.3 **Is the package of health and nutrition services and its scale the most appropriate in view of the needs, and in view of the context in which the programme is implemented?**

CHDs in all three case studies are implemented at national scale, and not just in areas with coverage challenges. In **Madagascar**, since its introduction, the week-long SSME takes place in the 113 districts that countries has spread over 22 regions. The same applies for the other two countries, irrespective of being classified as an early transitioning, late transitioning or fragile state country.

As mentioned earlier, the most frequently co-delivered activities in all countries are vitamin A, vaccination and deworming. To this, one or more other activities can be added, depending on the context and need. In some countries districts can choose to add interventions to the CHD as they feel this is relevant in relation to the health status of children in their district. In Tanzania each district is to implement three activities during the CHDs being vitamin A, deworming and monitoring of wasting by MUAC. In addition the districts can add other activities that they think are relevant and are able to find the resources for this to do so. This ensures that activities can be adopted to the most pressing needs. As the overview in table 2 above shows, the other co-delivered services may fluctuate from year to year in the same context. Some services, such as measles campaigns only take place every three years but also bed nets may be distributed on a three yearly basis.

In all three case studies countries, respondents were in wide agreement that the CHDs interventions are well suited to address major causes of child morbidity and mortality. Respondents in **Madagascar** said for instance that the CHD interventions contribute to reducing diarrhoea, malaria, (acute) malnutrition and ARI which suggest that CHD interventions are responding to the health needs of the children (rota virus vaccination, distribution of ITN, Vitamin A distribution and deworming).

Health staff but also parents and care takers and other stakeholders in **Sierra Leone** concurred that the CHDs help to address the main child health problems in the visited districts -Kailahun, Koinadugu and Tonkolili- such as malaria, acute respiratory infections (ARI) including cold, running stomach (diarrhoea), malnutrition, measles, worms and – as mentioned in some FGD for caretakers even scabies (and / or rash). Hereby it has to be noted that while care takers may ascribe positive health effects to things like scabies, there is no evidence that agrees with this⁴⁹. In FGDs caretakers summarized why they thought the CHDs were highly appropriate: ***"It has added something to the health of our children in this community. The high death rate of the children has reduced greatly"***. In **Tanzania** stakeholders, health staff and parents/caregivers also mentioned the importance of vitamin A distribution and deworming, although the latter were more aware of the effect of deworming as they could directly see that effect. A community leader said in this regard: ***"Most of the parents now greatly believe that vitamin A and deworming helps in child's health improvement, helps in sight problems in children, children have good appetite, they are in good health, they are active"***. (Community leader Kilolo (Tanzania).

In order to know how relevant the most common activity of Vitamin A distribution further is, it

⁴⁹ In fact, the question on effects of the CHDs invites parents to mention all positive changes they have seen in the health and nutrition of their children, also changes which can't be attributed to CHD interventions.

is also important to understand the level of Vitamin A deficiency. With regards to such deficiency, there is no official country-reported data to be relied upon. What is available are data from nationally representative micronutrients surveys measuring deficiency amongst children 6–59 months of age. A 2017 review by Wirth et al. (see section 4.2.1.3 for details)⁵⁰ has summarised all the information from the most recent available micronutrients surveys. See Annex XII for an overview of this data. Wirth’s overview shows that out of the 13 countries in this evaluation, 2 never had a vitamin A deficiency assessment, and in half of the countries with data, surveys were conducted more than 10 years ago. Most countries were once assessed as having Vitamin A deficiency levels considered so high as to constitute a severe public health problem⁵¹. Only two countries, Senegal and Sierra Leone, were classified as having a moderate public health problem related to Vitamin A deficiency. Wirth et al. recommend that Vitamin A deficiency assessments in countries considering VAS programs (or scaling down programs), should be conducted on a 10-yearly basis (while acknowledging that these are very costly undertakings). In the light of this recommendation, it is worth pointing out that there are a number of countries in this evaluation that have sustained very high bi-yearly coverage of Vitamin A Supplementation (See section 5.3.4) as well as having biofortification programs in place. These include DRC, Madagascar, Mauritania, Senegal, Sierra Leone, Tanzania, Zambia (VAS coverage above 90% in the past 3-5 years). Out of these countries:

- DRC and Madagascar and Zambia’s latest Vitamin A deficiency surveys were conducted more than 10 years ago are therefore due for a survey
- Mauritania appears to have never had a survey
- Senegal and Sierra Leone were estimated to have moderate Vitamin A deficiency problems (less than 20% prevalence) in 2010/2013 and therefore a survey might be justified at a shorter interval than 10 years

While the evidence provided by these surveys can help ascertain progress towards elimination of Vitamin A deficiency, it also provides warning signs against the risk of inducing hypervitaminosis in children (an intoxication resulting from over-consumption of Vitamin A) as a result of an over-enthusiastic combination of vitamin A supplementation and biofortification programs. According to Wirth et al, there may already be signs of such problems in parts of Zambia for example:

"In addition, a national VA survey should also be conducted in Zambia, as extensive and recent sub-national data suggest that children may consume excess amounts of VA. Two recent studies from Central and Eastern Zambia found that a much lower percentage of children had inadequate liver reserves assessed with the MRDR test. Another study in Eastern Zambia found that a large proportion of children 5–7 years of age were experiencing hypervitaminosis A, assessed with ROH isotope dilution, and documented hypercarotenoderma during mango season, likely due in part to wide-scale sugar fortification on top of a traditional diet high in provitamin A carotenoids. Another study in Central Zambia found that serum ROH concentrations in children 4 to 8 years old did not respond to an intervention with provitamin A biofortified maize. The author’s conclusion was that the children were relatively Vitamin A adequate at baseline"⁵².

⁵⁰ Wirth JP, et al., *Vitamin A Supplementation Programs and Country-Level Evidence of Vitamin A Deficiency. Nutrients*. 2017 Feb 24;9(3). pii: E190. doi: 10.3390/nu9030190. <https://www.ncbi.nlm.nih.gov/pubmed/28245571>

⁵¹ According to WHO guidelines (<http://www.who.int/vmnis/indicators/retinol.pdf>) VAD prevalence of 2%–9% is considered a mild public health problem, 10%–19% a moderate public health problem, and ≥20% a severe public health problem.

⁵² Wirth JP, et al., *Vitamin A Supplementation Programs and Country-Level Evidence of Vitamin A Deficiency. Nutrients*. 2017 Feb 24;9(3). pii: E190. doi: 10.3390/nu9030190. <https://www.ncbi.nlm.nih.gov/pubmed/28245571>

Symptoms of Vitamin A intoxication are dizziness, nausea, vomiting, headaches, blurred vision, vertigo, reduced muscle coordination, skin exfoliation, weight loss and fatigue (18). Currently, there is no mechanism for CHDs to look at the risk of hypervitaminosis in children. However, other research points in the direction that the issue of hypervitaminosis may not (yet) be a problem in many countries even those with food-based vitamin A control strategies in place⁵³ since these rarely reach high scale coverage.

While stakeholders in **Tanzania** appreciated the CHNM, they did point out its limitation that they do not provide enough interaction opportunities with mothers and care-givers to be able to successfully improve the nutritional status of children to reduce stunting. This is currently only done indirectly, as VAS and immunization can reduce diarrhoea, and therewith contribute to a Screening for acute malnutrition was included relatively recently in **Tanzania** into the CHNM. In 2015 MUAC was piloted in Iringa district, before a decision was taken to roll out MUAC screening at national level during the CHDs. Training was provided in May 2016. Community health workers were trained to screen and refer acutely malnourished children and the capacity to treat acute malnutrition at district level was recently enhanced through training of facility workers. Various stakeholders said that there are challenges with human resources who can do effective referral and treatment of malnutrition and that there is a need for a system to be put in place.

In **Sierra Leone** MUAC screening for acute malnutrition used to be part and parcel of the CHDs, but this was dropped in 2014 during the Ebola disease outbreak which posed a challenge in terms of touching. MUAC has not been included since, because MUAC has meanwhile been integrated in community based health care. Screening takes place in all districts and the average coverage per district increased from 50% to 70% in 2016. The ultimate aim is 100% coverage. This strategy fits with the overall strategy in **Sierra Leone** to strengthen community health and nutrition, among others through capacity building and empowering of community health workers and strengthening community development / health committees.

In **Madagascar** MUAC screening has been introduced and implemented in 2009 in districts with high levels of acute malnutrition, where a system of referral is in place. In 56 districts out of 113 MUAC is part of the routine. In Boeny, one of these district, the team observed in one health facility that the nursing staff was not well trained in MUAC. Upon questioning the team was told that in fact MUAC was carried out by CHWs in the community. Those with a red or yellow MUAC are referred to the health centre, where their weight and height are taken and treatment takes place if acutely malnutrition is confirmed. In some other facilities the team noted that CHWs were indeed well trained in taking MUAC. Data suggest that where MUAC screening is included, this goes together with providing ready to eat (plumpy-nut) to acutely malnourished as part of the CHDs.

In **Sierra Leone** as well as in **Tanzania** the need to include attention for HIV testing in the campaign was mentioned. In Tanzania this was because of the fact that the changed treatment protocol for children advises to start treatment at an earlier age. In **Sierra Leone** the reason mentioned was that during the CHDs people are reached which don't usually come to the routine (or only when already very sick).

While a range of activities for children are implemented in most countries, activities for mothers are few. In **Madagascar** some activities were standard incorporated in the CHDs in the early years, but became optional later (after 2009), depending on districts' priorities. These activities included antenatal care (ANC) and post-natal care (PNC) consultations, distribution of delivery kits to women delivering at a basic health facilities during the CHDs, preventive treatment of

⁵³ Kupka et al. Safety and Mortality Benefits of Delivering Vitamin A Supplementation at 6 Months of Age in Sub-Saharan Africa Food and Nutrition Bulletin 1-12 ^a 2016 sagepub.com/journals Permissions.nav DOI: 10.1177/0379572116646280 fnb.sagepub.com

pregnant women with Fansidar (sulfadoxine pyrimethamine) against malaria, counselling on family planning (FP) and screening of pregnant women for HIV (at health centre level only). In 2013, the CHDs included distribution of iron-folic acid (IFA) to pregnant and lactating women, FP counselling and screening for fistula in all districts. The latter was also included in the 2016 CHDs but not seen by the evaluation team nor mentioned by health staff in the two district visited (Boeny or Andramasina). A possible explanation might be that this activity was not carried out everywhere. The only activity for mothers / pregnant women carried out everywhere was deworming. Data suggest that in many districts pregnant women were also offered vaccinations against tetanus (TT), and sometimes VAS. However, as several of the in-charge of health facility staff interviewed observed: **“more should be done for mothers”**.

In **Sierra Leone**, referral of pregnant women to ANC is included. Screening of HIV in pregnant women has been part of the CHWs in April 2015 but not in 2016. Whether HIV testing is included is decided at central level by the MoHS taskforce to ensure uniformity across districts. However, all pregnant women who attend ANC receive a standard package which includes an ITN, iron folate, de-worming pills and Fansidar (sulfadoxine and pyrimethamine). In one of the focus groups caretakers/ parents summarized the benefits of the CHDs for women as follows: **“It has not only added something to the health of the children but it has also added something to the health of the women. We don’t hear of the death of pregnant women when giving birth as it used to be”**. In Tanzania, no activities for pregnant women are included.

What can be concluded is that the CHDs interventions are well suited to address major causes of child morbidity and mortality at a large scale, thereby it has to be remarked that there is no mechanism to look at the risk of hypervitaminosis as result of overconsumption of Vitamin A. The package of health and nutrition services is flexible and can be adjusted to contextual needs. However, there is also a tension between the numerous needs and some indications that if too many services are being co-delivered that the effectiveness goes down.

5.1.4 Are Child Health Days being included in health sector plans and budgets, or efforts made hereto? And what adaptations are being made to make them suitable for the country

As mentioned and described earlier, in section 5.1.1., CHDs activities have been included in some health sector plans. In **Madagascar**, the CHDs have explicitly been mentioned in the *Health Sector Development Plan 2015-2019* as a mechanism to reduce infant and child morbidity and mortality. While CHDs have been included in various strategies and plans in **Sierra Leone**, campaigns, including the CHDs, have not been incorporated in the National Health Strategic Plan (NHSSP) 2010-2015 and its complementary Joint Programme of Work and Funding 2012 – 2014, but CHWs are included in other health and nutrition plans and policies. In **Tanzania** important steps have been taken to include VAS into the health sector plans (national) and the health basket fund (district level) used to support these health sector plans. So in terms of including CHDs activities in budgets, headway has been made in **Tanzania**, however, funding for this comes mostly from international donors through (for example vitamin A comes from GAC) or the Health Sector Basket fund. For further details on integration of the CHDs in country budgets please see the sustainability section.

From the previous sections it is also clear that in all three case study countries adaptations (continue to) take place to ensure CHDs are relevant in the specific context.

The evaluation question: **Does the initiative focus on increasing coverage (in particular of underserved populations)? (A2)** is answered through the following sub-question.

5.1.5 Does the design of the programme have an explicit focus on reaching underserved populations and low performing districts in terms of child health and nutrition?

In all three case study countries, the evaluators identified an explicit focus to increase coverage

for underserved populations and in low performing districts. In **Madagascar** three different approaches are being used to do so. In 2012 an equity health strengthening approach for 11 of its regions (9 PASSOBA⁵⁴ and 2 other regions) to reach the most vulnerable communities was introduced. Within these regions, 3-4 extra vaccination campaigns per year are organized. The equity health strengthening approach is an example of UNICEF's global equity approach as among others summarized in its strategy for monitoring (MoRES).

In order to improve immunization coverage in **Madagascar**, the Government has progressively adopted the Reach Every Community (REC) approach since 2005. After a period of stagnation, 108 out of the 112 districts in the country were implementing this approach by 2012, which focuses on building the capacity of districts, health workers and communities to address major obstacles to improving immunisation and other maternal and child survival services. The REC approach is essentially the same as a UNICEF's global approach to improve reaching the most vulnerable by using the "Reaching Every District" (RED) approach. One of the pre-conditions for the RED/ REC to be successful is re-establishment of regular outreach services⁵⁵, which is the third strategy to improve coverage in **Madagascar**. This approach, entailing the use of outreach strategies, was initiated by the Ministry of Public Health (MoPH), formerly the Ministry of Health, Family Planning and Social Protection, in its Health Sector Development Plan 2007-2011 and reinforced in other plans including the "Multi-annual plan for EPI, 2010-2014 to strengthen access to quality vaccination services for the most marginalized populations and/or people living in remote areas through advanced and mobile. Also during the SSME an outreach strategy (stratégie avancée) is used to reach families living more than 5 km from the basic health centres / Centre de Santé Base (CSB).

The focus on equity is also elaborated in UNICEF's country-plan for **Madagascar** 2015-2019. UNICEF's country-plan for the health sector entails expansion of the use of integrated health services for children under five years old among other by increasing coverage of life-saving interventions through proven strategies such as Mother and Child Health Weeks and community-based service delivery in focus regions. Activities include strengthening of routine immunization systems with a specific focus on micro-planning, cold chain and vaccine management, social mobilization, outreach and biannual national vaccination campaigns, and monitoring for corrective action to address bottlenecks and reduce geographical equity gaps.

The equity focus as well as the REC approach are also outlined in the Scaling Up Nutrition and Immunisation Through Child Health Days In Sub-Saharan Africa project proposal (referred to as Project proposal from now on) as strategies to increase coverage. As such the proposal builds upon and complements already ongoing UNICEF supported interventions in **Madagascar**.

An important tool to implement the three strategies to increase coverage during the CHDs is the micro-plan which each district makes (among others for the CHDs). For the plan HMIS/CHD data are analysed to prioritise areas with low coverage. Please see the effectiveness section for more details on the use of data and their impact on the successfulness of these three strategies in increasing coverage.

Coverage also benefits from the fact that vitamin A and albendazole are provided for free during the CHDs, while mothers and children have to pay for these during routine health services, where albendazole is only provided as a curative medicine. However, the poor (as per lists compiled by

⁵⁴The PASSOBA programme is an EU funded health strengthening programme implemented by UNICEF. In 2013 PASSOBA helped to develop integrated annual work plans in 27 districts, recruit an additional 163 new health staff and re-open 44 health centres. PASSOBA= Programme d'Appui aux Services Sociaux de Base. By 2015 CSB coverage was nearly 100% in all but one of the nine target regions.

⁵⁵ Jos Vandelaer, Julian Bilous, Deo Nshimirimana (2008). *The Reaching Every District (RED) approach as a way to improve immunisation performance*. Bulletin of the World Health Organization 2008; 86 (3): 240

the authorities) are exempted from paying for all health services. From each kit with medical supplies a health facility receives, a part can be distributed for free.

Also in **Sierra Leone** specific focus is given to low performing districts and chiefdoms and the reaching every community approach. Also many health and nutrition policies emphasize the need to address equity. The National Health Sector Plan also mentions the needs of the unserved and the underserved populations as well as issues of equity. The Comprehensive EPI multi-annual plan has been formulated on the fundamental principles of amongst others equity. The Reproductive, Newborn and Child Health Strategy outlines steps to accelerate progress towards achievement of the Millennium Development Goals, focus on equity and reduce disparities in reproductive, newborn, and child health care. Similarly, the Policy for Community Health Workers emphasizes the need for efforts to reach marginalised communities and individuals who have the poorest access to health care. In the National Food and Nutrition Security Implementation Plan the need for gender equity is emphasized. Because in **Sierra Leone** the CHW is done using a door-to-door approach, there is no issue of reaching the most vulnerable households. Remote rural communities are prioritized during the planning process and first visited. In urban slum areas which are difficult to reach because of insecurity, bikers (motorbike taxi drivers) play a role as promoters, mobilizers and transport providers of the door-to-door teams. Parents confirmed that this door-to-door approach is being used. **"We love it, the teams come to our home"** was mentioned in various FGDs.

The equity focus is also central within the CHNM in **Tanzania**. The recently developed CHNM guidelines and facilitation guides make reference to the Reach Every Council (REC) strategy for the provision of regular outreach services, supportive supervision and on-site training, community links with service delivery, and relying on effective monitoring and the use of data for better planning and management of human and financial resources. The guidelines furthermore state that *"The CHNM offers an additional routine service that extends services, much like an expanded outreach, done twice annually"*. The field visits confirmed that the most common strategy to "Reach Every Council" is to bring the service to the people during the campaign days through outreach and in some cases by visiting orphanages. Involvement of community leaders (ten cell leaders) for sensitization of all families in the village by going from door to door is frequently used, especially in Iringa. **"Generally, vulnerable groups are not hard to identify because we live in the same community, they are our neighbours, and we insure that they are reach by going door to door to give information about CHDs"** (Community leader, Kilolo District, Tanzania).

In Iringa the District Nutrition Officer and his team analysed the campaign data of the previous round, and based on those figures they plan the outreach stations for the next campaign to ensure higher reach in lower performing areas. In Arusha, data are also reviewed by a team from the city council. They focus thereby on areas where there is underperformance, and follow this up with the relevant facilities and communities. However, there are also limitations to reaching out to remote communities, or to specific vulnerable groups as the statement below demonstrates. **"We normally try to spread the information to everyone especially in marginalized areas but we do not have a modality that targets specifically vulnerable group"** (Arusha City Council, Tanzania)

In **Tanzania** and **Sierra Leone** by-laws at district or village level are also used to ensure attendance (and increase coverage). In **Tanzania** a village health/ development committee will penalize mothers for not taking their child to the CHNM. Both health workers and village leaders have a task in reporting children who have not attended the clinic. In one of the visited districts in **Tanzania** the by-laws developed at community level specified that families not attending the CHDs had to pay a fine. **"There are regulations that are set to address this problem, for people that refuse to come for the services there is a penalty of 5000/= up to 20,000/= TZS depending on the situation that causes them not to come for the**

services.” Both health workers and caretakers/ parents said that by-laws help to promote people’s willingness to participation and that this later turns into a culture.

Also in focus group discussions in **Sierra Leone** caretakers and community stakeholders insisted that the by-laws provided an additional mechanisms to ensure that few people were missed both during campaigns and in the routine. Type of by-laws, fines and enforcement seem to vary substantially depending on the (paramount) chief(s) (who are responsible for the by-laws) and health managers. In one of the districts visited in **Sierra Leone** the nurse in charge explained that not finding children during a repeat visit rarely happened. **“Oh, this time they will find people. Because of the by-laws.”**

In conclusion it is evident that in all three case study countries efforts are made to reach under-served populations and low performing districts during CHDs. Within this approach, no specific focus seems to be given on specifically zooming in on particular children such as those not having biological or not living with one’s biological parents, not living in a household where at least one adult has had primary education, belonging to the poorest health quintile, etc. with the exception of the example given in relation to orphanages in **Tanzania**. For further details on this, please see the effectiveness section.

The evaluation question: **Has equity including gender equality been mainstreamed? (A3)** is answered through the following three sub-question:

5.1.6 **To what extent is gender inequity addressed in the design and implementation of the interventions?**

In **Madagascar** while equality between men and women is enshrined in the Constitution of **Madagascar**, this has not resulted in reference to gender (equality) in (health and nutrition) policies / guidelines. Neither in the (provision of) routine services nor in campaigns, including the SSME, gender equality is addressed. Questions on this issue were considered not relevant and/or appropriate by many stakeholders because there are no indications that there is disparity between coverage of boys and girls during the SSME.

In **Sierra Leone’s** National Food and Nutrition Security Implementation Plan the need to advocate for the institutionalisation and operationalisation of gender equity policies is emphasized. The New-born and Child Health Strategy states that gender issues shall be mainstreamed in the planning and implementation of all health programmes. For the MCHW, the Policy for Community Health Workers is in particular relevant. According to this policy, CHWs, tasked with social mobilisation for the MCHW, have to be selected with gender equality. As a result, about half of the CHWs are male, half female. By the same token, gender parity is pursued in village development committees (VDC)/village health committees (VHC), of which CHWs are members and Peripheral Health Units (PHU) management committees. As a result, there are many men involved in mobilisation for and during the MCHW. In some places

However in spite of this, there is no specific focus on involving fathers in MCHW activities. Asked about the role of the father in the MCHW, some caretakers said that fathers also had a role to play during the MCHW: **“The father stays home with the children if the mother has work to do (goes to the farm)”**. But in other FGDs this was considered an exception: **“If my wife is sick I will take up that responsibility. But if she is well, that is her responsibility.”**

In **Tanzania** no specific strategies to enhance gender equity were identified. In the HSSP IV reference to sex disaggregated utilization data is made, as well as accessibility to health services, based on equity and gender-balanced needs. However with regard to the CHNM no

gender approaches are taken into account. The issue of male participation in child health days was explored at district/ facility and community level. Men participated marginally in attending the CHNM. When they do, it are most young educated men, or with their first child. Sometimes it are unemployed men, whose wives have a job. However, mostly, it is seen as a women's issue to bring the child to the services. **"Most partners do not accompany us to these clinic because it culturally believed that the child is the responsibility of the mother".** (Health facility-Arusha City Council-Arusha region).

At the districts and at the health facilities it was admitted that there was not much attention to sensitize men to participate in the CHNM, even though both male and female Community Health Workers are involved in sensitizing and in implementing the CHNM. Some reference was made to efforts to involve men in ANC activities, not linked to the CHNM. This is amongst others done through a name change, instead of "clinics for mothers and children", they are now renamed "reproductive health clinic and childcare". The assumption of health workers that this will assist men to come on CHNM days was turned down by women participating in FGDs who said that such efforts were not made in their areas. One of them said: **"During the pregnancy clinics women (who come) with partners were given priority in accessing services, but at this clinic it is not done".** (Health facility, Arusha City council-Arusha region).

Also the assumption that men can participate during campaign days in the weekends (Arusha) was turned down: **"Few men come to CHD days. Culturally. Those who come are younger and more educated. It is said that men have no time to come (work), however when the campaign takes place in the weekend, we see no more men".** (Health Facility- Meru District Council-Arusha Region).

In **Tanzania** the mothers are held accountable for not bringing children to the services in the by-laws (and punishable). In **Sierra Leone** the by-laws hold the household accountable.

In sum, gender inequity has not systematically been addressed in the design and implementation of the CHDs interventions. This while gender transformative programs in sub-Saharan Africa have resulted in better health status outcomes⁵⁶.

5.1.7 Are data systematically disaggregated?

Both HMIS and campaign data were disaggregated down to at least one and in some cases up to 2 subnational administrative levels. These data were mostly shared for the purpose of this evaluation and enabled analyses of geographical equity.

While HMIS data appear to be systematically disaggregated by sex, this is not the case for the campaign data. Campaign data is collected through a tallying sheet for children 6 – 12 months and for children aged 12 – 59 month, without a division by sex. In **Madagascar** data on sex in relation to use of SSME are collected but not reported up. In **Sierra Leone** sex aggregated data is not collected. The same applies to **Tanzania**. This while health facility staff in one of the districts visited in **Tanzania** said to - besides the tallying for CHNM - also check if all the children registered in their own designated books have come to receive the services. In this book they do record information about the name, age, sex, height, weight and address to easy follow up with subsequent appointments.

While one may assume CHD campaigns are gender-sensitive by design, this cannot be monitored if data is not available. Analyses presented in section 5.3.10 re-analysing DHS data at individual level confirm that there are no difference in coverage for services provided by

⁵⁶ Muralidharan, A., J. Fehringer, S. Pappa, E. Rottach, M. Das, and M. Mandal (2015), *Transforming Gender Norm s, Roles, and Power Dynamics for Better Health: Evidence from a Systematic Review of Gender- integrated Health Program s in Low- and Middle-Income Countries*. Washington DC: Futures Group, Health Policy Project.

CHDs, as does the PECS from **Sierra Leone** (2012), **Tanzania** 2010. Unfortunately the two LQAS and most PECs do not present data disaggregated by sex. Despite many studies and surveys showing that immunization coverage in Africa is gender-equitable, our results from re-analysing DHS data in **Tanzania** show a 20% higher immunization coverage in boys than in girls, confirming that sustained gender equity cannot be taken for granted and needs continuous monitoring if it is to be a defining feature of a project.

5.1.8 **To what extent were mothers and fathers involved in the development of the programme? And in the implementation of activities?**

In all case study countries, use of community structures is made. In **Madagascar** in nearly all places visited there was active involvement of community leaders in the mobilisation of the population for the CHDs. Involvement of parents/ care takers in social mobilization was not institutionalized but can in theory be ensured through their membership of Village Health Committees (VHC) / Comité de Santé (COSAN), which are key in mobilizing the community for the CHDs. However, most VHC in the communities sampled by the evaluation team consisted of CHWs and community mobilizers only. In one community the COSAN consisted of a mix of people including village leaders and CBO representatives including those who had children participating in the SSME. Like elsewhere, the role of this COSAN was in particular social mobilization. There is no involvement of COSANs in the design or organization of the SSME. Yet, in terms of appropriateness, caretakers in focus group discussions (FGD) were full of praise of the SSME: **"La SSME est bien connue et bien reçue"** (the SSME is well known and well received). Other qualifications heard during FGDs (several places) included among others: **"Because of the SSME our children are thriving"**. Asked to explain what was meant by thriving caretakers said: **"Not sick, no potbellies"**.

In **Sierra Leone** representatives of (grass-root) women's groups –including mother support groups (MSG), village (sub) chiefs (also female village chiefs), the "mammy Queen"⁵⁷, teachers, CHWs and others, often (also) members of VDCs/VHCs said that while they were involved in mobilizing communities for the CHDs, but not involved in the planning of these. Involvement of parents/ caretakers in social mobilization takes place if they are a member of the VHCs and/or VDCs. Involvement of MSG in community sensitization and mobilization is however well defined.

Although community engagement is high in **Tanzania** community participation is mostly seen in the social mobilization and implementation of the campaigns but not in supportive supervision visits before, during and after the campaign.

There is also cooperation with other NGO's working on nutrition and health. The new guidelines also provide a stronger role for CHW though which services and health promotion can be brought closer to the community.

Relevance overall

The activities of the CHDs are very much in line with the different relevant Government plans that acknowledge the strong need to reduce the continuing high child morbidity and mortality rates in spite of progress made over the last 25 years. The CHDs activities are also evidence-informed and well aligned with UNICEF's policies and international best/ promising practices. CHDs interventions are well suited to address major causes of child morbidity and mortality at a large scale. The package of health and nutrition services is flexible and can be adjusted to contextual needs. Thereby there is room to further expand the activities from countries can pick and choose through for instance including more attention for health promotion around the causes and effects of stunting. However, there is also a tension between the numerous needs and some indications that the effectiveness of CHD may be compromised if too many services are being co-delivered. Strong efforts have been made to reach under-served populations and

⁵⁷ A mammy queen is a woman within the community who is considered wise and well respected. She is often the wife or sister of a chief, but may not always be related to him.

low performing districts during CHDs. Within this approach, very limited focus has been given though to zooming in on particular vulnerable children. CHDs have not been used to pursue gender equity, neither in its design or its implementation. In all case study countries, community structures are used for sensitisation and mobilization. While HMIS data are systematically disaggregated by sex and age, this is not the case for the campaign data.

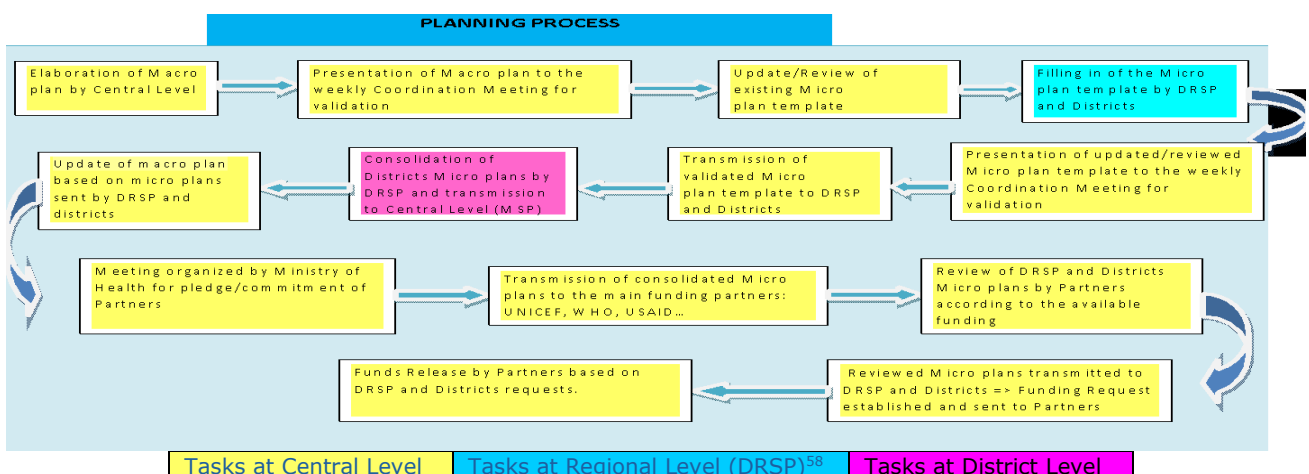
5.2 Efficiency

The evaluation question: **Have inputs resulted in outputs targeted? (B1)** is answered through the following six sub-questions:

5.2.1 Were activities implemented as planned?

The planning process in all three case-study countries was very similar, making it a safe assumption that this is fairly representative for all countries where CHDs takes place. The planning follows the “micro-planning” guidelines; in **Tanzania** a training guide for this is developed and introduced in 2016. Typically, a task-force under (one of the directors of) the MOH or in the case of **Tanzania** under the Prime Minister’s Office consisting of the main partners including various departments of the MOH, UNICEF, other UN agencies, NGO and/or donor partners oversees the planning of the CHDs. Main duties of the taskforce are to: (i) approve the activity package and budget; (ii) secure funding and; (iii) oversee sub-committees (which carry out the groundwork). The base of all planning consists of micro-plans coming from the districts/ regions. In the late transitioning country **Sierra Leone** and early transitioning country **Tanzania**, where district staff received training in micro-planning, the micro-planning is more a bottom-up process, with the district (health management teams) in the driving seat. For example in **Tanzania**, following the MOH decision to transform the CHDs into a Child Health and Nutrition Month (CHNM), Iringa region chose to implement CHDs activities during working days, while Arusha opted for implementation during the weekend. In Iringa this was perceived as a way to improve efficiency: **“It is more practical that the campaign lasts for the whole month because more people are covered and the workload at facility level is reduced”** (health worker, Iringa region). Caretakers also mentioned advantages: **“Waiting time during the campaign has diminished from one hour to 30 minutes by making the campaign last one month”** (Mother, Iringa region). In fragile state **Madagascar** the micro-planning process is driven by the central level. The process is summarized in figure 4.

Figure 4: Macro- and micro-plans in the planning process in Madagascar



Source: Angele Randrianaivo, National KIT Consultant for the CHD Evaluation in Madagascar, October 2016

⁵⁸ DRSP=Direction Régionale de Santé Publique

At the end of the day, all micro-plans (and in ultimately the national macro-plan) are based on district HMIS data on target populations or on population projection data from the National Bureau of Statistics as is the case in Tanzania, numbers targeted (and sometimes also reached during routine), number of health facilities and available/ necessary staff. In Tanzania interviewees mentioned several times that there are problems with the population projections, and that this provides inaccurate denominators.

The district micro-plans in the case-study countries are made according to guidelines provided by the MOH⁵⁹. Where the planning process is decentralized, micro-planning is done by district health teams with support from national supervisors. Support is often in a training cum planning session.

In **Madagascar** districts use the micro-plan approved by central level to make a detailed plan of action on who has to do what, when (before, during and after the campaign) and at what level (central, region, district, facility or community level) as per the guidelines. Overviews are distributed to all facilities, in principle well in advance of the CHDs. Complementary to these plans, facilities also make their own plans for resourcing before and during the CHDs (including human and material resources for outreach teams). In this micro-plan a distinction is made between households living within 5 km of a health facility and those living further –the latter being prioritised in the micro-plan. The evaluation team saw district overviews in all district head-quarters and facilities visited. Facilities visited by the team had also made their own facility plans. Triangulation of this observation revealed that planning was improving country-wide, although not everywhere and all the time. However, an analysis by UNICEF of a comparable micro-planning process for vaccination activities in four districts revealed that the quality between districts varied hugely.⁶⁰

In **Sierra Leone** district data were also verified at facility level during the second phase of the planning. This entails among other a mapping of all catchment communities and target populations in each community. The furthest communities are visited first. District supervisors (DHMT members and staff trained to be a supervisor, e.g. community health officers in charge of a community health centre or nurse-midwives in charge of an under five clinic) support the facilities, again by training cum planning sessions. In **Tanzania**, support is seen in supervision of the district team during the CHDs. The responsibility for this is with the District Nutritionist.

In all three case study countries CHD activities were implemented as planned at national level, but not always in all districts. In Tanzania bottleneck analyses conducted through questionnaires showed that district level leadership has strong influence on activities being implemented on time in spite of continuous challenges such as late transfer of health basket funds. In some districts managers are pro-active and innovative and temporarily advance money from other budget lines in such cases, while in other districts such leadership is absent.

5.2.2 Were administrative data and supervision reports used in the planning for the next CHD?

In **Madagascar** and **Sierra Leone** data from previous CHDs were used to correct (projected) population statistics. As mentioned earlier, in **Tanzania** population projections based on 2012 census data from the National Bureau of Statistics are used as denominator as instructed by law. Each health facility has thereby its own catchment area. Planning committees at council levels jointly review this statistical data for planning purposes. However, respondents also said to look at data from previous CHDs. For instance, in one of the zones visited in Tanzania, the

⁵⁹ These guidelines are existing guidelines which are updated prior to each CHDs as needed (e.g. because the package of intervention is different or other strategies are used and so on).

⁶⁰ UNICEF (2016). *Mise en œuvre de l'approche Équité en matière de vaccination à Madagascar, Possibilité d'intégration, Dakar - Inception Meeting Avril 7-8, 2016* Power-Point Presentation

District Nutrition Officer and his team analysed the data of the previous campaign. With a view to plan better and ensure all communities are reached, results of the analysis were then used to plan the outreach stations for the next campaign. In **Sierra Leone** information used in the micro-plans includes information from supervisors and independent monitors on populations not reached during the previous CHDs and the reasons for this. These populations are then prioritized.

Figure 5: Individual child fiche

In **Madagascar** the evaluators noticed a wealth of data (name, date of birth, resident village, measles vaccination etc.) was collected during the CHDs on individual child fiches. Fiches are collected and kept by facilities, but the data are not processed and analysed. Fiches are only used to aggregate data which are reported daily and analysed at district and higher levels. Yet, as staff of some facilities themselves suggested, if tally-sheets (hard or soft copies) for entering the data on the individual child fiches would be available it would be no problem to process these data. Districts could then use the data to fine-tune the planning as a step towards **"Tailor-made microplanning, putting the district in power"** (interviewee Antananarivo).

In all three countries activities were implemented as planned, to a large extent because of efficient planning including coordination (section 4.3.2.1 refers). There were several examples of improvements in the planning. For example, in **Madagascar**, the planning process now starts earlier than previously and roles within the MOH designated persons for the CHDs with clear responsibilities have been appointed. In Tanzania, a good example of learning from previous campaigns with a positive effect on efficiency was given by a district health officer in Tanzania: **"The planning process involves various stakeholders, who are interested in specific program activities; there is a committee in our council, which identifies gaps by looking at statistic data which they use as a base for planning. The planning committee will discuss statistics together with health sector, community and development, agriculture as well as water and sanitation. Then the planning process starts by comparing priorities identified through the statistics data"** (District CHMT team).

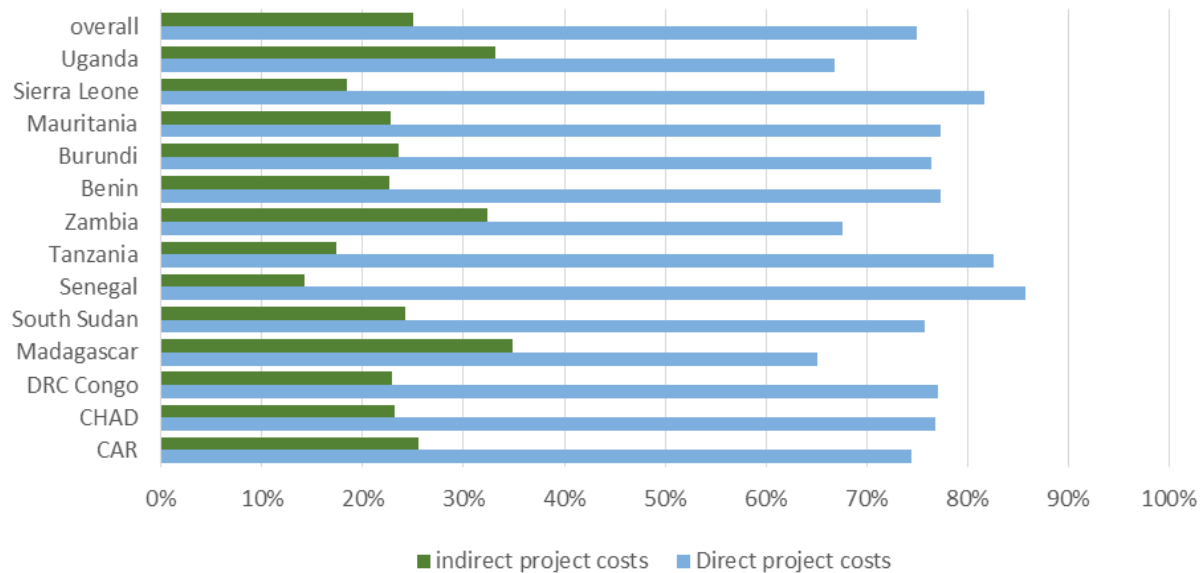
5.2.3 Were resources (financial, expertise, time) available in time and sufficiently?

The total amount of funding granted by CIDA (GAC) for the three year period amounted to 41 million Canadian dollar (CDN \$). Of this amount 33,515,700 CDN\$ was allocated to the thirteen countries for direct project activities, 5,299,500 CDN \$ was for indirect project activities (monitoring and advocacy and policy development) and the remaining amount for UNICEF headquarters (2,898,450 CDN\$) and the two regional offices (receiving 857,925 CDN \$ each). The amount of funding per country and country-budgets varied considerably. Country-budgets varied from less than half a million Canadian dollar (CDN \$) for South Sudan to more than 6 million CDN\$ for DRC Congo. Allocations per budget-line varied as well.

Overall, 25% of the budget was for indirect project activities including UNICEF personnel costs, monitoring activities and advocacy and development. The amounts per country for indirect costs ranged from 17% in Tanzania to 33% in Uganda. On average 75% of the budget was for direct project activities for nutrition and immunization consisting of training, social mobilization (C4D), logistics (including procurement of supplies, transportation, storage and related issues like support to the cold chain), services delivery (consisting of per diems for staff delivering the

CHD activities, plus costs of supervision (all levels), planning costs and so on) and post-event surveys (PECS)/monitoring/workshops. Figure 6 provides a breakdown of these costs per country. Figure 7 summarizes the break-down of the country-budgets in terms of direct projects and indirect project costs.

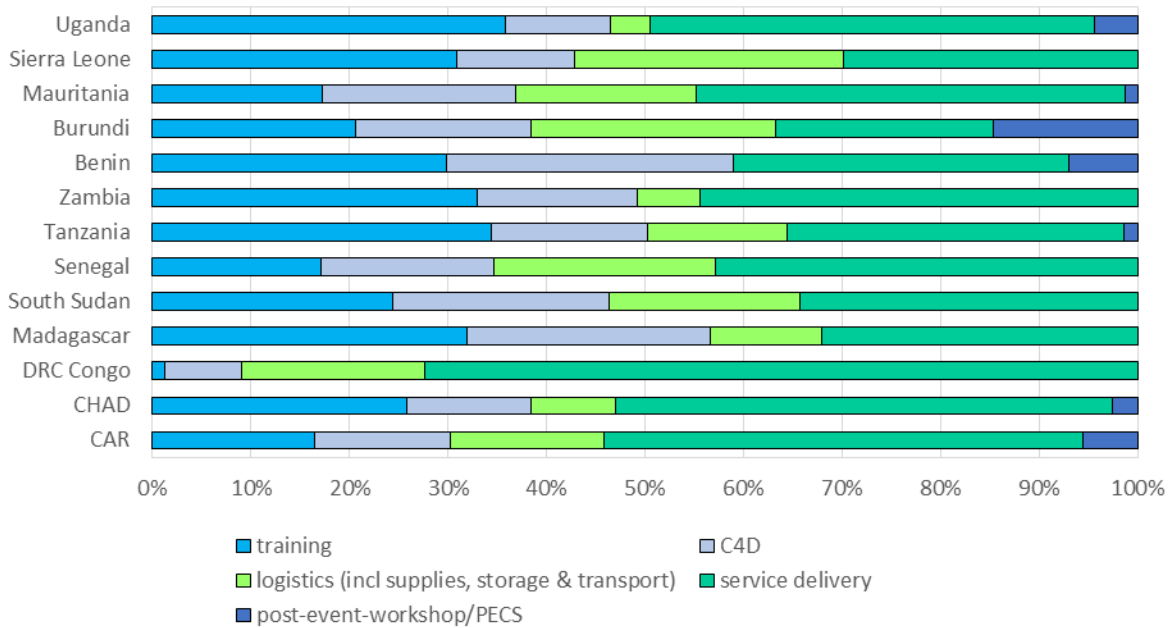
Figure 6: direct and indirect project costs per country



There are big differences also for countries in the same phase. For example the share of the indirect project costs in Zambia are nearly twice as high as in Tanzania (in %). Comparison is not straightforward however, because in many countries UNICEF is receiving funding for the CHDs from other donors besides Canada, sometimes earmarked. Also, in some countries other agencies contribute towards the CHDs. For example, the UNICEF budget in **Sierra Leone** for the CHDs didn't include any PECs because there was agreement that HKI (also with funding from CIDA) would (continue to) be responsible for the PECS. HKI's annual PECs provided useful complementary information on coverage. By contrast, in **Madagascar** there was no such partner and the lack of funding for PECs on the budget meant that post event monitoring was not carried out most of the time. As one of the interviewees said: **"For polio, post campaign coverage surveys are included in the budget, but not for the CHW. These should be standard included"**.

Differences between country budgets may also occur because of government contributions in kind (in some countries supplies for the CHDs come from the routine for example) or in cash (for coordination and/or supervision, for over-time of staff). In **Sierra Leone** for examples NGO partners in many districts contribute substantially. Contributions include human resources, transport means (cars/motorbikes) and fuel. **"Thanks to our partners we can reach everywhere. They support us with social mobilization, fuel, transport; they are in the community. They know."** (DHMT member Koinadugu). Possible other factors for the differences between countries could be the role of UNICEF in (CHD) service delivery or the geographical coverage (whole country or only part). Due to these factors, it was (unfortunately) not feasible to assess whether there were systematic differences in costs between the three case-study countries and/ or between the three groups (fragile, late and early transitioning countries).

Figure 7: breakdown of country-budgets for direct project activities



Despite substantial financial resources available for the CHDs, there were many issues regarding the availability of financial resources in all three case-study countries. In both **Madagascar** and **Tanzania** the biggest challenge consisted of funding of per diems. In both **Madagascar** and **Sierra Leone** human resources allocated for the CHDs are based on population figures only. Differences in population density, distances between health facility and communities in the catchment area and/or logistical constraints in reaching communities (isolated, river crossings and so on) are not take into account. As a result, rural areas where distance are vast and the population scarce are at a disadvantage.

In **Madagascar** the problem is solved by involving the number of staff districts planned for, not the number allocated by the central level. This year, an estimated 40,000 CHWs and mobilizers participated in the CHDs, while funding was allocated for only half of this number. The already low incentive of 10,000 MGA (3.11 US\$) per day was shared between the actual number of health workers involved, often between two (or more!) CHWs.

In **Sierra Leone** rural teams in vast districts with little infrastructure said they were often overstretched and finding it difficult to fully cover their catchment area in five days: **"We don't have enough teams"**. In these districts mop-up (re-visiting households which were missed during the day of the visit) is often haphazard or not done at all due to lack of human resources. In **Sierra Leone** lack of funds for transport was also an issue. An interview with one of the nurses in charge of a remote community health post summarized the problems well: **"We need more fuel because some villages are motor-able"**. *Who is paying for the fuel? "The DHMT". So the DHMT is providing fuel? "Yes they are proving some extra fuel but not enough". So who pays for the fuel if it is not enough from the DHMT? "I most time improvise". In another village staff told the evaluation team how the village supported transport for the CHDs: **"In some communities, there are community members who use their motor bikes to help reach other communities to do the vaccination"**.*

Availability of other resources was not a real issue (anymore) in the case study countries. In **Madagascar**, shortage of vaccines, which was an issue previously according to various stakeholders, appeared not to be a problem this year. There was however a shortage of posters. In both **Madagascar** and **Sierra Leone** there was not enough low dose vitamin A

(100,000 IU). In **Madagascar** this was due to shortage at the national level, which had already been observed in the 2015 research as well (but not in time for the supply order for 2016). In **Sierra Leone** there has not been challenges with overall availability of vitamin A (100,000 IU). Distribution from the central level to districts usually includes a 10% buffer. Rather, the challenge has been suboptimal distribution across the teams in the district, due in part to the need to open and split tins of 500 capsules across teams in a given district, because the target population of 6-12 month children are few. In Tanzania, even after the end of the of the "Scaling Up Nutrition and Immunization, 2013- May 2017" program, no shortage of supplies is expected, because there is no indication that major donors including GAC (vitamin A) and UNDP/UNICEF (albendazole) will discontinue their support.

Timeliness of supplies was sometimes an issue. In Tanzania, medical supplies were said to arrive often too late due to the fact that clearance of vitamin A by the medical stores department (MDS) took too much time. In 2016, clearance was taken over by UNICEF, which resulted in a timely albeit late arrival of supplies for the June campaign, 2 weeks before the start of the campaign. One of the visited regions had to send separate cars to the zonal MDS to collect the supplies the week before the CHNM started leading to a financial loss as cost of the distribution of medication cannot be integrated in the regular transport. Also in **Sierra Leone** supplies were not always available in time, in particular for pre-positioning in remote health facilities. All supplies are bought by the Central Medical Store (CMS) and availability at the CMS was not considered a challenge. Supplies were in time and sufficient. The main problem seemed to be that the CHDs involve an extra shipment of albendazole and vitamin A to the districts. This shipment is outside the routine delivery and distributed to the health facility before the exercise starts. In some cases facility staff pick up their supplies after implementation training. However, this doesn't always work as planned. As one DHMT member observed: "Because this shipment is outside the budget of the routine, there are delays in securing transport. ***I had to go to Port Loko (location of the CMS) myself to get the supplies***" (DHMT member). However, overall, interviewees at all levels were quite satisfied about availability and timeliness of the necessary supplies in **Sierra Leone**. In **Madagascar**, to avoid delays in the delivery of supplies, UNICEF now procures the supplies for the CHDs once a year instead of twice. This has improved timely availability.

There were however some challenges regarding timeliness of financial resources both in **Madagascar** and in **Tanzania**. In **Madagascar** funds for the districts were said to arrive very late. In Tanzania, health basket funds, are used to cover allowances (per diem) and other costs of the CHDs the district pays for, often arrive late. As a consequence, districts need to borrow from other sources. This was however not seen as a serious problem. Interestingly, a bottleneck analysis performed in 2016 to analyse the supply side of the CHDs and to identify the reasons for poor performance of the districts in Tanzania revealed that late availability of Health Basket Funding at district level was one of the main bottleneck. Another bottleneck was the late distribution of vitamin A.

5.2.3 To what extent has programme governance been efficient (cost-effective) in terms of attaining results?

In the three case-study countries the evaluation team calculated how much the costs per child was during one of the CHDs in 2016. In **Madagascar** and **Sierra Leone** the budgets as approved by the task-forces in each of these two countries were used. In **Madagascar** the cost per child in October 2016 was 0.44 US\$. In this amount are not included costs of the salaries of the regular health staff. However, incentives for CHWs and mobilizers, district supervisors and vaccinators/ vitamin A administrators and so on are included. Also included are costs of logistics such as transport of supplies from central to district and to health unit level. Some means of transport mobilized locally to support implementation is not included. Also not included are the costs of routine vaccines, but this

amount is very little because only children who missed out (one or more vaccinations) at routine vaccination are vaccinated during the CHDs. Nevertheless, supplies made up nearly 60% of the budget in October 2016, mainly because the campaign included measles vaccination for children above 5 years of age (carried out once every three years). When measles is not included the cost per child is 0.26 US\$. UNICEF provided 82% of the budget part of which was GAC, part from other sources including UNICEFs own resources)⁶¹, WHO 15% and other donors (USAID, the Government and the private sector) the remaining 3%.

In **Sierra Leone** the costs per child of the intervention package provided during the CHDs in November 2016 amounted to 0.30 US\$ per child. Included in this budget are the costs of manpower including incentives, costs of training at all levels, supplies and equipment, transportation, planning and coordination as well as monitoring and evaluation. The supplies and equipment budget-line consists of stationary, training materials, referral slips, tally sheets. Gloves and aprons are provided by the Central Medical Store (budgeted at no costs). Other medical supplies (vaccines, vitamin A and albendazole) are not on the budget either, because provided by the routine (vaccines) or procured with donor funds- mainly as in-kind supplies (for example Vitamin A from the Micro-nutrient Initiative. More than half of the budget (56.5%) consisted of per diems for the nearly 4,000 teams that carried out the door-to-door visits. Each team-member received 20,000 SIL per day, or 10,000 SIL (a little more than 18 US\$) for five days, paid after the work has been done.

Not included in the 0.30 US\$ per child are the costs of social mobilisation. If these are included the cost per child increases to 0.50 US\$. UNICEF (funds from GAC and own resources) was the only donor providing funding in cash towards the November 2016 CHDs. It was the first time HKI, which had been contributing US \$ 40,000 US\$ for each round, did not have any funds. Although CHDs are incorporated in district plans, districts do not contribute in cash. Contributions of the district council including line ministries mainly consist of contributions toward social mobilization.

In **Tanzania** the CHD budget at central level consists of the contribution by UNICEF (own resources and GAC) for technical and financial support, including the offshore procurement of vitamin A capsules; assistance in the production of technical guidelines, communication, training, monitoring and evaluation materials; and support for the operational costs in the field, by GAC, consisting of in-kind donations of vitamin A capsules, and financial support for operational costs) and other donors including HKI, MI and USAID. There are no extra salary costs on the budget for regular health staff. The districts contribute in kind by releasing cars for the campaign and in cash for fuel and allowances for staff and community leaders through the Health Basket Fund. In one of the districts visited this contribution amounted to 130 TZS (0.06 US\$) per child reached per campaign in 2015. Unsurprisingly, the financial resources at district and facility level were perceived as insufficient. Sometimes facility staff used out-of-pocket money and districts were supported through other interventions.

Again, comparison of the costs per child between the three case-study countries is not really feasible due to the differences in intervention packages, differences in delivery mode, and differences on items included in the various budgets. For example, in **Madagascar** the costs of social mobilisation are included in the (MOH) budget, while in **Sierra Leone** these are not. In Tanzania, the contribution of the districts differ, making comparison even more complicated.

⁶¹ For 2016 the breakdown of UNICEF contribution towards the CHDs is not yet available (through progress report). On the other hand, the cost per child for the years prior to 2016 were not available at either country level or in the progress reports.

5.2.4 **Has timely support been provided to national and sub-national governments in planning, technical support for procurement, logistics and delivery?**

As can be deduced from the elaboration on the planning process, preparation of the CHDs is through cascade training on the spot approach starting with training, which includes the planning (process) at central level of national supervisors/trainers. National supervisors in turn train district / zonal supervisors, who train the in-charge of the health facilities. Lastly the in charge trains his/her staff including all community health workers CHWs in the catchment area of the health facility. Making a plan of action is part of all training sessions as well the type of interventions which will be undertaken, what they are for and who has to do what and –at facility level, how (with more experienced health staff training community health workers). Social mobilization may also be part of the training. The national supervisors and zonal/district supervisors monitor/supervise teams throughout the CHDs. In all three case-study countries, building capacities in planning as well logistics and service delivery were among the most frequently mentioned success factors of the CHDs. Please refer to section 5.4.5 for further details.

The evaluation question: **Have agencies worked together towards the common goal of increased and sustained well-being and survival of children?** (B2) is answered through the following five sub-questions:

5.2.5 **What were the coordination mechanisms and did they work?**

As explained in section 5.2.1 in **Madagascar** and **Sierra Leone** CHDs are coordinated under a national taskforce under the MOH, while in Tanzania this national task force is placed under the office of the Prime Minister. Once the micro-plans have been approved and resources from central level have been allocated the district health teams brings together the relevant stakeholders such as members of the District Council and line ministries, NGOs, CBOs, religious and community leaders and so on to discuss the implementation of the CHDs, including social mobilisation.

In **Tanzania** strong coordination mechanisms were observed. Stakeholder participation was good and NGOs were contributing towards the CHW. As one interviewee summarized: **"A great coordination system that enables to get the supplements, distribute and supervise the campaign.....that allows even for new-comers on the job to adjust well to the campaign, as well as that the information is spread out"**. Also informal ways of collaboration were mentioned, such as district teams requesting use of cars for supportive supervision from NGOs.

In **Sierra Leone** implementation of the CHDs is a concerted effort of all health and nutrition partners in the whole country, partly institutionalized. For example, UNICEF specifies in its partnership collaboration agreements (PCAs) that partners are expected to actively support campaigns including the CHDs. With 32 implementing partners (at least one in each health districts) such collaboration entails substantial support. The evaluation team was able to triangulate this information by interviewing representatives of UNICEF's implementing partners in all three districts visited. Besides these partners, all major INGOs including CRS, HKI and MSF were involved in the implementation of the CHDs. INGOs were said to put to the advantage of the CHDs their comparative strength in logistics, in particular by making transport available, assist in prepositioning supplies (cold chain!) and sending their own staff to very remote areas. **"That is why we did so well during the campaign: because MSF was supporting us; what we did was to divide the district into two, the MSF chose about 5 chiefdoms, and all of the chiefdoms they chose are the most difficult chiefdoms, and the other chiefdoms were dealt with by us, the MOH, even though we sent some supervisor to supervise the activities of what the MSF guys were doing. At the end of the campaign we came out with a very good result"**.

An entirely different example from **Madagascar** shows how involvement of the private sector can provide new opportunities. TELMA, a recent partner and the biggest telecom provider in **Madagascar**, developed a tool to transmit data during the CHDs and provided the MOH with 500 telephones plus credit for each telephone.

5.2.6 Have agencies developed common strategies and approaches to increase coverage?

According to most stakeholders, social mobilization is an important success-factor in increasing coverage. In all three countries the team found examples of (new and existing) partnerships and strategies to strengthen social mobilization, with differences between countries and levels.

In one of the districts visited in **Tanzania** religious leaders and village leaders were involved in sensitization of the community towards the participation of CHDs, both at district and at community level. Community leaders received training to this end: ***"In 2015 around March/April, training about vitamin A and child health in general was given to leaders at the village level. The training was provided at the district for two days and facilitated by health officers at the district and MOH officers"*** (Health Staff member). However, in another district religious leaders were less involved in social mobilization and didn't receive a training: ***"No, we have never received any special training, we just receive the announcement. What they do is after making announcement during the village meeting; the health officer comes during those meeting and sensitizes people to attend the campaign and also speak of the importance of Vitamin A drops and worm medicine but they have never called people purposely for training on the campaign."***

An example from **Madagascar** is collaboration between UNICEF and PSI. During the last two years PSI has been developing and providing tools for communication (messages) for the CHDs. PSI is also contributing to social mobilization through mobile cinemas. In addition staff working in one of the 200 clinics supported by PSI as well as staff of other NGOs such as CRS are active in mobilizing the population before and after the CHDs. As one facility-in-charge remarked: ***"This is the first time ever private clinics, schools, religious and community leaders met to discuss social mobilization"***. However, as in Tanzania, also in **Madagascar**, there were substantial differences between districts. An interviewee summarized the situation as follows: ***"Involvement is increasing, but not always and not everywhere"***.

In **Sierra Leone** UNICEF and the Inter-Religious Council of **Sierra Leone** (IRCSL), an alliance of Muslim and Christian faith leaders, have a long-standing partnership on raising community awareness around essential development and health issues including the CHDs⁶². Activities by religious leaders include announcements in mosques and churches, home visiting houses and organising meetings with community members to ensure they understand the benefits of the CHDs. More recent is the collaboration between UNICEF and Restless Development, an INGO for youth-led development to raise awareness about health issues in general including the CHDs in six priority districts through drama and songs. Restless Development presently uses mobile phones for awareness raising (52,000 registered youth reports!). Activities not only involve informing the youth but also telling them to spread the message that the campaign (CHDs) is very important.

In **Madagascar** UNICEF nor other stakeholders knew whether there is a net effect of the extra investments in social mobilization. As one interviewee summarized: ***"The added value of social mobilisation is not clear. There is no way to assess the results of social mobilisation. Social mobilisation at present doesn't even entail asking who are the most vulnerable"***. In this case-study country detailed information on the effectiveness of the

⁶² UNICEF (2010). In Sierra Leone partnerships with religious leaders help combat child mortality. Available from: https://www.unicef.org/wcaro/2009_5743.html

CHDs apart from overall coverage and coverage per district (and trends) is not collected systematically. In some other countries such information is collected regularly (at least once a year, often after each campaign) through post event surveys and independent monitoring. Benin and **Madagascar** have collected however this type of information through LQAS surveys in 2015. Please refer to section 5.3.10 (reasons for not gaps in coverage) and 5.3.14 (effectiveness in terms of knowledge transfer) for more details.

5.2.6 **Have agencies jointly identified and addressed gaps in geographic or vulnerable/ at risk group coverage?**

As mentioned in the section on relevance, in all three countries the Reach Every District / Reach Every Community strategy has been agreed on and is being used to ensure that also remote areas, isolated communities and the most vulnerable are reached. To ensure equitable coverage a number of strategies is used, as also mentioned earlier. These include:

- (1) using data from the previous CHDs to identify gaps in coverage and prioritise these for the next CHDs and;
- (2) using data from independent monitoring and PECS (e.g. data explaining reasons for non-response).
- (3) mapping at facility level prior to the CHDs and prioritising the hardest to reach communities first;

In all three case-study countries also, in efforts to (further) address gaps in (geographical) coverage, agencies agreed to strengthen the role of CHWs. In **Sierra Leone** UNICEF's nutrition partners (at least one in every district) and HKI have strongly advocated (and are paying for) a bigger role of the CHWs in the CHDs. Partners are (also) actively involved in (supporting) training of CHWs for CHDs interventions, especially in mobilization. In **Tanzania** involvement of CHWs complement the scarce human resources at facility level during mobilization and implementation of the CHDs. (as it is also a preferred mechanism to use community members especially for mobilization). Typically, CHWs visit households in their community prior to the campaign to make sure that the target groups are aware when the CHD teams will arrive either at homes or in the vicinity) or- alternatively, when they are expected at the health facility (children living in the vicinity of the facility), accompany the CHD team and -in some countries, engage in community conversation after the team leaves and further follows up, e.g. by tracing households which were not home/ did not attend. In **Sierra Leone** recently also Mother Support Groups (MSG) consisting of pregnant women and mothers of children below 2 years of age are involved in raising awareness among parents.

5.2.6 **Are interventions sufficiently complementary to the work done by other stakeholders?**

The main question the evaluation team asked in this respect was complementarity to work done during the routine (including activities done with support of NGOs/CBOs at community level).

In **Tanzania** the main rationale for an institutionalized campaign bi-annually is to ensure that the children of 2 to 5 years who mostly do not attend clinics also utilize health and nutrition services. However, in one of the districts with a coverage rate above 90 percent discussions with community members at health facility and community level and through checking the clinic cards revealed that the majority of the under-fives up to the age of 5 years visit the clinic monthly. These monthly visits place a large burden on the parents – mostly mothers – and the health staff. For these children it would be possible to do deworming and VAS during regular services. Currently they can't do this though. This because VAS supplies are only delivered prior to the campaign dates and only left over supplies can be used throughout the year, while albendazole is part of the regular supplies but not available in the large enough quantity. The campaign can therefore be an unnecessary burden for districts that have very well performing regular RH services. In the same district, weight for height and weight for age is also collected

on a monthly basis. During the Child Health and Nutrition Month MUAC screening is added to that. Discussions with national stakeholders on this revealed that they did want to keep the protocol simple and not make exceptions in CHNM activities for well performing districts. Behavioural change communication during CHNM is minimum. Various stakeholders said that this was left to NGOs who have more frequent interaction with the population than the bi-annual CHDs.

In **Madagascar** child health interventions provided during the CHDs fall into three categories: (i) interventions solely provided during the CHDs (VAS and FREE provision of albendazole); (ii) catch-up of defaulters (children who missed one or more vaccinations during the routine and; (iii) screening of children for acute malnutrition through MUAC (in districts with high levels of acute malnutrition, where a system of referral is in place). MUAC screening is carried out by CHWs (pls refer to paragraph 5.2.3), but the data on CHDs don't make a distinction between children already previously screened and the ones screened during the CHDs (which wouldn't make sense given that MUAC screening is quick, non-evasive and that early detection (=frequent screening) and advantage). Data suggest that about 15-25% of children (depending on the antigen) receive a catch-up immunization during the CHDs. All interviewees insisted that CHDs were complementary to the routine, providing vitamin A and albendazole which were hardly provided during routine and useful in catching the hard to reach children.

In **Sierra Leone** the CHDs, are seen as an (important) mechanism to trace children under five and pregnant women who have missed one or more contact moments in the routine or previous campaigns (defaulters) or never showed up. As a high level interviewee from the MOPH put it: ***"We also use this platform (the CHDs) to reach children with immunizations services especially those that have defaulted in their routine immunizations"***. With increasing numbers reached during the routine, the potential target group has become smaller and smaller. Data show that the average percentage of children vaccinated during the CHDs ranges from less than 1% to 5.5% (depending on the vaccination) in 2015 and 2016. The success of the CHDs is however described in terms of children reached with VAS and albendazole. As one interviewee phrased it: ***"In one week of campaign, we are able to reach more children than during six months of routine."*** In terms of number of children vaccinated this is clearly not the case: the number reached during routine is far higher than during the CHDs. Although vitamin A and albendazole are also available (for free) in the routine (though not in sufficient quantities for preventive services for all under-fives), CHDs figures don't distinguish between the numbers of children reached during the campaign and during routine. It is estimated that at least 10% of all children younger than five receive VAS in the routine.

As opposed to **Madagascar**, in **Sierra Leone** MUAC screening, which was dropped from the CHDs during the Ebola Virus Outbreak (which posed a challenge in terms of touching) in 2014, was not re-introduced because in the meantime MUAC screening by community health workers has been embedded in community based health care in all districts with a coverage of on average 70% per district.

5.2.7 **Were there improvements in the integration of child nutrition and immunization services through strengthened linkages between out-reach and treatment services?**

In all three case-study countries community services were strengthened, partly because the CHDs entail capacity building of CHWs twice a year. In **Tanzania** new guidelines provide a stronger role for CHWs among others in bringing services and sensitization nearer to the community. In **Sierra Leone** the Policy for Community Health Workers specifies that social mobilization for the CHDs every 6 months is one of the core activities of CHWs. In **Madagascar** the National Plan for Community Nutrition tasks CHWs with providing VAS and albendazole and MUAC screening during (CHD) campaigns, but progress on an updated policy in which CHWs will be tasked with these activities during routine is long overdue. As one stakeholder summarized:

"The revised Community Health Strategy is not at any stage yet." The main reason is apparently that stakeholders yet need to reach consensus on the extent to which CHWs can take responsibility for (para) medical tasks.

In **Sierra Leone** children miss out on routine activities due to long distances to the facility, ignorance and/or indifference of families and/or social cultural reasons. To address this, outreach is organized during which children are vaccinated, but vitamin A and albendazole are not provided at those times outside of the CHDs. In interviews, the evaluation team heard suggestions for strengthening outreach: ***"We are working on strengthening on our routine outreach activities; that is, if the activity has been going on twice a month, we will now have to be doing that once every week. And also we need to intensify our social mobilization, intensify our health education, have regular meetings with stakeholders and also put by-laws wherein we state that if a woman is pregnant and fails to register with us for the first three months, she pays a fine and if she doesn't bring forward a defaulter, she pays a fine too"***. (DHMT member, Tonkolili District)

In **Tanzania**, in districts very well performing on regular preventive health services it is possible to provide VAS and albendazole to children also children aged 2- 5 years, that is after they have received their regular vaccinations. The CHDs and extra efforts of the health staff and community volunteers can be then be used for to reach that small proportion of "hard to reach" children in the district. Although the new role of CHWs provides an additional opportunity, no districts consider integrating CHD interventions completely in the regular health services as they are used to the campaign and follow the instructions from National level (mainly from the Tanzania Food and Nutrition Centre (TFNC and UNICEF). The question whether the practice that parents continue to visit the health centre every month with their children once they have reached the age of two was discussed. At central level opinion on this issue varies. The department for Reproductive Health differs thereby in opinion from the TFNC. They propose to have –in well performing districts–quarterly preventive services for the children from 2 to 5 years instead of monthly ones. VAS and provision of albendazole could be included in the routine in those districts.

Efficiency overall

CHDs take place as scheduled, with a few exceptions. Micro-planning is a useful tool for this, but there are possibilities to better make use of micro-planning. Top down planning (**Madagascar**) or limited possibilities to address contextual challenges (geographical, population density for instance in **Sierra Leone**) are examples in case. In **Tanzania** the decentralized approach resulted in tailor-made plans at district level. Data from previous CHDs and surveys are being used to address gaps and improve coverage. There are many examples of how agencies collaborate in making the CHDs a success. Although the onus is on working together in mobilisation, in countries like **Sierra Leone** support from partners during the actual implementation (logistics, human resources and supplies) is crucial. A weaker point is that there are virtually no data on the efficiency of some efforts (such as social mobilization). Due to many factors including multi-donor support for the CHDs and differences in budgeting between countries as well as limited access to relevant information the evaluation team didn't have the means to evaluate the cost-effectiveness of attaining results.

5.3 Effectiveness

The evaluation question **Are planned program outputs and outcomes being achieved? (CI)** is answered through the following seven sub-questions:

5.3.1 What were the annual case-loads?

Annual case-loads provide an indication as to the scale of the public health issue addressed by an intervention (and therefore indirectly also its relevance), and trends over time can also hint towards its effectiveness. For this evaluation we thus analysed annual case load for measles, diphtheria, pertussis and neo-natal tetanus according to the WHO vaccine-preventable diseases: monitoring system 2016 global summary (see section 4.2.1.3 for details). However, it is important to note that this data needs to be interpreted with caution, as reports vary greatly from country to country given that this statistic is reported in absolute numbers and is therefore dependent on total population size (Figures 12-13 below). Furthermore trends over time are heavily biased towards changes and especially improvements in reporting. As vitamin A deficiency is not a routinely diagnosed in the evaluation countries, case-loads are not collected nor reported and thus could not be analysed.

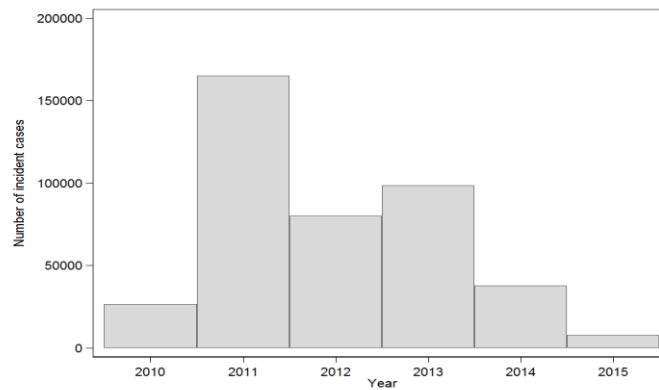
Across all 13 countries, measles case-loads are much higher than the other three diseases addressed by the immunisation programs considered in this evaluation. The total number of measles cases reported over the period 2010-2015 (415,860) was up to 22 times as high as the number of cases of Diphtheria, Tetanus and pertussis (18,339). In the year 2011 the highest number of measles cases were reported (just over 165 000) with gradual decreases thereafter and the lowest number of cases reported in 2015 (7716). WHO and CDC indeed reported a series of measles outbreaks in 2011 in the Americas, Europe and Africa (DRC, Nigeria, Zambia, Ethiopia⁶³ and Somalia⁶⁴). Within the 13 evaluation countries, DRC contributed by far the greatest number of cases, with up to 133,802 cases reported in 2011. Most countries reported the highest number of cases in 2010-2011 - apart from Benin (peak in 2014 with 786 cases), South Sudan (peak in 2012 with 1952 cases) and Uganda (peak in 2013 with 7878 cases).

The data for diphtheria is scant, with many countries not reporting any cases or any data. Noteworthy is the huge increase in the number of reported cases in Madagascar in 2015 - 1527 out of the 1637 total cases in all 13 countries. Pertussis data is also scantily reported - most cases were reported in CAR, DRC and Madagascar. While DRC did not report any cases after 2012 (3407), reporting is on the rise in CAR, with only one case reported in 2010 and 379 in 2015. The highest number of reported cases in Madagascar was in 2015 when 413 cases were reported. The year which saw the highest number of incident cases of neo-natal tetanus was 2012, largely because of an increase in the number of cases reported in DRC (1252). Some countries reported zero cases (e.g. Tanzania and Zambia) and others very few cases such as Burundi, Benin and Mauritania. Throughout the evaluation period the countries which reported the highest number of cases are DRC (3661) Chad (1244) and Uganda (1080).

⁶³ http://www.who.int/csr/don/2011_10_07/en/

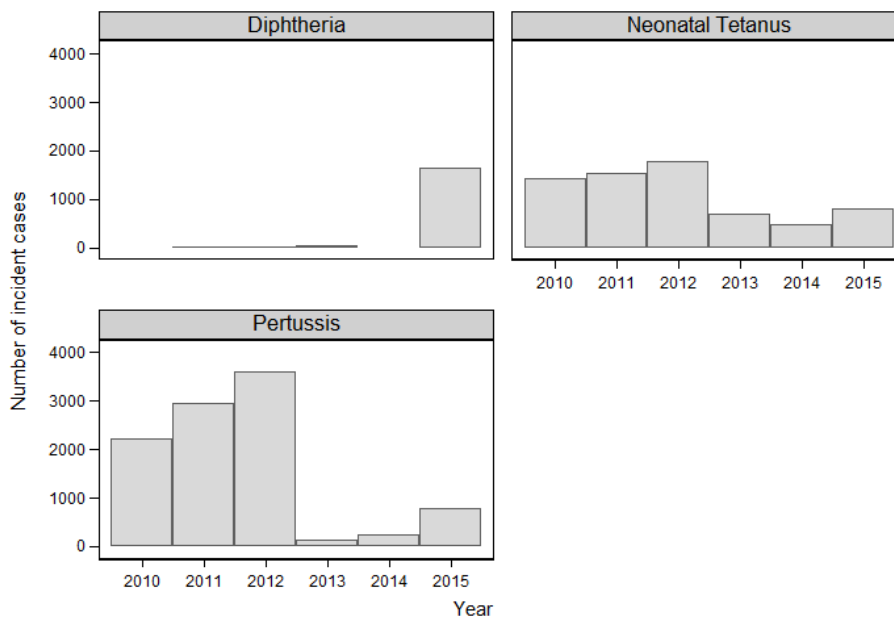
⁶⁴ <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6134a4.htm>

Figure 8: Annual measles case-load in 13 evaluation countries



Source: WHO vaccine-preventable diseases: monitoring system 2016 global summary

Figure 9: Annual diphtheria, pertussis and neo-natal tetanus (total) case-load



Graphs by Disease

Source: WHO vaccine-preventable diseases: monitoring system 2016 global summary

5.3.2 How many children were reached with CHD campaigns per year during the intervention period?

The number of children reached with CHD campaigns provide an indication of the number of campaigns conducted per year (whether these were implemented as planned) and the scale of the CHD efforts per country (number of children reached).

The 2013 CHD annual progress report states that funds for the current grant were received in October 2013, and therefore the number of children supplemented with Vitamin A in a campaign-style delivery⁶⁵ in 2014 and 2015 according to country reported data is presented here as an indication of the number of children who were reached with the intervention. According to UNICEF data processing conventions⁶⁶, when two rounds of campaigns are

⁶⁵ The data shared with us does not enable us to distinguish between CHD campaigns and other types of campaigns (NIDs, Polio Days, etc.)

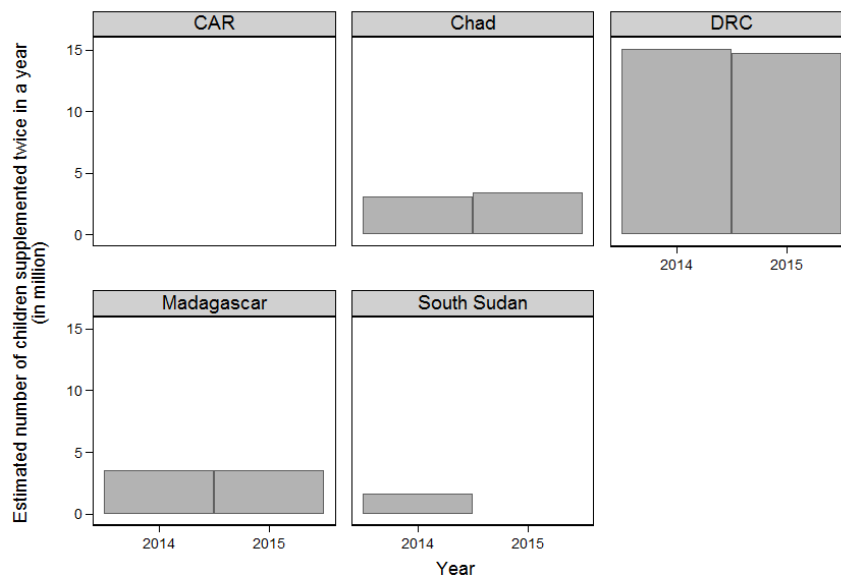
⁶⁶ <https://data.unicef.org/topic/nutrition/vitamin-a-deficiency/>

conducted in a given year, we assumed the lowest number of children reached to refer to the number of children supplemented with vitamin A twice (effective coverage). The number reached in only one campaign per year (if only one campaign was conducted) or the highest of the two campaigns refers to the number of children reached at least once.

Analysis on effective supplementation during campaigns are presented in Figure 10a-10c. Most countries have two bars, one for 2014 and for 2015, showing that most of them were able to conduct two campaigns a year. The height of the bars indicates how many children (6-59 months) are estimated to have been reached twice for VAS in a given year by means of campaign. Three countries did not conduct 2 campaigns per year where VAS was provided – two of them fragile states (CAR and South Sudan) and one late transitioning (Sierra Leone). In CAR only one campaign was conducted in 2014 and one in 2015, in South Sudan only one in 2015 (two in 2014) and in Sierra Leone only one campaign in 2014 (two in 2015). The grave levels of political unrest and insecurity in all or parts of CAR and South Sudan, who were both designated as level 3 emergencies, the United Nations’ highest security level was the main reason for this. Sierra Leone was seriously affected by the Ebola epidemic in 2014 and unable to implement the second round of CHDs.

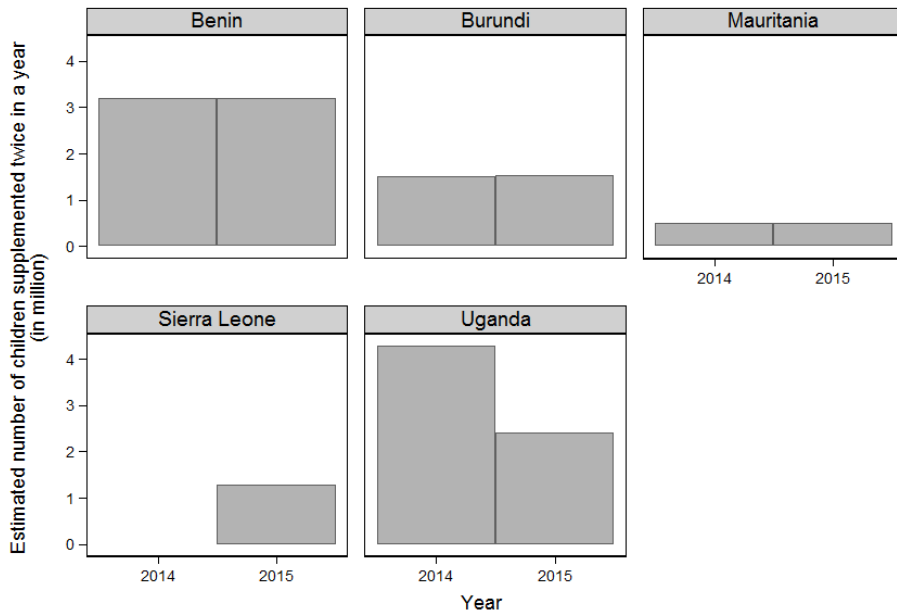
The total number of children supplemented twice by means of campaign across all 13 countries with currently available data is estimated to be 38.5 million in 2014 and 41.8 million in 2015

Figure 10a: Effective VAS through campaign-style delivery per year in Fragile States



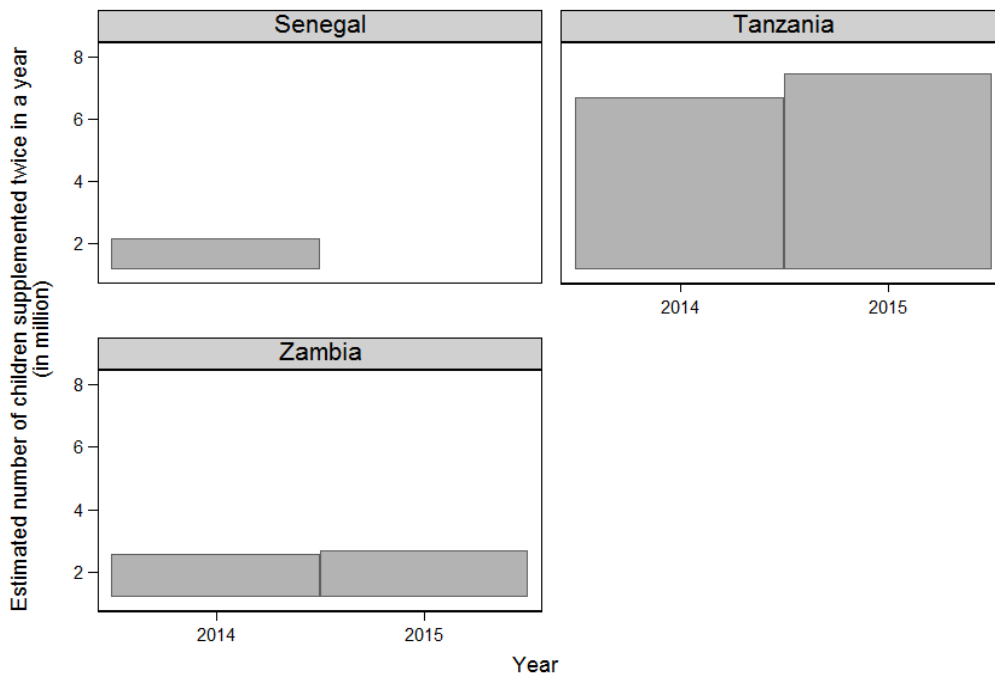
Source: Campaign data shared by individual countries to evaluation team

Figure 10b: Effective VAS through campaigns-style delivery per year in Late transitioning countries



Source: Campaign data shared by individual countries to evaluation team

Figure 10c: Effective VAS through campaigns-style delivery per year in Early transitioning countries



Source: Campaign data shared by individual countries to evaluation team

5.3.3 Has the number of children receiving vitamin A increased overall (routine and campaign)?

In order to assess whether the CHD intervention contributed to an increase in the number of children supplemented with Vitamin A, it is useful to look at the average number of children

supplemented per semester before (2010-2013 S1) and during the project years (2013 S2 - 2015).

Data is available for most countries on VAS through campaigns or routinely before and after the second round of 2013, since data was shared for the period from 2010 to 2015. The only countries which did not share data prior to the second semester 2013 is South Sudan, this as result of South Sudan recently having been established as autonomous country and the first round of VAS having been conducted in 2013. This data enables an analysis on 12 countries of whether there was an increase before and during the project years in the average number of children supplemented per campaign or semester through either mode of delivery (e.g. in Uganda and Sierra Leone VAS is conducted and reported on routinely as well as through campaigns). Importantly, in these analyses we provide an indication of number reached when supplementation has actually taken place (so if no supplementation took place, the number "zero" does not contribute to bringing down the average number of children reached), as opposed to results presented in the following section (section 5.3.4 analyses coverage reached and there "zero percent coverage" does contribute to bringing down the average coverage achieved).

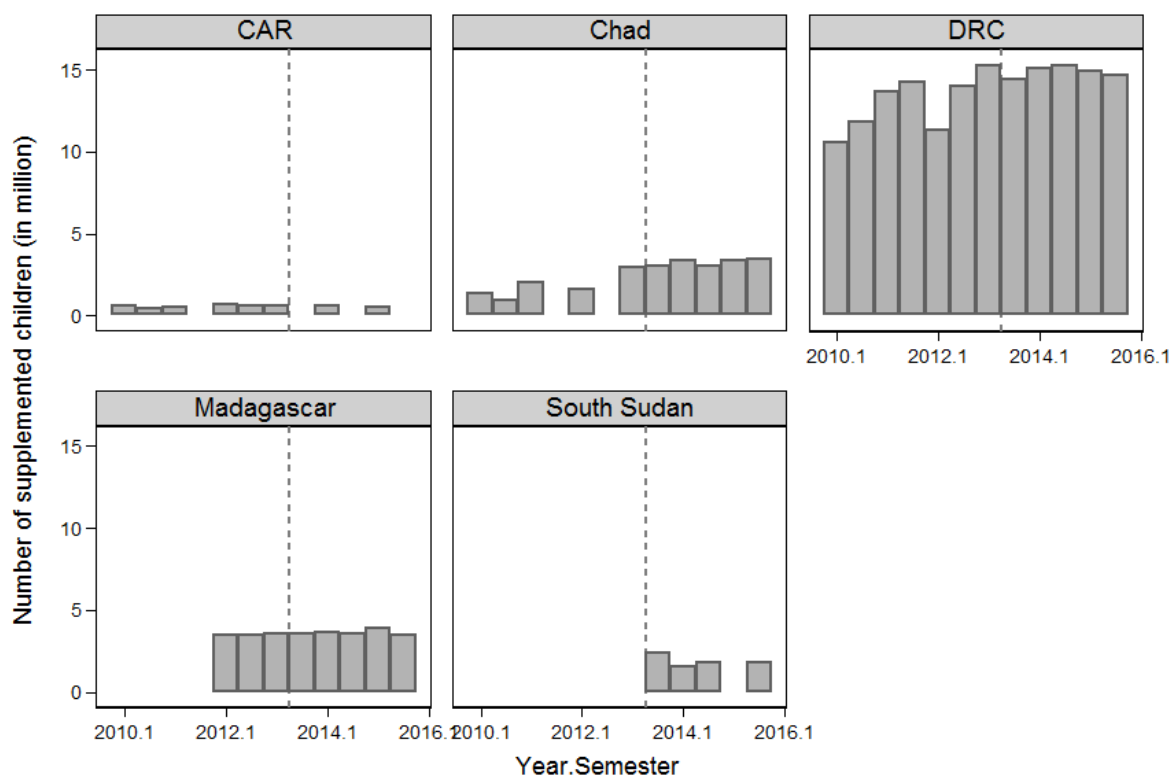
The average number of children supplemented per country per semester, before and during the project years, is presented in Table 3 and Figure 11. In Figures 11a-11c each bar represents the total number of children supplemented per semester. In Table 3 we present the average number supplemented per semester before and during the project support years for comparison. Overall we estimate a 500.000 (13%) increase in the average number of children supplemented per semester (Table 2). Most countries saw an increase in the average number of children supplemented per semester, apart from one fragile state being CAR (but importantly, South Sudan was excluded from these analyses), two late transitioning countries being Sierra Leone and Burundi and one early transitioning country being Senegal. In Burundi and CAR, the security situation considerably worsened over the course of time. According to the 2014 annual report, in CAR this affected the ability of both conducting campaigns in all parts of the country (service delivery perspective) as well as attending them (community perspective). This might also explain the trend in Burundi. Senegal experienced the sharpest decreases, which according to the 2015 annual report can be attributed to low coverage of VAS through routine services in the 12-59 months age group, possibly because of the targeting through the community growth monitoring platform, which is targeted at children under two. In Sierra Leone the major challenge encountered and reported on in the annual report was the Ebola outbreak in 2014-15 which adversely affected service delivery and access across the entire health system.

Table 3: Average number of children supplemented in a semester (in millions) before (2010-2013 S1) and during (2013 S2-2015) the project years, per country

	Before	During	Change	Percentage change
Burundi	1.60	1.52	-0.09	-5%
Benin	2.64	2.67	0.03	1%
CAR	0.59	0.57	-0.01	-2%
DRC	12.99	14.88	1.89	15%
Madagascar	3.51	3.62	0.11	3%
Mauritania	0.53	0.53	0.00	0%
Senegal	2.54	1.80	-0.74	-29%
Sierra Leone	0.21	0.18	-0.02	-12%
South Sudan		1.91	1.91	
Chad	1.82	2.38	0.57	31%
Tanzania	4.06	4.62	0.56	14%
Uganda	1.65	3.40	1.75	106%
Zambia	1.91	2.57	0.65	34%
Average over all countries			0.5	13%

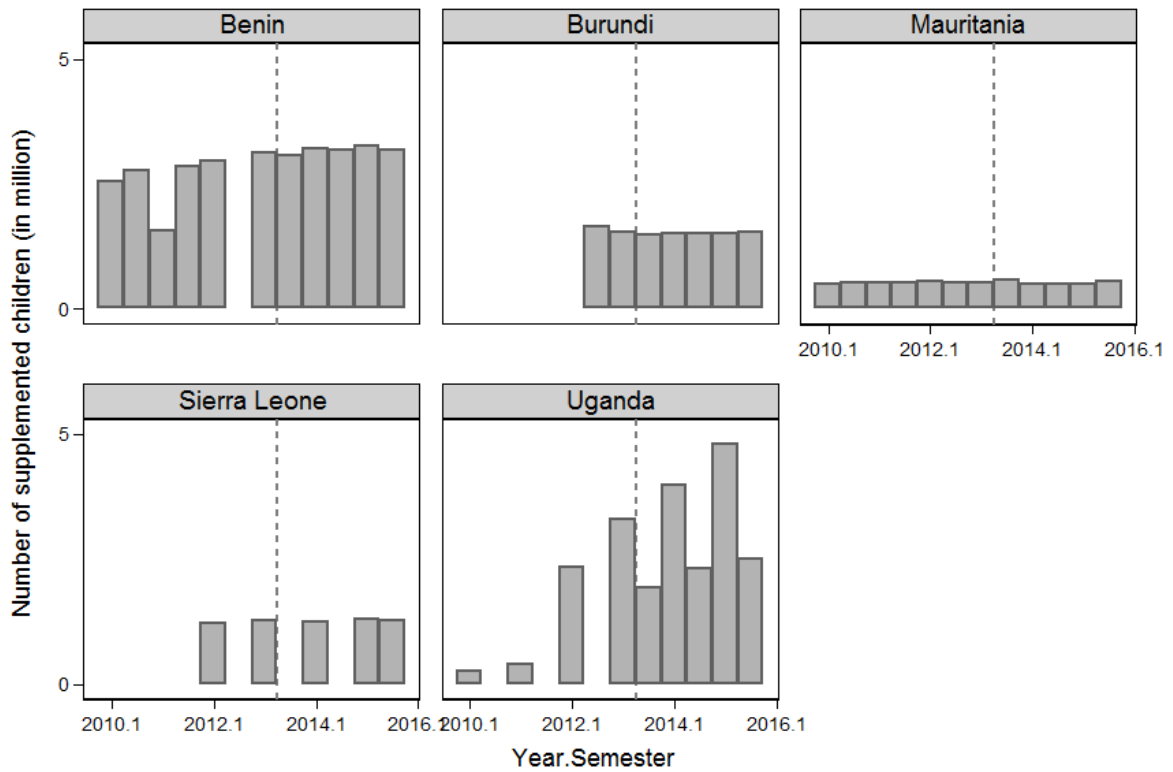
Source: Campaign (and HMIS) data shared by individual countries to evaluation team

Figure 11a. Number of children supplemented with Vitamin A per semester in fragile states



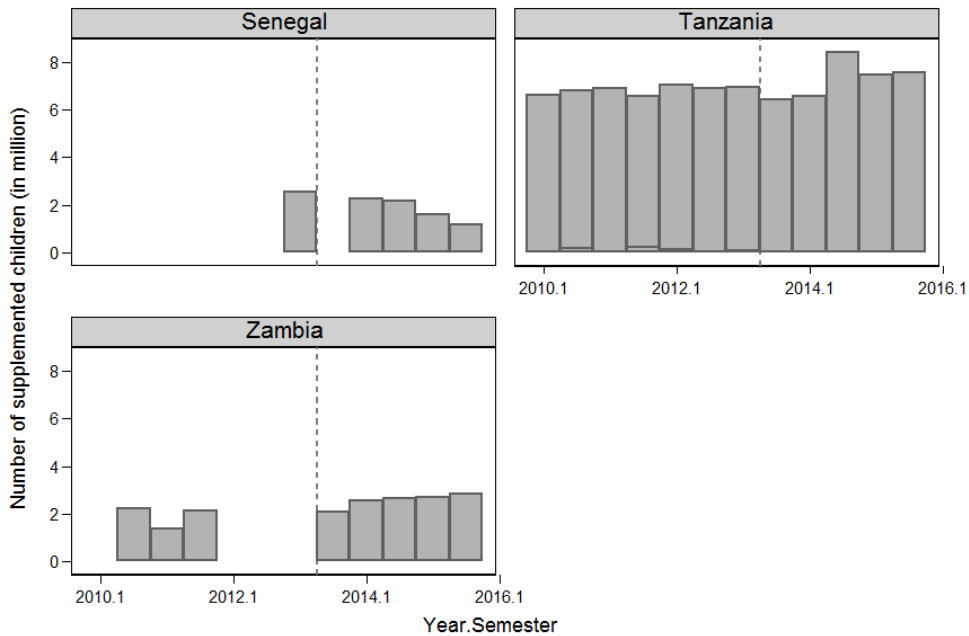
Source: Campaign (and HMIS) data shared by individual countries to evaluation team

Figure 11b. Number of children supplemented with Vitamin A per semester in late transitioning countries



Source: Campaign (and HMIS) data shared by individual countries to evaluation team

Figure 11c. Number of children supplemented with Vitamin A per semester in early transitioning countries



Source: Campaign (and HMIS) data shared by individual countries to evaluation team

The evaluation question: ***How does the initiative contribute to increased coverage (in particular of underserved populations)?*** (C2) is answered through two sub-questions.

5.3.4 Has the coverage of vitamin A supplementation increased?

Evaluation countries shared their administrative and campaign data which was analysed to assess trends in Vitamin A coverage before (2010-2013 S1) and during the intervention (2013 S2-2015) years, alongside UNICEF Data and Analytics estimates of Vitamin A coverage (VAS database), which attempt to address the known data quality issues with campaign data (numerators are overestimated and denominators underestimated thus leading to artificially high coverage estimates). One of the sources of data which UNICEF makes use of in adjusting the campaign estimates, is data from nationally representative surveys. These were also taken into account in our analyses of coverage, namely results from DHS/MICS survey as well as from PECS and LQAS. Trends in coverage were analysed in relation to the targets set out in the CHD Performance Monitoring Framework. In this section we present graphs for coverage over all ages 6-59 months, whereas in Annex VIII we present the data disaggregated by age group (6-11 months and 12-59 months) - all results are all discussed in this section. Trends for children 6-59 months presented here include UNICEF estimates.

As can be seen from Figures 12a to 12c, generally UNICEF estimates (dashed line) do not vary greatly from the country reported data (grey bars). However, here are some cases where there is administrative data but no UNICEF estimates, which is usually an indication of data quality concerns in the administrative data. Where there is a UNICEF estimate but no administrative data, it is likely that the evaluation team was not provided with the data points in question. Given these data quality limitations, we decided to rely on UNICEF estimates for analyses of change before and during the project years (Table 4). In addition to country reported and UNICEF data, we also show the estimated coverage from DHS/MICS surveys (hollow red circles) and LQAS/PECS surveys (filled red circles) Generally the estimates coverage from DHS/MICS surveys is lower than the coverage from LQAS and PECS surveys, as it is known that the former underestimate coverage due to recall bias whereas LQAS and PECS surveys, being conducted soon after a campaign, have been shown to produce more accurate estimates. The UNICEF coverage estimates are mostly in line with the LQAS/PECS results (although it is important to point out that the two LQAS surveys in Madagascar and Benin were not nationally representative but conducted in a selection of districts/departments).

As can be seen in Table 4, on average, according to UNICEF Data and Analytics data, VAS coverage in the evaluation countries decreased in the project years (2013 S2-2015) compared to before (2013 S1-2015) by around 7 percentage points, or 9% decrease. Importantly, here, when coverage is estimated to be zero in a certain semester, it affect the estimated coverage in before/during period (as opposed to analyses presented in section 5.3.3 above). Thus this overall decrease is mainly caused by decreases where campaigns could not be conducted as well as countries where the number of children supplemented dropped. These are the countries which experienced security crises (South Sudan, CAR, Burundi), and Sierra Leone which had to cancel its second campaign in 2014. It also includes Senegal, which experienced the most severe decrease in coverage, and as mentioned above, this was attributed in the 2015 annual report to low coverage of VAS through routine services in the 12-59 months age group, possibly because of the targeting through the community growth monitoring platform, which is targeted at children under two.

Generally most countries were able to reach their targets in the semesters when campaigns were conducted. Targets referred to here are those set out in the PMF, and range between 80 and 95% depending on the countries. The main problem with reaching targets was where campaigns were not conducted at all in certain semesters (CAR, South Sudan, Sierra Leone). Burundi and Uganda are two countries whose coverage was consistently below their PMF target

(90%) as well as below the 80% international target. While in Burundi the fragile security situation might explain this, for Uganda it is also important to bear in mind that there are known data issues with VAS, which is also why UNICEF did not publish an estimate for 2015. Coverage estimates are considered artificially low due to issues with completeness of reporting - there is an estimated incomplete reporting at 53% across health facilities, during the transition from reporting in campaign/tally sheets to reporting directly into HMIS/DHIS2 in 2015 (although our analyses were still able to suggest a huge (doubling) increase in the number of children supplemented based on country reported data in Table 3).

VAS coverage data was not reported for all age groups (See Annex VIII) - not for CAR, Chad and South Sudan, Benin, Burundi and Uganda. For those countries that did report data by age group, data suggests that coverage was slightly higher in older children compared to infants (median coverage in 6-11months: 94.1%; 12-59 months: 97.6). This trends is consistent across countries, although in some countries it is more marked than in others. For example in Mauritania the difference in mean coverage is 77% to 100%, in Senegal 87.8% to 95.5%. The only exception is Zambia, where means coverage is 87.8 in infants and 73.2% in children.

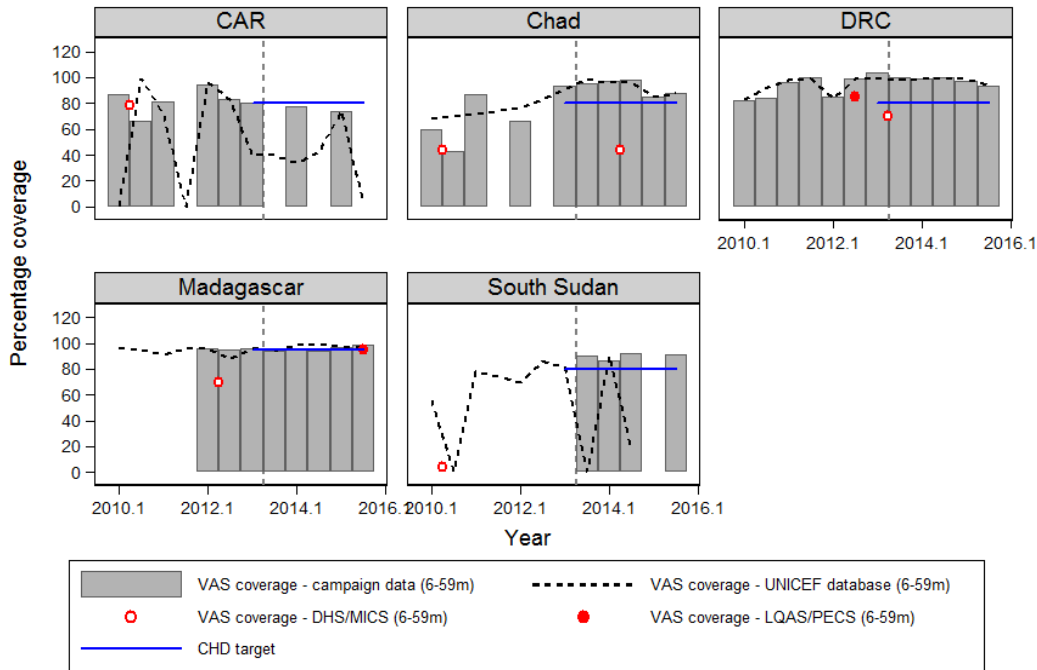
Table 4. Change in VAS coverage before (2010-2013 S1) and during (2013 S2-2015) the project years, per country

	Before	During	Change	Percentage change
Burundi	82.9	71.4	-11.5	-14%
Benin	98.9	97.8	-1.1	-1%
CAR	55.7	38.6	-17.1	-31%
DRC	93.4	97.8	4.4	5%
Madagascar	94.0	97.2	3.2	3%
Mauritania	98.4	91.0	-7.4	-8%
Senegal	99.0	60.2	-38.8	-39%
Sierra Leone	99.0	80.4	-18.6	-19%
South Sudan	62.0	36.0	-26.0	-42%
Chad	78.3	92.8	14.5	18%
Tanzania	97.3	90.8	-6.5	-7%
Uganda	62.9	66.5	3.6	6%
Zambia	91.0	99.0	8.0	9%
Average over all countries			-7.2	-9%

Source: UNICEF Data and Analytics data (VAS database)

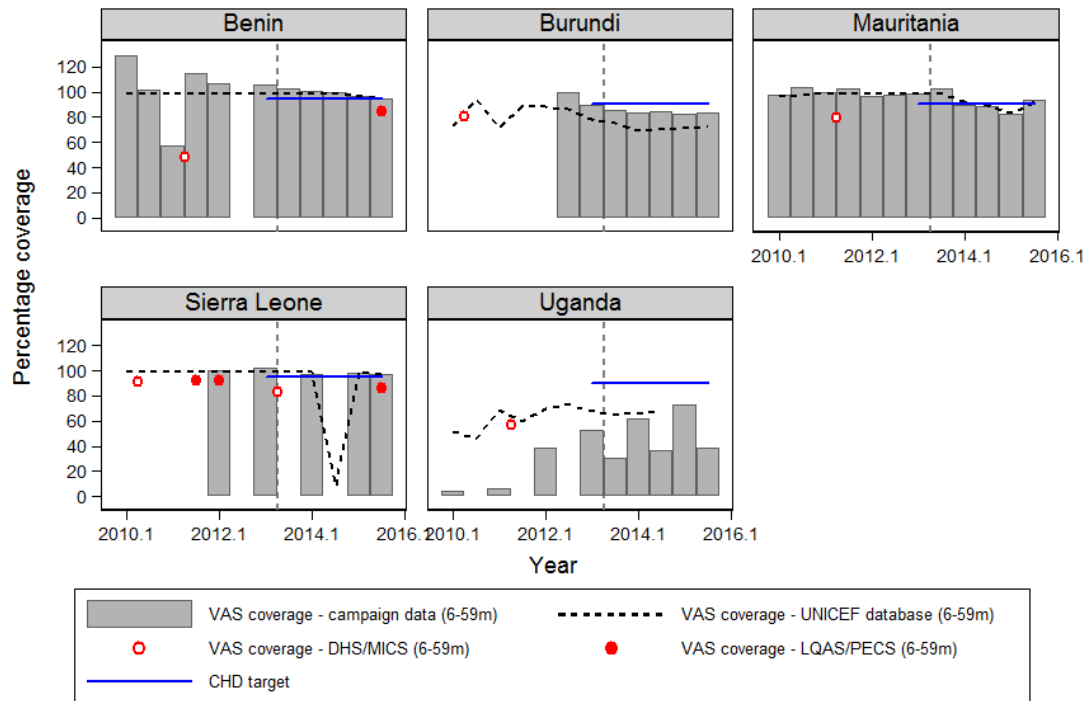
Note: no estimates of VAS coverage from the UNICEF database for South Sudan and Uganda for 2015 despite the fact that that these countries reported coverage data (see Figure 12a and 12b). For both countries the data was deemed incomplete

Figure 12a: VAS coverage in fragile countries (6-59 months)



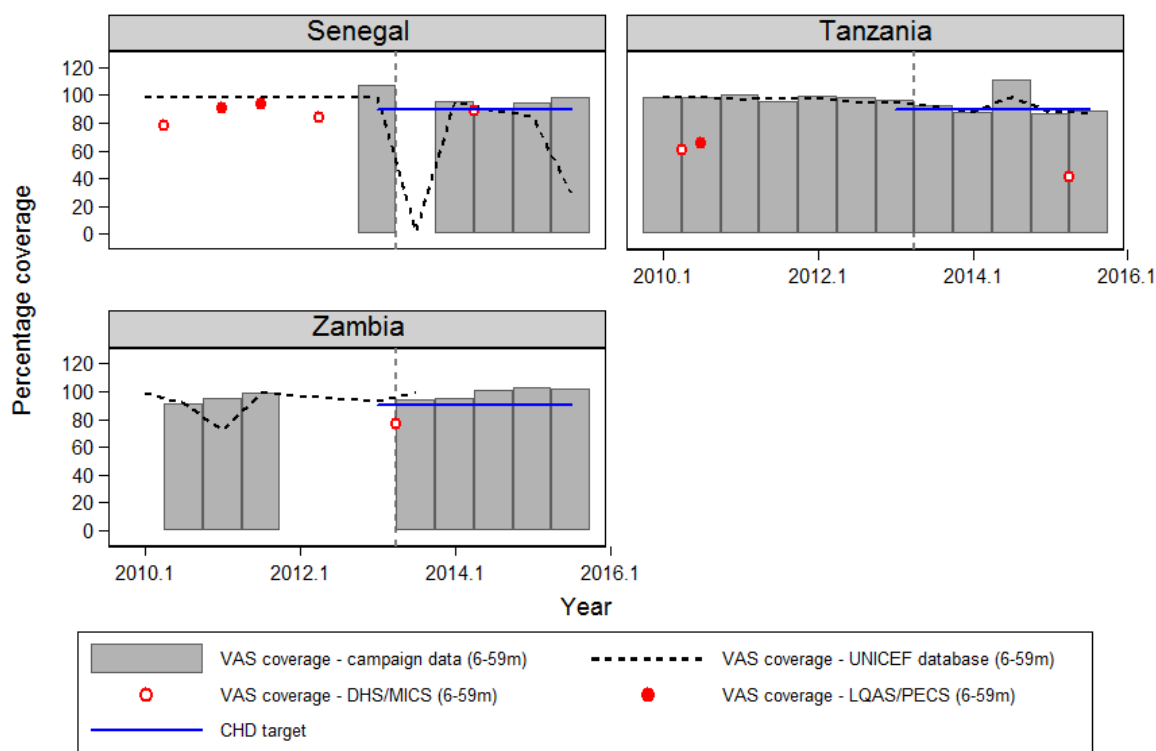
Source: VAS coverage according to campaign data as shared by individual countries to the evaluation team and UNICEF Data and Analytics data (VAS database). Note: Madagascar LQAS not nationally representative 46 communes in 3 districts (Andramasina, Miandrivazo, Vatomaniry)

Figure 12b: VAS coverage in late transitioning countries (6-59 months)



Source: VAS coverage according to campaign data as shared by individual countries to the evaluation team and UNICEF Data and Analytics data (VAS database). Note: Benin LQAS not nationally representative (19 communes in 3 departments (Alibori, Atacora Atl. and Zou)

Figure 12c: VAS coverage in early transitioning countries (6-59 months)



Source: VAS coverage according to campaign data as shared by individual countries to the evaluation team and UNICEF Data and Analytics data (VAS database)

5.3.5. Has the coverage of immunisations increased?

Evaluation countries shared their administrative coverage data which was analysed to answer this evaluation question along with the WHO/UNICEF National Immunization Coverage (WUENIC) estimates⁶⁷. Given that trends for MCV1 and DTP3 were broadly comparable we present here trends for MCV1 whereas trends for DTP3 are presented in Annex IX. Trends for the coverage of both vaccines are discussed here.

While delivery of immunization services is mainly done routinely in all evaluation countries, immunization coverage rates offer a useful barometer against which to compare VAS coverage and to gauge the strength of routine service delivery. However, it must be reminded that delivery of VAS through routine services is more challenging than immunisations, since bi-yearly supplementation is need from 6 months to 5 years, which requires many repeated visits, as opposed to the immunisations considered here which are given over the course of 3 visits before the age of one.

Figures 13a-13c show immunization estimates over the period 2010-2013. The continuous line refers to coverage as provided by individual countries based on the HMIS records whereas the dashed line refers to WUENIC estimates. In addition, red circles denote estimates from DHS/MICS surveys.

As expected, WUENIC rates are generally lower than the national EPI estimates, as they are estimated by calibrating estimates to the nationally representative surveys and are therefore more likely by design to be closer to truth coverage than EPI estimates (for which there are

⁶⁷Anthony Burton, Robert Kowalski, Marta Gacic-Dobo, Rouslan Karimov, David Brown (2012). *A Formal Representation of the WHO and UNICEF Estimates of National Immunization Coverage: A Computational Logic Approach*. <https://doi.org/10.1371/journal.pone.0047806>

issues with both numerators and denominators which bias estimates upwards often to values above 100%). The WUENIC estimates mostly coincides with the DHS/MICS estimates as the latter is being used to calibrate WUENIC estimates. For this reason our analyses comparing average coverage before (2010-2013 S1) and during the intervention (2013 S2-2015) years, is based on WUENIC estimates. This also enables to include Chad and Senegal, who have not shared their HMIS data, in these calculations. Before and during changes based on HMIS derived coverage estimates are presented in the Annex for comparison.

Overall, according to WUENIC estimates, there was no change before and during the project years in MCV1 rates, and slight decrease in DTP3 rate. Uganda and Zambia are the only countries where changes in DTP3 and MCV1 coverage are not aligned. In Uganda DTP3 coverage decreased slightly whereas MCV1 increased and the opposite in Zambia. Reasons for this remain unclear to the evaluators.

In terms of using vaccination coverage rates as barometer against which to compare VAS coverage rates, it is interesting to see that most of the countries which saw severe decreases in VAS coverage for a number of reasons elaborated on in section 5.3.4 did not experience significant decreases in immunization. Here it may be more relevant to consider DTP3 coverage changes (before and during project years) since this is vaccination which necessitated repeated visits, as VAS does and as opposed to MCV1 (Table 5 and 6). For example if we consider the countries which experience security crises: CAR, South Sudan and Burundi, their decreases in DTP3 coverage during project years compared to decreases in VAS coverage was only half in CAR (-16% vs. -31%) and a very small fraction in Burundi (-14% vs. -1%) although it was similar in South Sudan (-42% vs. -36%). In Sierra Leone, where VAS coverage suffered considerably as result of the Ebola epidemic (-19%), DTP3 coverage only decreased very slightly (-2%). In Senegal, where decreases in VAS were attributed to issues in the transition to routine delivery (-39%) hardly any change was experienced in DTP3 (-1%). This can be seen as attesting to the resilience of routine system delivery in these countries for child health interventions and further strengthens the argument for integration of VAS in routine systems.

Maps for South Sudan, Sierra Leone and Uganda show how the district level (EPI) coverages change over time. Increases and decreases in coverage over time do not seem to occur randomly, but clustered in certain areas. Although the national EPI coverages increase in Uganda in 2013-2015, there are areas that consistently remain behind.

Figure 13a: MCV1 coverage in fragile countries

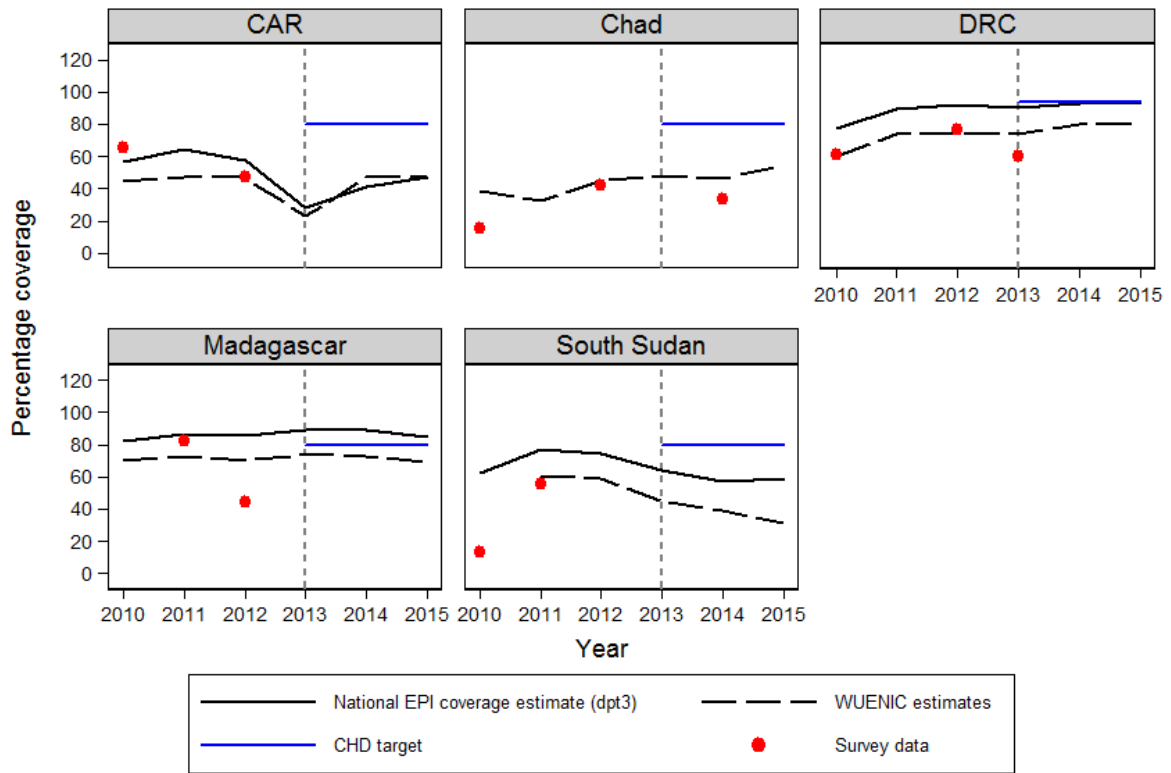


Figure 13b: MCV1 coverage in late transitioning countries

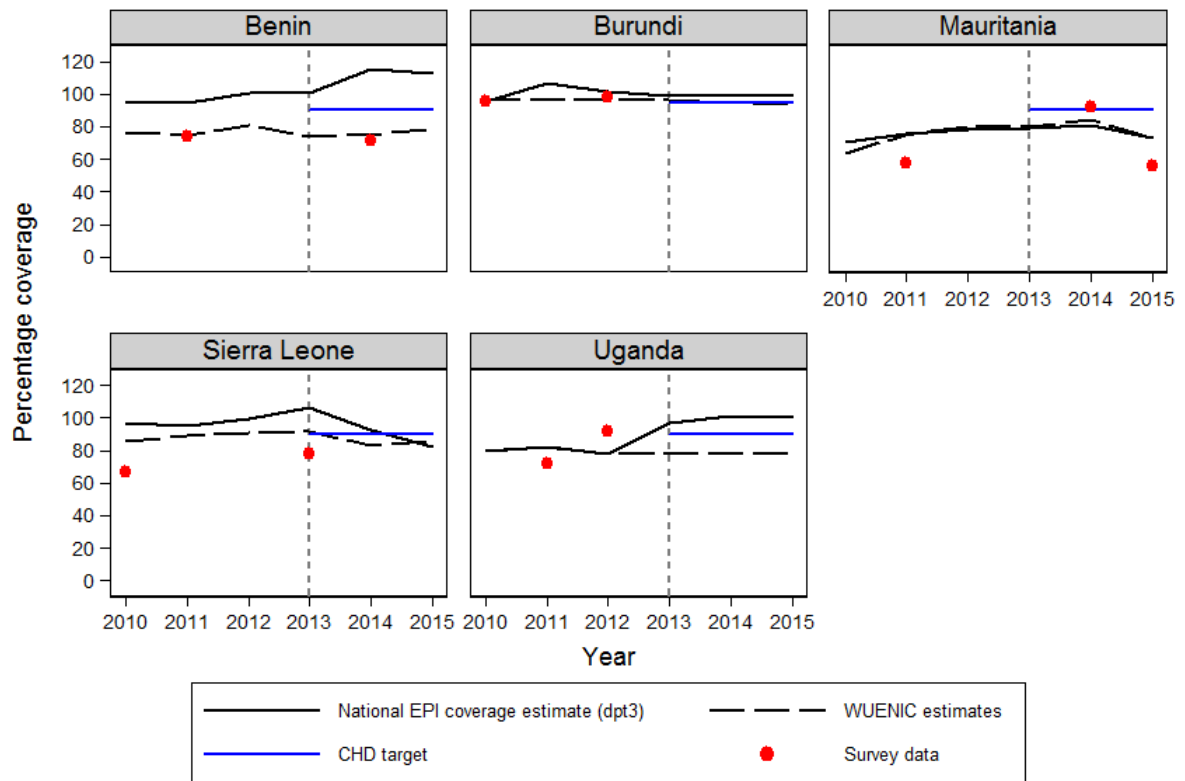


Figure 13c: MCV1 coverage in early transitioning countries

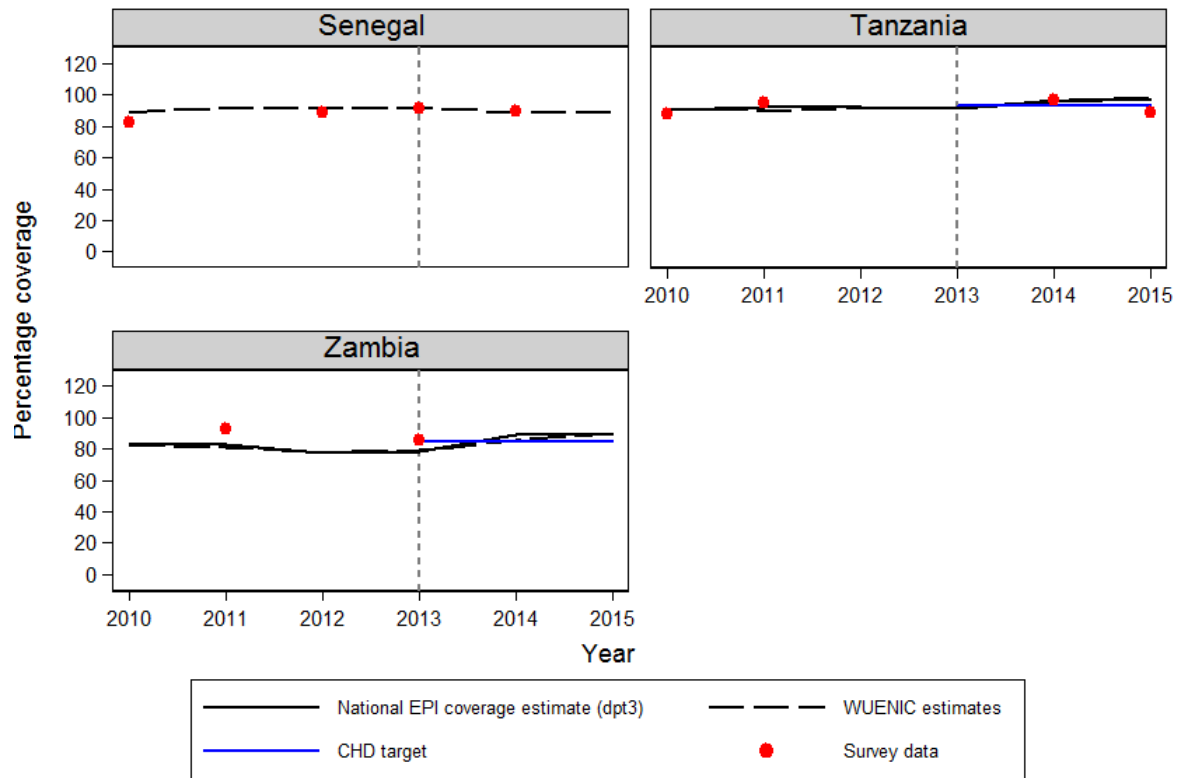


Figure 14: Map showing district level MCV1 National EPI coverage estimates of **Sierra Leone** for 2010-2015 (n=14)

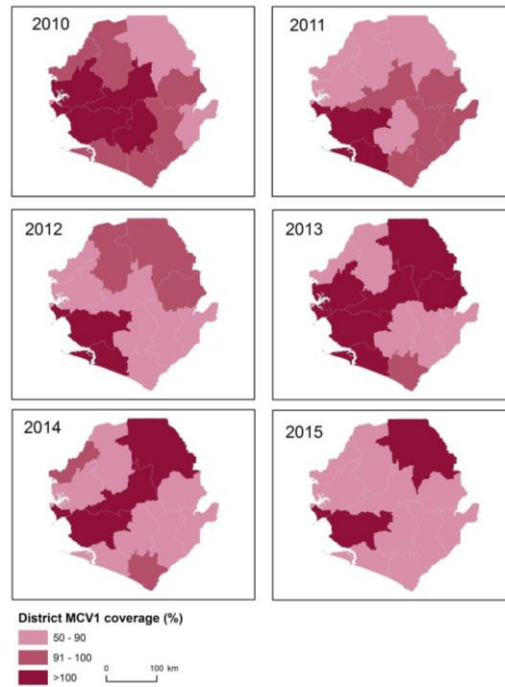


Figure 15 Map showing district level MCV1 National EPI coverage estimates of **Uganda** for 2011-2015 (n=112)

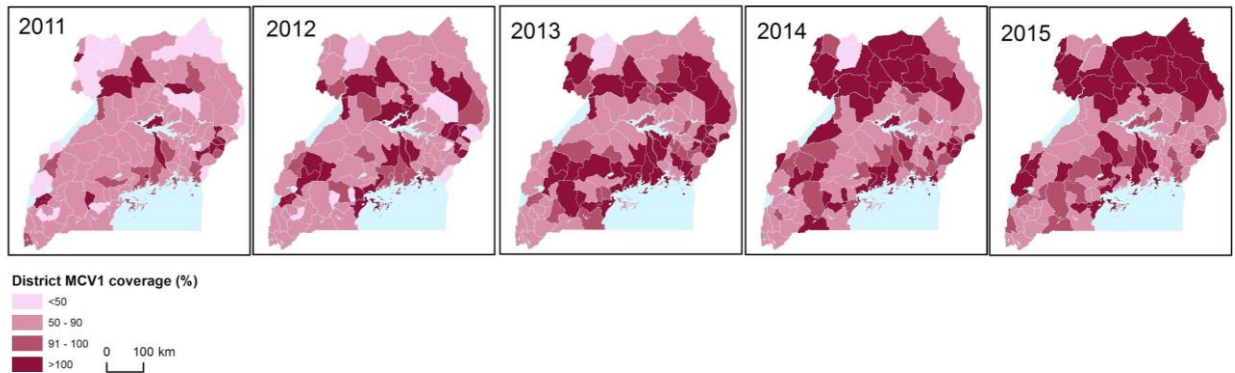


Figure 16: Map showing county level MCV1 National EPI coverage estimates of **South Sudan** for 2010-2015 (n=79)

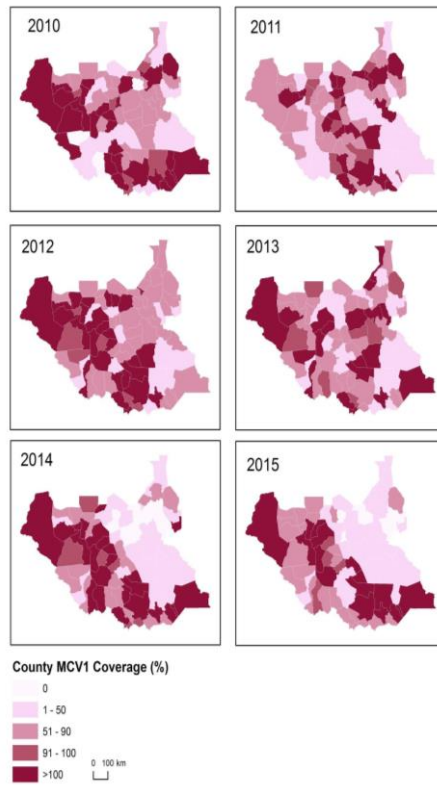


Table 5. Change in DTP3 coverage before (2010-2013 S1) and during (2013 S2-2015) the project years, per country

	Before	During	Change	Percentage change
Burundi	96.0	95.0	-1.0	-1%
Benin	77.3	76.0	-1.3	-2%
CAR	46.3	39.0	-7.3	-16%
DRC	69.7	78.3	8.7	12%
Madagascar	71.0	72.0	1.0	1%
Mauritania	73.0	79.0	6.0	8%
Senegal	90.7	90.0	-0.7	-1%
Sierra Leone	88.7	87.0	-1.7	-2%
South Sudan	60.0	38.3	-21.7	-36%
Chad	39.0	49.7	10.7	27%
Tanzania	91.0	95.3	4.3	5%
Uganda	80.0	78.0	-2.0	-3%
Zambia	80.7	85.0	4.3	5%
Average over all countries			-0.1	0%

Source: vaccination coverage according to WUENIC estimates

Table 6. Change in MCV1 coverage before (2010-2013 S1) and during (2013 S2-2015) the project years, per country

	Before	During	Change	Percentage Change
Burundi	92.7	95.0	2.3	3%
Benin	71.0	70.3	-0.7	-1%
CAR	50.3	41.0	-9.3	-19%
DRC	73.3	77.3	4.0	5%
Madagascar	63.0	61.7	-1.3	-2%
Mauritania	69.7	78.0	8.3	12%
Senegal	82.7	81.3	-1.3	-2%
Sierra Leone	82.7	79.0	-3.7	-4%
South Sudan	57.0	24.0	-33.0	-58%
Chad	54.7	58.3	3.7	7%
Tanzania	94.0	99.0	5.0	5%
Uganda	76.7	82.0	5.3	7%
Zambia	87.0	85.0	-2.0	-2%
Average over all countries			-1.7	-4%

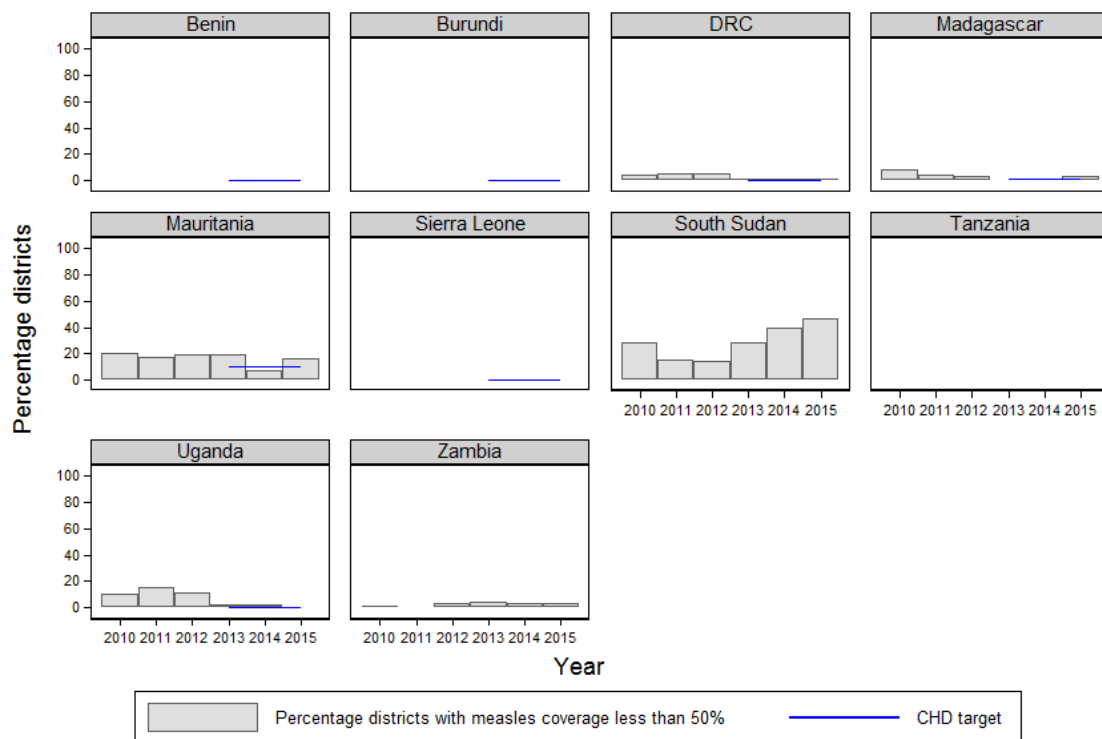
Source: vaccination coverage according to WUENIC estimates

5.3.6 How many (%) districts have < 50% coverage of vaccinations?

HMIS data was shared by individual countries disaggregated by the second or third administrative level, which enable calculations of the number of district who achieved less than

50% and above 90% coverage (Section 5.3.7). Overall most countries were able to make very positive steps towards the eradication of low performing districts for both DTP3 and MCV1–The only notable exception is South Sudan, where these are on the rise (Figure 17). Also in Mauritania the percentage of districts (departments) is still relatively high. Benin, Burundi, Sierra Leone, and Tanzania had no districts with less than 50% coverage Note that, CAR, Chad and Senegal did not share district level data and were therefore excluded from these analyses. It is important however, to note that these analyses were conducted on HMIS data which, as can be seen from the analyses presented in section 5.3.5, usually overestimate coverage.

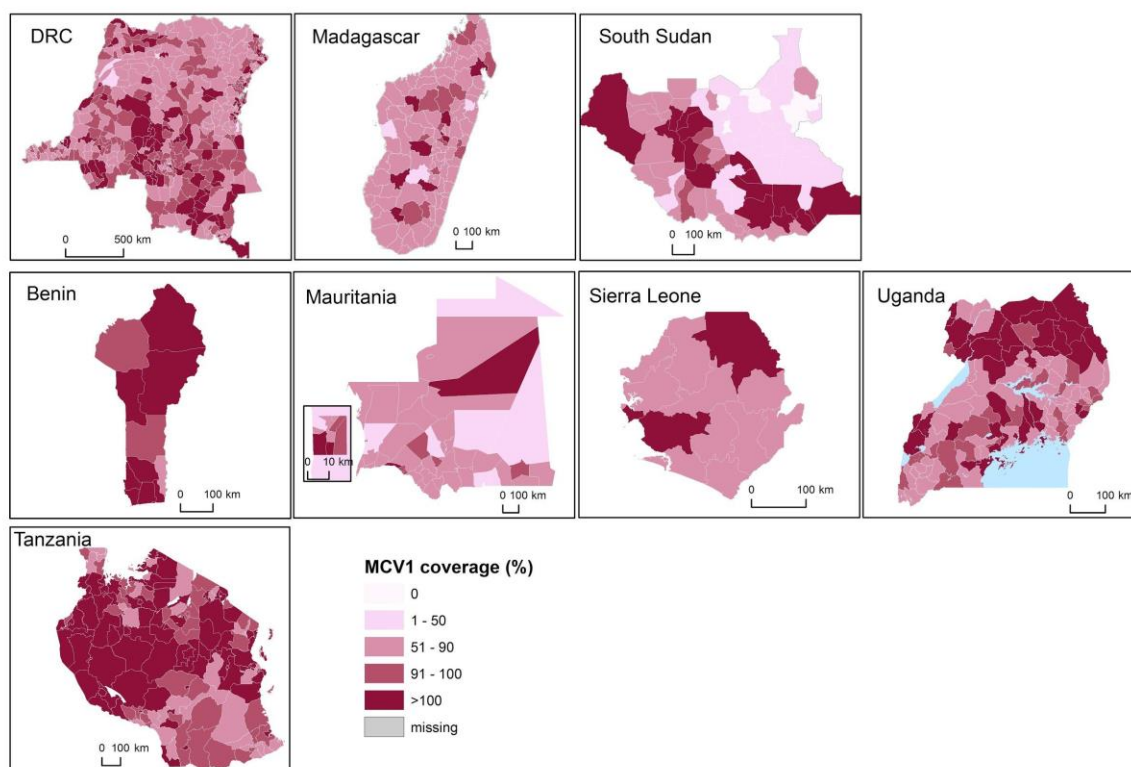
Figure 17: Percentage of districts with less than 50% coverage of MCV, by country



Source: HMIS data shared by individual countries to evaluation team

The maps presented in figure 18 (below) show where the districts are located with a coverage below 50% (if any). In South Sudan most of these districts (counties) are located in the Greater Upper Nile Region (North-East). A number of counties in South Sudan have MCV1 coverage of zero; we are not sure whether this is a lack of reporting or a correct representation of the coverage. The districts (departments) in Mauritania with a MCV1 coverage below 50% seem scattered around the country. The capital Nouakchott with higher coverages (presented in the insert) is surrounded by a department with low coverage. The issue with incorrect denominators is also visible in the maps as several districts show a MCV1 coverage of above 100%.

Figure 18: Maps showing MCV1 vaccination coverage by lowest available administrative level for 2015, by country (grouped by fragile states, late and early transitioning countries)



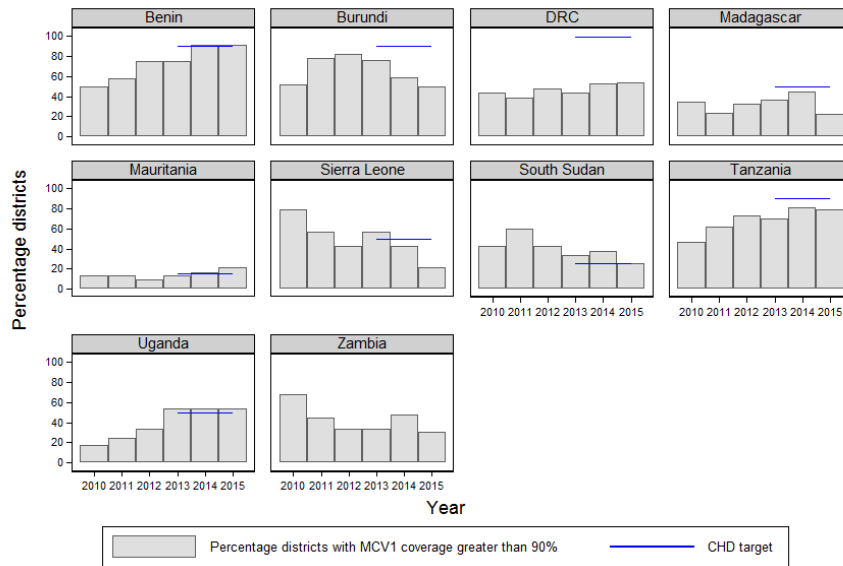
Secondary data review of the LQAS survey in **Madagascar** showed various reasons why people do not attend, such as not being aware of the necessity to continue vaccination of children under one year of age beyond the CHDs; the long distance; and the long waiting time. In **Benin**, reasons for not attending included not knowing about the benefits (ranging from 0% to 27%), not knowing about the campaign (from 0% up to 20% and being absent (from 0% to 15%)⁶⁸. Independent monitoring results in 2016 (first semester) in **Sierra Leone** showed as primary reasons that the child was absent (82% of the children not reached) or that their house was not visited (10%). A PEC survey carried out in **Tanzania** in 2014 indicated that 90% of the children who missed the CHD campaign in Dar es Salaam did so because the caretaker didn't know about it. Researchers suggested that this might have been due in part because the national campaign advertises June and December as CHD month months, as is the case for all other regions, whereas in Dar es Salaam distribution occurs in January and July. The same survey showed that half of the surveyed caretakers were not aware about the different VAS benefits for the health of their child.

5.3.7 How many (%) districts have > 90% coverage of vaccinations?

Overall most countries appear to have been able to reach their geographical equity targets by lifting the average coverage in the less well performing districts (Figure 19). However analyses are restricted to 10 countries which reported subnational data, which excludes CAR, Chad, and Senegal. All countries - apart from Sierra Leone, South Sudan and Burundi- showed a steady increase in the percentage of districts with more than 90% coverage of DTP3 and MCV1. As above, it is important however, to note that these analyses were conducted on HMIS data which, as can be seen from the analyses presented in section 5.3.5, usually overestimate coverage.

⁶⁸ Reasons for not attending are expressed as percentage of non-receivers.

Figure 19: Percentage of districts with over 90% coverage of MCV, by country

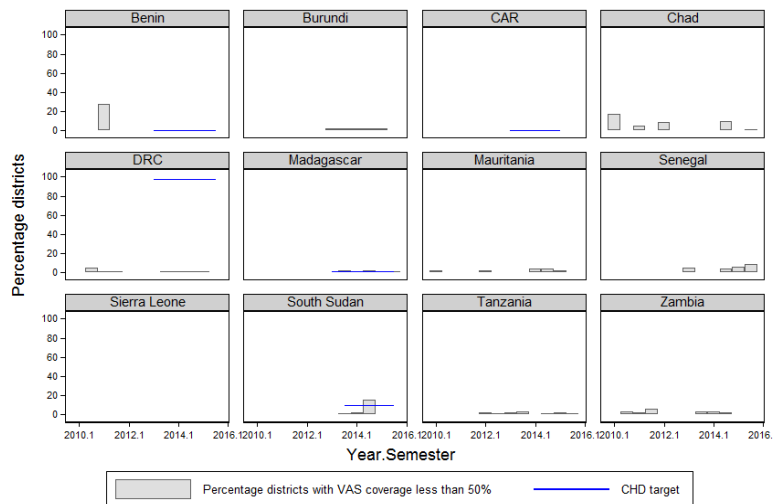


Source: HMIS data shared by individual countries to the evaluation team

5.3.8 How many (%) districts have < 50% coverage of VAS?

Campaign data was shared by individual countries disaggregated by the second or third administrative level, which enable calculations of the number of district who achieved less than 50% and above 90% coverage (Section 5.3.9). Generally coverage with Vitamin A Supplementation appears to be fairly equitable from a geographical perspective, with very few districts reporting less than 50% coverage (Figure 20). Geographical equity for VAS appears even better than equity for vaccinations – comparing Figure 20 and Figure 17 there are fewer bars and they are lower, indicating that the percentage of districts which reported less than 50% is lower for VAS than for vaccinations. Uganda had to be excluded from these analyses as they did not report subnational denominators. It is important however, to note that these analyses were conducted on campaign data which, as can be seen from the analyses presented in section 5.3.4, usually overestimate coverage.

Figure 20: Percentage of districts with less than 50% coverage of VAS



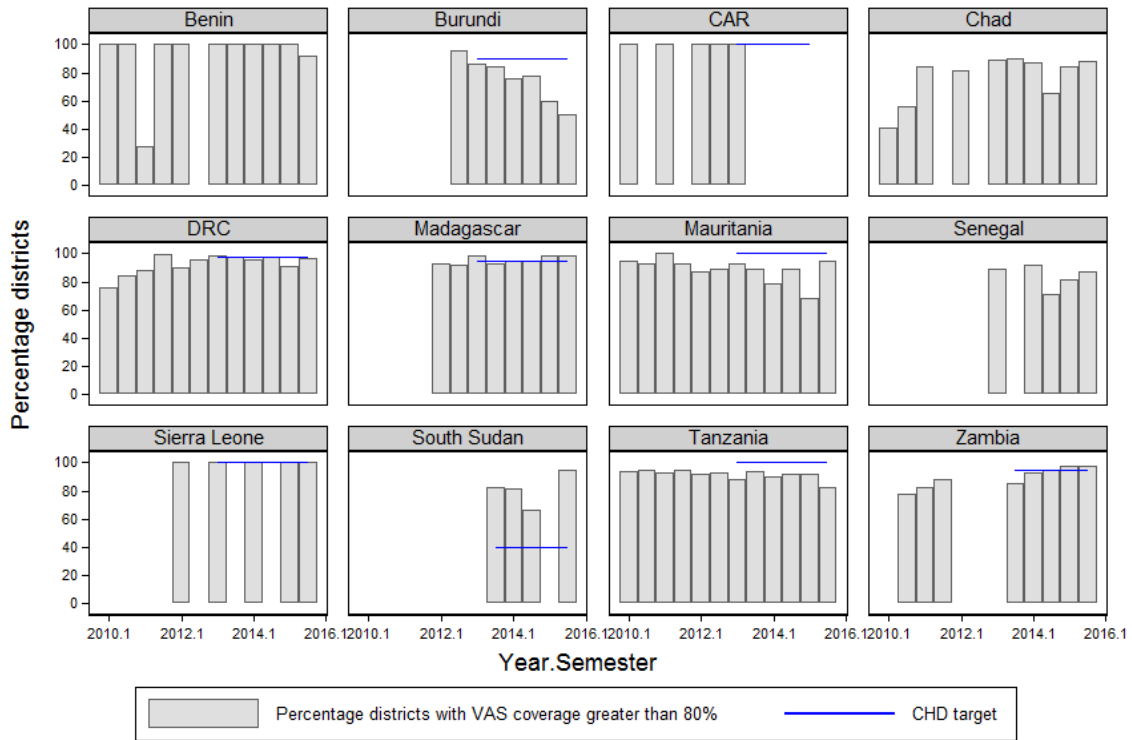
Source: VAS coverage according to campaign data as shared by individual countries to the evaluation team

5.3.9 How many (%) districts have > 80% coverage for VAS?

In most countries the majority of districts report over 80% VAS coverage with a constant level

over time (Figure 21). Notable exceptions are Burundi, Chad and Senegal, where these districts have decreased during the implementation period. Here as well, it would appear that VAS coverage is more equitable than vaccination coverage – comparing Figure 21 below with Figure 19 shows that the bars for VAS are higher indicating that there is a higher percentage of districts that reported coverage above the threshold – although it is important to note that the threshold itself is different for VAS (80%) than vaccinations (90%).

Figure 21: Percentage of districts with more than 80% coverage of VAS



Source: VAS coverage according to campaign data as shared by individual countries to the evaluation team
 Note: Missing bars refer to missing data rather than no districts achieving the target

Figures 21a-21c show where the high and low performing districts for the case study countries **Sierra Leone** and **Madagascar**. In the case of **Sierra Leone**, the map confirms the good geographical equity achieved as there are indeed no districts below 50% coverage and all are above 80%.

Figure 21a VAS coverage in Tanzania in 2015 (6-59 months)

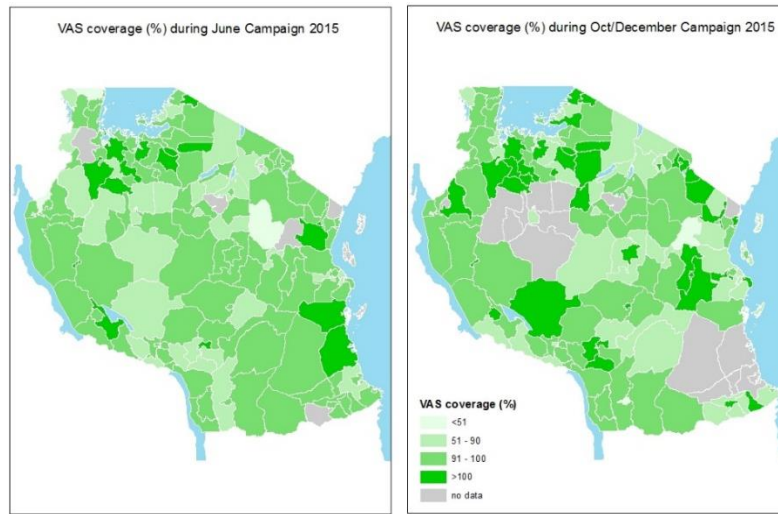


Figure 21b: Map of VAS coverage in Sierra Leone in 2015 (6-59 months)

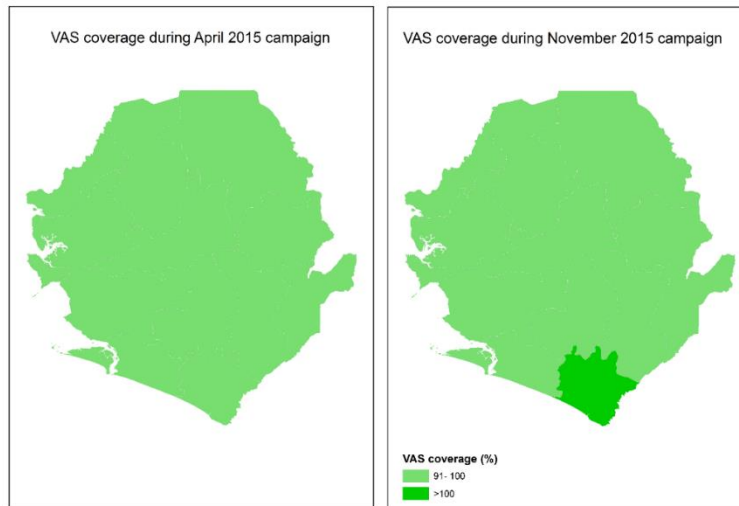
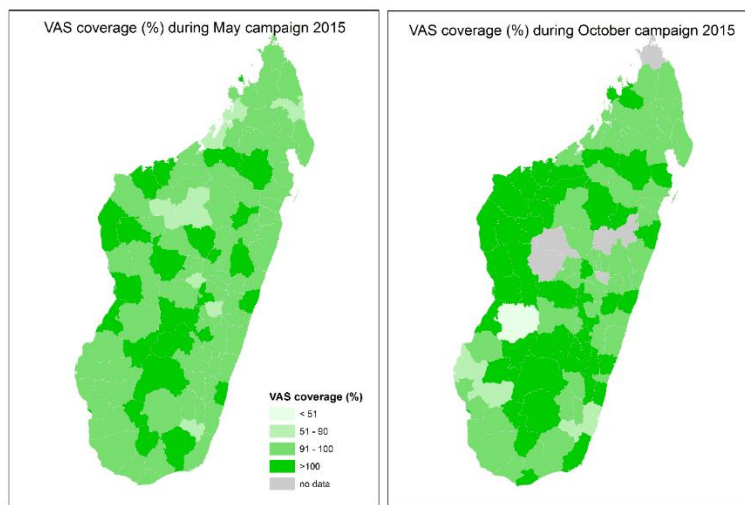


Figure 21c: Map of VAS coverage in Madagascar in 2015 (6-59 months)



The evaluation question: **How does the initiative contribute to increased coverage (in particular of underserved populations)? (C2)** is answered through two sub-questions:

5.3.10 Has the programme reached the most vulnerable and/or marginalized children and communities in the targeted districts?

To answer this question regarding the current initiative, we re-analysed individual data from the **Senegal** 2015 and **Tanzania** 2015 DHS surveys, the latest available DHS data in the region. The odds of being vaccinated with DTP3, MCV1, as well as supplemented with Vitamin A and dewormed, were regressed against determinants of vulnerability as defined in the UNICEF vulnerability framework (Figure 22). These include the following household level characteristics: household wealth quintile, household dependency ratio, number of children under the age of 5 in the household, household education (no education among all adults in the household vs. at least one adult with primary or higher level education, orphan status (single or double orphan vs. both parents alive), living arrangements (with parent(s) or elsewhere). These were analysed alongside children’s individual characteristics (age and sex) as well as the broader environment in which they lived (urban vs. rural).

Figure 22: Vulnerability determinants



We chose the latest available DHS surveys conducted in 2015 as they provide an indication of the status quo in the last year of the implementation period. We assumed that vaccination services were provided mainly/entirely through regular services and VAS mainly/entirely through CHDs. This assumption holds quite robustly for Tanzania since no immunizations were provided in CHDs in 2015 (see Table 2 in section 5.1.2). It does probably also hold for Senegal as well, although less strongly, since the country relied on two delivery mechanisms for VAS in 2015. CHDs 'Journées de Survie de l'Enfant' (JSE) were implemented sub-nationally while vitamin A supplements were delivered in the remaining districts through routine primary health care structures. However, an analysis of the number of doses delivered through routine services vs. via CHDs suggests that still 3 times as many doses were delivered through CHDs vs. routine (3.6 million doses vs. 1.1 million combining both semesters over ages 6-59 months).

Deworming on the other hand is mainly delivered through campaigns as in most countries.

Results from the multivariate logistic models fitted are provided in Annex X and confirm that vulnerability determinants vary considerably across countries. In **Tanzania** immunizations are mainly provided in the regular health services and vitamin A supplementation and deworming mainly provided in campaigns. Our analyses suggest that neither immunization during regular health services nor campaigns are particularly equitable, with only a marginal improvement in services provided with campaigns. We observed a strong decrease in coverage with decreasing wealth status – the odds of being reached are approximately 3 times higher in the richest compared to the poorest quintile. Household and family characteristics are also associated with provision of services - the odds of vaccination, supplementation and deworming increase with decreases in the household dependency ratio (up to 26% more likely to be reached if coming from a household with a dependency ratio less than 1) and with decreases in the number of children in the household (just over twice more likely to be reached if from a smaller household). Having more educated parents and living with them also increases the odds of being vaccinated/supplemented, though more so for delivery through regular health services than for campaigns. This latter point was also brought up during a Group Discussion where it was said that those with higher incomes can usually afford to go elsewhere as **"they find it difficult to go to the campaign and stand in long queues"**, in the same FGD it was also said that single parents households with only the father present also tend not to come because the father has to work. One area where campaigns appear to have had a more equitable provision than routine is by reaching out to boys and girls alike - boys were approximately 20% more likely to be immunized (although the effect was only significant for measles) but no effect could be seen in campaign data. Finally, in Tanzania there were no differences between urban and rural settings in HMIS/ DH2 nor campaign indicators.

In **Senegal**, regular health service delivery is also inequitable, especially in terms of socio economic status, but less so in terms of children's living arrangements and family characteristics - children from the richest households are more than 4 times more likely to be immunized, 20% more likely if they come from a household with a dependency ratio less than 1 and nearly 2 times more likely if they come from a more educated household, but there is no effect of living arrangements or number of children per household. Children in urban areas are about 40% more likely to be immunized and there is no difference between boys and girls. However, the striking and very encouraging result in **Senegal** is that none of the vulnerability determinants were associated with services provided in campaigns (i.e. Vitamin A and deworming), suggesting that campaigns were successful in reaching out to the most vulnerable children. Even to the extent that inequity appears to re-appear in a reversed form, with children from urban areas about 30% less likely to be reached than those from rural areas with campaigns.

Secondary data review of the 2008 and 2013 DHS reports from **Sierra Leone**^{69 70} suggest a similar positive effect of CHDs on equity coverage. Disparities in VAS and deworming coverage decreased substantially as opposed to disparities in stunting. For instance, in 2008, children born to mothers of the highest wealth quintile were 1.36 more likely to receive a six monthly VAS and more than one and a half times (1.62) more likely to receive albendazole than children in the lowest wealth quintile. The latter was about the same as the disparity in stunting with children of mothers from the lowest and highest wealth quintile, with the former being 1.61 times more likely to be stunted. By 2013, the picture had changed drastically for VAS and deworming with no disparities for VAS and very little for deworming, while disparities in

⁶⁹ Statistics Sierra Leone (SSL) and ICF Macro. 2009. Sierra Leone Demographic and Health Survey 2008. Calverton, Maryland, USA: Statistics Sierra Leone (SSL) and ICF Macro

⁷⁰ Statistics Sierra Leone (SSL) and ICF International. 2014. Sierra Leone Demographic and Health Survey 2013. Freetown, Sierra Leone and Rockville, Maryland, USA: SSL and ICF International.

stunting remained largely unchanged. This improvement in equity coverage during the period 2008-2013 coincides with a sharp increase in the coverage from both VAS (6-59 months) and deworming (12-59 months). Coverage of both increased from less than 50% to 83% and 58% respectively. Noteworthy is that data from the 2013 DHS indicate big differences in coverage between the various districts, despite a specific focus on low performing districts and chiefdoms and the reaching every community approach.

5.3.11 **What approaches have proven to work, including for reaching underserved populations? Are there new or innovative ways of increasing coverage? Has HMIS data been used for increasing effectiveness? What types and results are there from training of health workers, community systems and others? Supportive supervision?**

In all three case-study countries HMIS and CHD data were used to prioritize districts/communities with a low coverage. Please refer to section 5.2.2 for details. Other approaches include (increased) social mobilization (including through social media) as well as strengthened multi-stakeholder coordination and partnerships in the preparation and implementation of the CHDs. Section 5.2.7 provides an overview. Supportive supervision is elaborated in the next section (5.3.12). Results of capacity building are discussed in section 5.4.4. UNICEF (nor the evaluators) have hard data on the extent to which these approaches impact on coverage. Operational research in Benin, Madagascar and Niger (LQAS) didn't entail measuring the impact of (innovative) approaches.

An interesting example of an innovative approach to increase coverage during the regular service delivery (a little outside the scope of this evaluation question) is coming from **Tanzania**. In this early transition country the MOHCDGEC is doing a trial with Result Based Financing in Shinyanga, Mwanza. Health workers/nurses are given a target in relation to a number of indicators (breastfeeding, Vitamin A, vaccination etc.) and are paid a certain amount e.g. 400/=Tshs for every child she/he has screened basing on those indicators or for every mother she/he has counselled for breastfeeding and the facility in general receives a bonus which in turn can help in improvement of infrastructures. The nutritional effects of this trial were not yet available during the field work.

The evaluation question: **What were the effects of supportive supervision? (C3)** is answered through three sub-questions:

5.3.12 **Has supportive supervision increased access and coverage? How many of the districts where supportive supervision took place are delivering health and nutrition services to 100% of the communities? (Through routine, outreach or both)?**

In all three case-study countries supportive supervision was said to enhance the coverage. In **Tanzania**, supportive supervision is provided at different levels. At national level TFNC visits local government authorities to provide supportive supervision, although this is done irregularly. At the regional level the Regional Health Management Team (RHMT) have to supervise the districts, and the teams at the council level (CHMT) provide supportive supervision to the facility level, which in turn goes to the outreach areas for supervision. From the national level a team does such supervision but at the regional level only one member of the RHMT supervises for instance 2 districts. Supervision is time consuming and it is hard. A respondent said "**Sometimes we do it right, sometimes we don't do it right**". The supportive supervision checklist helps to make the process more efficient. All respondents mentioned to find supportive supervision helpful and to help push things to go in the right direction or to quickly help solve problems. What furthermore makes supportive supervision effective is that those involved in it have to report on the outcome of the supportive supervision trips at national level meetings. National level supportive supervision was said to give priority to district with low performance. However, while supportive supervision is done everywhere in Tanzania, it has not (yet) resulted in 100 per cent coverage everywhere. There is a limit to

what supportive supervision can achieve.

Supportive supervision (and training) is also an important pillar on which **Sierra Leone** relies to ensure that districts are performing as best as possible. Before each campaign (including CHDs) cascade training starting with training at central level of national supervisors (52 for 14 health districts in November 2016) takes place. The training includes the planning process. National supervisors in turn train district supervisors⁷¹ (130 in November 2016) in the district. District supervisors then train the Community Health Officer (CHO)/ nurse in charge of Primary health units (PHUs)⁷², usually per chiefdom. Lastly the community health officer /nurse in charge of a primary health units trains his/her staff including all CHWs in the catchment area of the PHU. The national supervisors and district supervisors monitor/supervise teams throughout the CHDs and provide support as needed (ranging from sending extra supplies to finding solution to problems raised by field teams).

In **Madagascar** supportive supervision throughout the country has been part and parcel of the health system since many years (funded by different programmes, of which this project is only one) and of the CHDs since its first introduction in 2006. As in **Sierra Leone**, supervision takes place (well) in advance, during and after the CHDs (for data gathering). Although UNICEF has been funding supportive supervision in particular as part of its CHD funding activities, nearly all health staff at district level (including directors) were under the impression that funding for supervision was provided by the MOPH. This can be partly explained due to the fact that supportive supervision not only takes place during the CHDs but also as part of the routine –in some districts at least and during other campaigns (e.g. polio).

Supportive supervision has been recognized as an effective method to ensure performance of the health system during the CHDs, both at district level and at health centre level as can also be concluded from the fact that the supervision system has been strengthened following recommendations to this end in an earlier evaluation of the CHDs in **Madagascar** (2011)⁷³

5.3.13 **Has the coverage of vitamin A supplementation and immunization increased in these districts?**

The data do not allow to analyse this presently. As explained in section 5.2.12, in the three case-study countries supportive supervision was already institutionalized before this project started. Moreover, supportive supervision is carried out throughout the country. This may result in improvements at community/ (sub) county level (as this is the very idea of supportive supervision), but data broken down at this level are not available.

5.3.14 **What are the trends in the district (base-line and annual data) in these districts of**

- VAS coverage among children 6 – 11 months through CHD or other integrated events at baseline
- VAS coverage among children 12 – 59 months through VAS CHD or integrated event
- Coverage of DPT1 and DPT3 among children < 12 month
- Coverage of measles among children 9 – 12 months

The data do not allow to analyse this presently. The previous paragraph refers.

⁷¹ Some health staff based in the district capital also attend the he training for district supervisors

⁷²PHU consists of community health centres (with a CHO in charge), community health posts (with a enrolled community nurse in charge) and maternal and child health posts with an Mother and Child Health (MCH) aide in charge

⁷³These recommendations were: (i) that regional and district staff should maintain the system of pre-campaign supervision (among other to find solutions for challenges regarding the preparation, managing the implementation and share good practices and (ii) regional staff should strengthen supervision of and join non-effective district health teams during the CHDs

5.3.15. Were there any indications about a positive impact of the CHDs?

While the evaluators were not asked to look at impact, respondents did talk about the positive impact of CHDs. In **Sierra Leone** parents and caregivers said for instance:

"It has added something to the health of our children in this community. The high death rate of the children has reduced greatly." (Participant of a caretakers' FGD). And another participant added: ***"It has not only added something to the health of the children but it has also added something to the health of the women. We don't hear of the death of pregnant women when giving birth as it used to be"***.

In **Tanzania** parents in one FGD observed that CHDs changed the way parents' perceptions about health and life as follows: ***"There is reduction of bad taboos like previous years we used to believe the vitamins contained poison but after being educated the whole mind-set has changed...we have learnt that these drops can protect our children from diseases. In the past we used to believe that the government had a secret agenda of destroying kids to control population...The children now are intelligent for instance when you send your child to collect something in the past they would just stare at you but now they understand, this has been attributed to exclusive breastfeeding. They have high capacity in understanding things"***. And also: ***"Before children would get sick often from diarrhoea and vomiting but now you can go even a year without your child being sick apart from the occasional fever maybe"***.

In **Madagascar** parents in several FGDs said among others: ***"Because of the CHDs our children are thriving"***. Asked to explain what was meant by thriving caretakers said: ***"Not sick, no potbellies"***.

Also health staff liked the CHDs days because of its contribution to reducing morbidity. In **Sierra Leone** staff in one facility said: ***"Let's take an example the albendazole or the worm medicine that is given to the children that is a great help. Let me tell you what worms do to the children; when a child has worms and goes to school, that child will be stupid and will not be able to concentrate and will always be sick. The vitamin A also that is given to them as supplementary booster dose will help them boost their immune system. Subsequently, that will help them to fight a whole lot of infections and even clinic visits will be minimized"***. In Tanzania staff in one of the visited health facility described the impact on parents' awareness as follows: ***"Now parents enquire from facility workers when they come for clinic for specific vaccinations that they are bound to receive contrary to before where parents were clueless. Nowadays parents can even return to the facility and ask why they are not given a certain vaccination, and you explain maybe the age of the baby is not yet"***.

Quantitative data from the LQAS research in Benin and **Madagascar** as well as data from other surveys indicate that many caregivers know about the merits of the CHD interventions and that this knowledge may positively impact on coverage, although the picture is mixed. In

Madagascar the number of children aged 12-23 months fully immunized by age one year was 65% in the best performing district and 33% and 22% in the two other districts. Measles coverage in this age group (children who received their first measles vaccination before 12 months of age) ranged from 75% in the best performing district to 50% and 40% in the two other districts. In the former, 94% of the caretakers had been informed of the need to continue vaccination and 99% of the mothers subscribed to all three assertions regarding the importance of vaccination (important for child health, to protect against sickness and childhood vaccination provides safety). In the lower performing districts, the percentages of caretakers, subscribing to these three assertions was 80% and 90% respectively, while 82% and 84% were informed about the need to continue. Findings from Benin indicate as well that in the community with

the highest number of children fully immunized by age one (89%) the number of care-takers who had been informed about the need to continue vaccination (also in the routine after the campaign) was higher (71%) than in (most) communities with lower numbers of children fully immunized.

The relation between the VAS coverage and knowledge about the merits (able to name at least two benefits) and the right age-group was less evident. In **Madagascar** this may be due to the fact the coverage in all three districts was very high (ranging from 92% to 96% in the age group 6-12 months and from 95%-98% in the 12-59 months age-group. However, again in the district where overall performance was best, more than half of the caretakers knew the right target age for VAS, while in the other two districts only one in four respectively one in three knew this. Interestingly, in the latter districts more caretakers (more than 50% in both districts for both age-groups) could name at least two benefits of vitamin A, than in the former district (less than 50%). Data from Benin also indicate that in the best performing communities more caretakers knew about the target group for VAS (23%) than in the two least performing communities (that is with a coverage below 70%). In the latter two the percentage of caretakers knowing the right age-group was 0% and 8% respectively. As in **Madagascar**, there seemed to be little relation between knowledge on the merits of VAS and coverage. Data from independent monitoring in **Sierra Leone** (2016, first round) don't show a positive correlation between knowing the merits and coverage either. However, as in **Madagascar**, this may be due to the high coverage (more than 90% in all 13 districts in **Sierra Leone**, eight of which with a coverage of more than 95%). Available data seem to suggest that rather than knowing the benefits knowledge on the right age-group (for VAS) and the need to continue (vaccinations) may impact on coverage. Evaluators note that many data have been collected but that in-depth analysis is missing. For instance data from the LQAS are a mere sum up of findings, missing covariance analysis to assess associations between variables. Similarly, the evaluation team observed that data on CHD were not always shared for triangulation and further analysis (for instance from PECS surveys and data from independent monitoring in **Sierra Leone**).

Effectiveness overall

Across all 13 countries, a gradual decrease of reported measles cases can be seen between 2011 – 2015. There were over 150,000 cases across the 13 countries reported in 2011, a year which also saw epidemics in parts of DRC, Nigeria, Zambia, Ethiopia and Somalia. Cases decreased considerably thereafter. However, given that this is country reported data, caution is needed interpreting this data which is subject as much to fluctuations in reporting as it is to changes in incidence. With regards to assessing trends in immunization rates before and during the project years, according to WUENIC estimates, there was no change in MCV1 rates, and slight decrease in DTP3 rate. South Sudan and CAR both with very low rates at baseline, experience the most severe decreases.

CHD campaigns, or similar campaigns where vitamin A was also administered, were conducted in every year in every evaluation country in 2014 and 2015. Three countries did not conduct 2 campaigns per year where VAS was provided: CAR (only one campaign in 2014 and one in 2015), Sierra Leone (only one campaign in 2014) and South Sudan (only one in 2015). Most countries saw an increase in the average number of children supplemented per semester when they did conduct campaigns apart from Burundi, CAR and Senegal and Sierra Leone. Despite these improvements, by analysing coverage data from the UNICEF database, VAS coverage in the evaluation countries decreased in the project years (2010-2013 S1) compared to before (2013 S1-2015) by around 7 percentage points, or 9% decrease from baselines ranging between 55.7% and 99% coverage. This overall decrease is mainly caused by decreases where campaigns could not be conducted as well as countries where the number of children supplemented dropped. These are the countries which experienced security crises (South

Sudan, CAR, Burundi) and Sierra Leone which had to cancel its second campaign in 2014. It also includes Senegal, which experienced the most severe decrease in coverage, attributed to low coverage of VAS through routine services in the 12-59 months age group

With regards to immunization rates before and after the intervention, according to WHO/UNICEF Estimates of National Immunization Coverage (WUENIC), there was no change before and after the intervention in DTP3 rates, and slight decrease in MCV1 rate. Immunisation rates per se are not central to the evaluation of CHD efforts, but offer a useful barometer against which to gauge the performance of CHDs. Mostly, decreases in VAS coverage attributable to political instability, humanitarian crises or the Ebola epidemic were not correlated with decreases in immunisation coverage. This can be seen as attesting to the resilience of routine system delivery in these countries for child health interventions and further strengthens the argument for integration of VAS in routine systems.

In line with the observations in the case study countries, an analysis of country reported data by district showed that for vaccinations low performing districts are generally decreasing (except in South Sudan for vaccinations) and that most countries saw an increase *suggesting a more equitable reach of children with campaigns rather than with regular services* in the number of districts with coverage above 90%. Trends are even more encouraging for Vitamin A data, with hardly any countries reporting coverage less than 50% in rounds when VAS is conducted and generally coverage above 90% reported in all countries suggesting a more equitable reach of children with campaigns rather than with regular services. However, it is important to note that this analyses are based on coverage derived from HMIS/campaign data and thus overestimations.

Analysis of DHS survey data at the individual level (comparing vaccinated/supplemented individuals vs. those who were not) confirmed that campaigns appear more successful at reaching out to more vulnerable children than regular services, although there can be substantial differences across countries (e.g. in Senegal campaigns are more equitable than in Tanzania). They also highlighted that even in countries with relatively good geographical equity, the most vulnerable children are still less likely to be reached. In all three case-study countries supportive supervision contributed to enhanced coverage.

In all three case-study countries the case studies confirm that supportive supervision contributed to enhanced coverage.

5.4 Sustainability

5.4.1 The evaluation question ***To what extent will the response achievements be sustained after the withdrawal? (D1)*** is answered through the following reflections and five evaluation questions.

According to the OECD/DAC criteria, the issue of sustainability looks at whether the positive effects or impact will continue. This is an important issue as the activities undertaken at the CHD continue to have to be delivered either as part of a campaign or integrated into routine services. Children and pregnant women need services delivered during the CHDs regularly and the new generations will need these services in the future. The services have to be planned both on a short and long term basis and need to be continuously integrated in policies and plans of health systems and service providers to ensure a healthy population. Efforts have to be undertaken to keep beneficiaries motivated to use the service (consuming the deliverables) now and in the future

To assess if the positive effects of the CHDs would continue after withdrawal of the support of

Canada (GAC) /UNICEF the model depicted in figure 1 was used. This model takes into account three dimensions: institutional (policies, strategies, regulations), organizational (capacity and modality) and financial sustainability. The local culture is taken as fourth overarching dimension. This model was used as an additional framework to assess the (sub-) evaluation questions against.

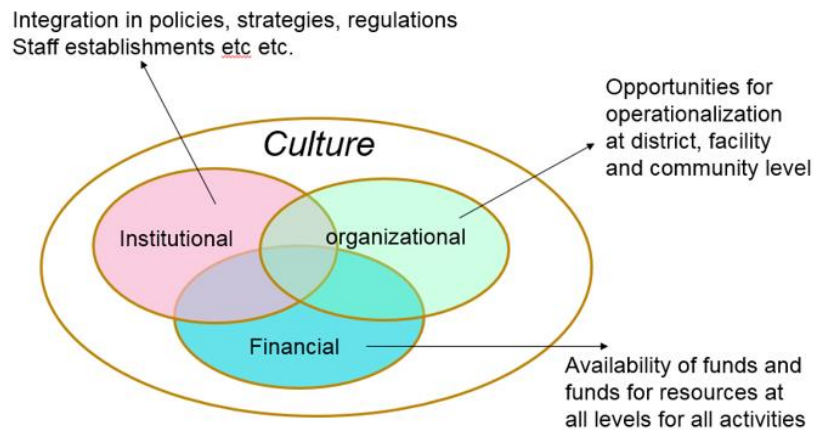


Figure 23: The dimensions of sustainability

Before going into further analysis awareness should be risen about the different expectations for sustainability with regard to the three categories of countries. The expected level of sustainability for continuation of the CHD or the various services delivered at the CHD after withdrawal of support are related to the fact if it is an early transition country, late transition country or fragile state. This programme formulated different aims for these three categories of countries. Early transition countries were supposed by the end of the programme to be capable to implement CHD independently from any technical support. During implementation of the last 3 years technical support will focus on national coordination. For late transition countries strengthening of capacity at implementation level was still foreseen so that after the project period the country is able to implement the CHD without technical support. The fragile states however, were expected to receive still support at all levels in the system.

5.4.2 To what extent does the initiative identify and build on existing national, local, civil society, government capacities and activities?

The initiative very much builds on institutional and organizational governmental capacities and activities. This applies for all case study countries, irrespective of these being early transitioning, late transitioning or fragile. Many examples have been given in earlier sections in this report, including in relation to the planning processes at national and local level, and the implementation through health staff and community health workers.

The initiative also builds upon civil society capacity in the sense that (I)NGOs are involved in the task forces at national level that play a role at the national level in terms of overseeing and approving plans and budgets. In **Tanzania** NGOs (informally) supported supervision by making cars available for the district teams for instance, or health promotion activities by NGOs were used to mobilize parents/care-takers to come to the CHDs. In **Sierra Leone** the CHDs are a concerted effort with all health and nutrition partners contributing to its implementation.

Madagascar also has been able to involve the private sector in CHDs activities.

The implementation and success of CHDs also build upon local culture, such as establishing by-laws to ensure households attend (which entail imposing fines in case of non-attendance). By-laws are also used for to ensure attendance of other health services, for instance ANC in **Sierra**

Leone.

5.4.3 Has a budget to deliver CHDs to children under 5 years been incorporated within the national budgets?

The weakest point in relation to sustainability is most likely the financing of the campaigns and the supplies. None of the three case study countries, including **Tanzania** as early transitioning country, is able to finance the CHDs from their regular Health System Budget. Moreover, lack of funding or plans to secure these in the foreseeable future hamper integration in the routine service provision.

In **Tanzania** Local Government Budgets are available to cover part of the local costs (allowances, fuel) but this comes from the Health Basket Fund funded by a large range of development partners⁷⁴. Local Government Authorities (LGAs) have started to include resources for VAS in the district health basket fund budget to finance supplies as fuel, implementation activities and supportive supervision and allowances for the CHM. Review of the LGA work plan during the field visits showed that indeed these activities and matching budget had been included. The limitation thereby is that these funds can only be used to support implementation and not training or national level activities. The funds for these activities are released and controlled by the district council.

In addition, in **Tanzania**, there is a directive to the LGAs that they should budget at least 500/Tsh per child under 5 years for nutrition in the Comprehensive Council Health Plans (CCHP). This is in line with the project monitoring framework (PMF) which articulates that all District budgets for at least 0.20 USD per child per year for CHDs by the end of the project. T This is about a third of the real cost approximately, showing that obtaining sufficient national funding for Child Health and Nutrition is still a big challenge in Tanzania. Further commitment to nutrition services is shown by the fact that in the last five years the new position of District Nutrition Officer was installed in nearly all districts. All this can be seen as strengthened "buy in" into child health/nutrition programmes over the last four years, as was expressed by various stakeholders. The capacity to organize the CHDs at district level has increased by the appointment of this new cadre programmes over the last 4 years, as was expressed by various stakeholders.

MOHCDGEC in **Tanzania** is responsible for the planning, implementation, supply logistics and evaluation of CHNMs. MOHCDGEC also provides technical support to the regions and councils through TFNC. The Prime Ministry chairs the National Vitamin A Consultative Group (NVACG) under which CHNM operates. TFNC serves as the secretariat to the NVACG. It provides guidance on CHNM services to regions, and all logistical support, especially relative to supplies, capacity building of service providers, data compilation, monitoring and evaluation and reports consolidation. The Medical Drug Store (MDS) is responsible for delivery of vitamin A capsules, deworming tablets and MUAC tapes from its central stores to district councils. Decentralization of the management of High Impact Nutrition Services (including the Vitamin A distribution) is also foreseen in the nutrition strategy: district-level nutrition focal person will provide high quality technical support to LGAs. Council Health Management Teams will understand the minimum package of high-impact nutrition services to be provided at community and facility level and will incorporate sufficient resources in the annual CCHPs.

The vitamin A capsules are provided in-kind donation and financial support for operational costs by GAC. In addition, all in countries UNICEF provides technical and financial support, including the offshore procurement of vitamin A capsules; assist production of technical guidelines, communication, training, monitoring and evaluation materials; and support for the operational

⁷⁴ The Health Basket Fund is supported by Ireland, Denmark, Switzerland, Korea (since 2016), World Bank, UNICEF, and UNFPA.

costs in the field. In early transitioning country **Tanzania** effort has been made to hand-over the responsibility of offshore procurement of vitamin A capsules to the responsible government department, MDS, in 2015. This was not really successful as all supplies remained in the port for 6 months and in the end UNICEF had to step in to pay for the clearance.

No progress has been made towards the attaining financial sustainability as specified in the project monitoring framework PMF in **Sierra Leone**. According to the PM, by the end of 2016, 50% of the budget to deliver CHDs to children under 5 years should be incorporated within the national budget (excluding loans and grants from development partners and other philanthropic actors). So far, no CHD activities have been integrated in the national budget yet and CHDs (continue to) depend nearly entirely on external donors. Health official explained that experience learns that such support is easier obtained for campaigns than for (funding structural gaps in the) routine. Moreover campaigns including CHDs are financially facilitated international and national NGOs that support the districts by providing transport, fuel, staff and sometimes supplies.

Nevertheless, several stakeholders expressed both awareness on the need to take over financial responsibility and willingness to move forward the issue of ownership. As one high level MOHS interviewee expressed: ***“What we are planning to start now is advocacy to the government to take over ownership and not just in the implementation but also the funding of the activities. We need to revisit strategies for Vitamin A supplementation and deworming using the routine system. The PHUs should also take these vaccines and tablets along during outreach in their catchment areas. These are some of the ways I think we can have ownership of the project (i.e. institutionalizing the CHD interventions)”***.

In **Madagascar**, UNICEF and others do advocate for inclusion of the CHDs in (sub-)national budgets, but so far attempts to integrate the CHDs in the budget have not materialized. A review by the World Bank, and UNICEF revealed that the budget for health decreased from 4.3% of the GDP in 2012 to 2.8% of the GDP in 2013⁷⁵[1]. Incorporating funding (including incentives, costs of transport of persons and supplies, fuel) as a separate Ministerial project in the Public Investment Programme, as the 2011 CHD evaluation recommends has not taken place either.

In view of these developments it is no surprise that the MoPH in **Madagascar** strongly advocates for maintaining the CHD: ***“Altogether, the financing of the CHDs is satisfactorily, providing an opportunity for children to access health services for free for a week. There are no funds for the routine.”*** (MoPH staff member). The lack of funding is the single most important issue mentioned by stakeholders (notable staff from the MoPH at all levels) that the CHD should continue. ***“During the CHDs, stakeholders receive an incentive, but the routine depends on the competence of the various responsible staff to motivate their teams to carry out activities without an incentive. Therefore, finances are need for example for (providing services through) outreach strategies.”*** (District staff member). Partnerships with other NGOs and the private for profit sector are being further developed however, to mobilize extra funding (for example the telecommunication for social mobilization) in **Madagascar**, which might help to achieve financial sustainability.

5.4.4 **Is a work-plan developed at districts level and approved that is inclusive of a strategy to provide 4 annual contacts for children under 5 years for nutrition and immunization interventions?**

As described earlier, work-plans are made at district and sometimes even at facility level in

⁷⁵ La Banque Mondiale-UNICEF (2015). *Revue des dépenses publiques relatives aux secteurs sociaux*.

each of the countries. Micro-plans are developed for two yearly CHD events without taking into consideration for further contact in between, although some referral takes place for children with acute malnutrition for instance. In **Tanzania** the responsibility to implement the CNHM is under the District Executive Officer (DEO) and in this way integrated in the overall district planning (not separately in the district health planning): ***“Another reason for the success of the campaign is that the campaign is widely known and given a weight by the DEO and other executives thus when they plan for other office activities in other departments things like transportation is distributed taking into mind the campaign.”***

However, in **Sierra Leone** in an effort to further institutional sustainability, UNICEF Sierra Leone has recently finalized an analysis of possible options for the transition of VAS (and deworming) to routine⁷⁶. The analysis was presented during the debriefing meeting. Three options were identified including their merits and challenges:

1. Integrating VAS into MUAC screening conducted by the lead mothers (of mother support groups) and CHWs
2. Integrating VAS into other existing mass campaign activities in the country such as campaigns for polio, measles, neglected tropical diseases and distribution of Long Lasting Insecticide Nets
3. Piloting of VAS through a package of service at 6 monthly contact point (6MCP)

Based on the analysis, the third possibility was identified as the most feasible, given the level of integration of the MCP into the existing health system and thus enhancing sustainability⁷⁷.

Positive evidence from the implementation of a pilot by the MOHS supported by HKI⁷⁸ [3] is an additional reason to recommend option three. In the pilot the effectiveness of integrating VAS at 6 months into the EPI was studied. Three groups were provided with a 'mini package' of VAS and infant and young child feeding (IYCF), a 'full package' of VAS, IYCF and family planning (FP), or 'child health card' only. VAS coverage between 6 and 7 months of age in the three groups was 71.7 %, 74.5 % and 60.2% respectively. In sum, integration of VAS within the EPI schedule achieved >60 % coverage for infants between 6 and 7 months of age, while IYCF FP and/or FP further improved coverage.

Integrating CHD activities in 6MCP is also in line with one of the results related to institutional sustainability mentioned in the PMF: An increase in countries which have specific strategies to provide sufficient annual contact points for children under 5 years for nutrition, immunization and other child health interventions (as appropriate) through Child Health Day or Integrated events and/or routine services developed in a sustainable way. The related indicator is availability of a work-plan developed at districts level and approved which is inclusive of a strategy to provide 4 annual contacts for children under 5 years for nutrition, immunization and other child health interventions (100% of districts). 6MCP are not mentioned in any of the current health and nutrition policies. The number of contacts is however well in line with the updated NHSSP, which recommend that the number of contacts should go up from 0.5 (in 2012) to 3 by 2015.

5.4.5 Does the plan include training of health staff and supportive supervision to increase child health and nutrition services? In how many districts (proportion of total)

Training is not included in the district-level plans but arranged at the central level, usually by the Ministry of Health with support from UNICEF and in some instances Hellen Keller International, WHO and or other partners. In all three case-study countries, building capacities

⁷⁶These options were summarized in slides and are part of the power point presentation of Sierra Leone.

⁷⁷In Sierra Leone, 6MCP for children under five were institutionalized in 2010, following the Free Health Care Initiative for pregnant and lactating mothers and children under five aimed among others at equitable access to health care, please also refer to section 4.2).

⁷⁸<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4521092/>

in planning as well logistics and service delivery were among the most frequently mentioned success factors of the CHDs. As explained in section 5.3.3 preparation of the CHDs in **Sierra Leone and Madagascar** is through a cascade training on the spot (at central, district and community level) approach. National supervisors and zonal/district supervisors monitor/supervise teams throughout the CHDs.

In **Tanzania** the bottleneck analysis mentioned in section xxx identified a lack of knowledge and technical skills of health staff to implement all activities related to the CHDs. However, the evaluation team found that district/ council teams were providing supportive supervision in all districts visited, but content and appreciation were different. Some regions were found to receive more support and supervision for the CHDs than others, because they were already in a broader programme supported by e.g. UNICEF. In one of those district support was summarized as follows: ***"There are 56 facilities, supportive supervision is done in all facilities not only to assess those who performed well or bad in last round but also to see how they deliver the services. (.....) Orientation is given to supervisors before going to the field. Challenges are shared among the supervisors thus it becomes easy to overcome them"*** (interviewee at district level). The central level provides extra support to regional and district teams that underperform. Overall, in **Tanzania**, the fact that CHWs have been capacitated in community mobilization, administration of drugs and recording of MUAC and understand the rationale of the campaign help to make it a success.

In **Tanzania**, the districts can not include funding for training as the funding from the Health Basket Fund is only meant for implementation. However with development partner funds from the central level health care workers in **Tanzania** and **Sierra Leone** were trained to perform the job. In all three case-study countries also technical assistance was provided to the districts to undertake supportive supervision, amongst others by the recently appointed district nutritionist, during the campaign.

5.4.6 Does the work plan include training of other stakeholders (village health communities, CBOs etc.)?

As explained above, training is not included in the district work plans. However, training resources from the central level are mostly used to train service providers, including CHW, and not village health committees or CBOs, except for social mobilizers in some cases (**Sierra Leone, Madagascar**). In all case-study countries community leaders, including religious leaders, received verbal or written communication about the campaign and are asked to raise awareness about the campaign and make announcements in terms of the designated days. As elaborated in section 5.2.7 in **Sierra Leone** UNICEF and the Inter-Religious Council of Sierra Leone have a long-standing partnership to this end, while collaboration between UNICEF and Restless Development supports the CHDs through awareness raising by mobile phones.

In **Tanzania** some village leaders mentioned though to have received a two day training on Vitamin A and child Health in general. However, the majority of respondents in all three case-study countries had not received such training.

The evaluation question ***What are best practices and lessons learned in terms of supporting governments in their effort to deliver integrated nutrition, health and immunisation services? (D2)*** is answered through the following reflections and three evaluation questions

5.4.7 What factors contributed to the success or failure of increasing integrated child health and nutrition services?

The CHDs are accepted at institutional and beneficiary level, and are seen as relevant by national entities and community members. A factor that contributed to its acceptance and

success in all case study countries is that the CHD activities are included in relevant national policies and plans. In addition, a major part of the core CHD activities are already long lasting interventions in the health sector. For example, the distribution of Vitamin A has been ongoing for over 10 years in all three countries through biannual campaign days.

The way CHDs are organized by having countries district health teams take up local responsibility for the implementation of the child health days. This contributes to local ownership of CHDs which is part of its success. By involving district teams in micro planning, in **Tanzania** and **Sierra Leone**, the district teams are really in the “driving seat” for the planning. Pro-actively seeking collaboration of other players further more helps with successful implementation. Supportive supervision in all three case-study countries also helps to enhance the coverage.

A challenge lays with the fact that health staff of regular health services are the main implementers of the campaign and often overstretched by the additional CHDs activities in one week time. The change in **Tanzania** from a Child Health week to a Child Health Nutrition Month has certainly diminished the tension for the health staff and also for the parents/caretakers who mentioned that the waiting time was much diminished compared to the past. ***“The same, attendance is good, they now come in groups, in previous years, the entire village would come in one day the 16th, there was much congestion and providing service was difficult, however at present time there are less congestions as people come in groups”*** (Health Service provider in Tanzania). The move towards a Child Health Month was really appreciated by all those involved and there are voices within the department of reproductive health to turn this six monthly event into a three monthly event as this would also link better to new guidelines for weighing children between 2 and 5 years on a quarterly basis. This would ensure a better fit between organizational capacity of the health system and the daily workload. This would certainly help Tanzania towards moving to an “institutionalized campaign”.

As elaborated above, also in **Sierra Leone** there are discussions on changing the modality for service delivery. As outlined above, the favourite is linking activities to the routine and (for the time being) continue with one CHD campaign a year (to catch defaulters/ as a mop up). Having a target and using whatsapp to inform facilities about their target was seen by some respondents in **Tanzania** as critical for success.

A success factor in increasing the use of integrated health and nutrition services by parents is due to the fact that CHDs are also (not least!) used to trace defaulters (children who don't come for vaccinations or have missed some, children who are not attending community MUAC screening and pregnant women who don't attend ANC (as in **Sierra Leone** and to a lesser extent in the other two countries). In doing so, CHDs contribute to higher attendance at integrated health and nutrition services directly (during the CHDs) and indirectly by referring defaulters to health facilities. In **Sierra Leone**, data indicated that the vast majority of “defaulting” pregnant women attended ANC at the first opportunity. In all three case-study countries attendance at ANC and under-five clinics rose after CHDs had taken place⁷⁹. Data showed however that this effect became less over time. In **Madagascar** this effect was modest however, after additional campaigns (of vaccination catch-up) had been introduced. The team didn't see other examples, although high level official in **Sierra Leone** expressed the intention to strengthen under five and ANC coverage by strengthening outreach. As mentioned in section 5.4.5 and 5.4.6, another success-factor is capacity building of health staff, CHWs and community mobilizers.

⁷⁹ Evaluators did not attempt to measure whether the provision of MUAC screening resulted in an increase in referrals and admissions after the CHDs. Such data were not available in any of the three case-study countries.

5.4.8 Did any negative changes result from programming? How could these be avoided?

No real negative changes were identified as result of the programme as such. The mass campaign approach comes at a cost though. While such mass campaign brings with it opportunities for keeping communities and caretakers informed and interested to take up the services, those who are far away of the services or more vulnerable will be the first to lose access if organization/ resources become insufficient: overstretching of health workers (**Madagascar** and **Tanzania**), shortage of means of transport and possibility to cover large geographic areas (all case-study countries) constrain a REC approach. *"There are two sub-villages that are very far from the facility approximately one is 7 Km and another is 9Km from the facility so to and fro is 14 km to 18 km respectively. This is a challenge because of walking distance and for mothers that have more than one eligible child it is difficult to come to the centre with all the children. One of the villages is Baning'ombe which has 70 children and Luhapo which has 68 children and when we want to go to those areas we must hire a motor cycle- this is a challenge"* (Service provider, Kilolo District, Tanzania).

For sustainable service delivery also to the hard to reach populations integration of nutrition and health activities for children and pregnant women with better access to services into the regular health service delivery and maintaining the campaign approach, with outreach/ house to house visits for hard to reach and vulnerable communities, could be considered. This seems especially feasible in areas where high numbers of children under five come monthly to the clinic for regular check-ups, as was seen in Kilolo, **Tanzania**. But also in **Madagascar** stakeholders consider a pilot in in areas with large population density (urban) and good health facility coverage as a first step to integrate CHDs in the routine.

Among the obstacles for integrating CHDs into routine services is the fact that extra supplies of Vitamin A, albendazole, and vaccines are needed. In all countries extra supplies are ordered for the CHD, and shipped into the country. The financing of these supplies come from outside regular health system funding and the logistics systems to move these supplies to district/ facility level are key bottlenecks in all countries for a sustainable implementation of the CHD. **Madagascar** for instance is depending much on extra supplies of albendazole and vitamin A for the CHD, financed through UNICEF/GAC. This is also the case in **Tanzania**, although clearance and distribution of supplies now goes through the regular system. In **Sierra Leone** these supplies are integrated in the regular district supplies and always available at facility level (for free), but also in **Sierra Leone** an extra supply (outside the health system planning) is needed.

While the involvement of health staff in general and of CHWs in particular is one of the key success factors, the lack of funding for incentives for staff during the CHDs especially in **Sierra Leone** and **Madagascar** is another obstacle towards sustainability.

A downside of the campaign approach could be that in some countries vitamin A in general (e.g. **Tanzania**) is not available or at least not in sufficient quantities (e.g. **Sierra Leone**) and/ or for free (e.g. **Madagascar**) outside campaign dates at health facilities, because VAS is seen as a CHD activity. In such countries children who were missed during the campaign will most likely not provided with vitamin A when they visit the health facility when they are sick.

Another downside mentioned by respondents was the payment modality for health staff during the CHDs. This extra payment was said to cause that health staff are not willing to do the work without receiving an incentive, especially for out-reach activities during routine. This had also created a negative attitude among community leaders.

A last downside is may be that for caregivers who bring their children regularly to the child

clinic where they receive all the services (as in Iringga, **Tanzania**), child health days do not have an extra value for the health of their children. In these situations health workers are occupied to attend children that at that moment do not need the services. In countries with a shortage of human resource this is not effective and the efforts and time of the health workers could better be used for other purposes.

A way to address downsides is to include in operational research -such as is done in Madagascar- (also) issues that identify factors that impact on the effective and culturally sensitive delivery of CHDs.

5.4.9 **What were the success stories regarding capacity development of partners and communities and how can these be replicated in an effective, efficient and sustainable manner?**

The micro plans were said to have really helped to increase capacity. In all case-study countries a training guide for the organization and implementation of the CHDs including developing micro plans at district level had been developed. ***"They have an understanding, as we said before we use health staff that we work with daily in the campaign and in terms of capacity building we had a micro plan that includes all the new staff that never attained training before to attain training and this is possible because we were trained about everything concerning the vitamin A campaign"*** (City Council, Arusha, Tanzania).

In fact, in all three case-study countries training/ capacity building was mentioned as a major success factor. In **Sierra Leone** health staff said that the strength of repeating the training prior to the CHDs is that also new staff and staff with (still) relatively little training (such as nursing aides or community health workers) are being drilled in the need/ rationale for preventive under five interventions and how to carry these out. As one nurse in charge in **Sierra Leone** put it: ***"Capacities of community health workers and teams have been really strengthened because it (the training) is twice a year"***. Unknowing, she confirmed the words of a community health worker in **Madagascar**: ***"We had training twice. Two weeks before the CHW we came together to strengthen our capacities for raising awareness and one week before the CHW we were trained in mapping the population in the communities, social mobilization of parents of children under five years of age, filling in forms and how to deliver the CHDs package. We found it very useful, because it strengthens our knowledge."***

The fact that in all three case-study countries guides (for planning and implementation) have been developed and updated for each CHD and cascade training at different levels is provided in preparation of the CHD suggest that these are major elements in successful capacity building.

5.4.10 **What are examples of the use of local resources/capacities and/or networks that are (or can be) effectively used to sustain the achievements of the response? I**

In all three case-study countries coordination mechanisms were excellent and well-tailored to mobilize resources (at all levels), in particular logistical resources, but also human resources and supplies. In **Madagascar** collaboration between stakeholders from the public and private sector continues to be strengthened. Examples include the participation of virtually all private health facilities in the CHDs and the provision of resources for communication and data collection by private telecom companies. In **Sierra Leone** good coordination mechanisms and collaboration were identified as key success factors. The coordination structure consisting of community leaders, civil society organizations and public and private health facilities is in a good position to sustain the achievements. In Tanzania the responsibility of the Districts to invest in nutrition is an example of decentralization of financial sustainability towards CHD

activities.

Overall sustainability

The initiative very much builds on institutional and organizational governmental capacities and activities. It also capitalizes on community structures and systems including by-laws, civil society capacity and in some cases also private sector capacity. None of the three case study countries, including Tanzania as early transitioning country, is able to finance the CHD from their regular Health (System) Budget, which means that financial sustainability seems still far off.

Micro-planning processes result in district level work plans and budgets with two contact points per year. Training in micro-planning is not included in district level work plans and is only made available occasionally around the introduction of a new activity/approach from the central level in **Tanzania**. In **Madagascar** and **Sierra Leone** (micro-)planning is part and parcel of the cascade training in preparation of each CHD. As a result of regular training (often twice a year) the capacity of those involved in the micro-planning is increased as result of this process. Capacities of community health workers are also being strengthened because of the CHD related training. There are many factors that points towards the sustainability of CHD activities, these being CHD activities having been included in relevant national policies and plans; core CHD activities having been included in well-established interventions in the health and nutrition sector; district health teams taking up local responsibility for the implementation which enhances ownership and pro-actively seeking collaboration with other players; the learning from supportive supervision; flexible arrangements i.e. moving towards a month instead of a week; parents acknowledging the benefits for their children (and for pregnant women) increasingly also seek seeking the positive effect within their children. There are also some challenges for integrating CHDs into routine services such as the fact that extra supplies of Vitamin A, albendazole, and vaccines and resources for this are needed.

No negative changes were identified as a result of the programme. Although this evaluation did not include a cost analysis component it was found that when districts contribute financially to the CHD (transport, allowances for fieldwork) this is felt as an expensive activity while the work is time consuming for the scarce skilled staff available in the health system. These campaigns are currently used to also reach out to children who live near facilities and already making use of the regular health services, instead of focusing only on those further away or less likely to make use of health services due to being particularly vulnerable. This evaluation did not come across examples where the CHD services were included in regular health services with smaller campaigns aside that aim to reach those children that live far away or are vulnerable. This could diminish the extra financial costs, logistic difficulties and health worker efforts as long as the need for a campaign approach exist to cover all under-fives.

5.5 Lessons learned and promising practices

This section aims to provide a short overview of key lessons learned and promising practices from different sections in the report.

Supportive supervision

In all three case-study countries, supportive supervision resulted in enhanced coverage, by moving things into the right direction or supporting prompt decision-making. A number of measures were identified that make supportive supervision more effective: regular orientation and/or training on how to conduct supportive supervision; building-in meetings during which

challenges identified can be shared and joint solutions found; using a supportive supervision checklist to help make the process more efficient; and ensuring reporting mechanisms on the outcomes of the supportive supervision activities immediately following the supportive supervision has taken place.

Micro Planning

The micro planning process, in which the district health teams and health facility staff take up local responsibility for the implementation of the CHDs is another factor for success. It contributes to local ownership of CHDs, and ensures that district teams are really in the “driving seat” for the planning, especially there where the districts are able to make tailor made plans.

Capacity development

Repeated capacity development was mentioned to be a major success factor. The strength of repeating the training prior to the CHDs was considered especially helpful for cadre with relatively limited training such as nursing aides or community health workers, but also helpful for new staff.

Research and bottleneck analysis

The LQAS and PEC surveys are helpful in understanding the reasons why people are not making use of CHDs, such as not being well informed about the need for the intervention, or the existence of CHDs, long waiting time, long distance, etc. This can then subsequently be addressed. However, not in all countries such research is undertaken that helps identify bottlenecks from the demand side. Furthermore, in some countries, such as Tanzania, bottleneck analyses are undertaken that can help to identify supply side factors in low performing districts.

Moving from week to month

In **Tanzania** the challenge that health staff of regular health services are often overstretched by the additional CHDs activities has been much reduced by the introduction of the Child Health Nutrition Month. Having the CHDs stretched out over four instead of one week has diminished the tension for health staff and for parents/caretakers who mentioned that the waiting time was much diminished compared to the past. There are voices within the department of reproductive health to turn this six monthly event into a three monthly event as this would also link better to new guidelines for weighing children between 2 and 5 years on a quarterly basis to keep track of their nutritional status. This would ensure a better fit between organizational capacity of the health system and the daily workload, and therewith help Tanzania towards integrating CHDs into the regular services.

Social mobilization

An important success-factor in increasing coverage is social mobilization. MOHs with support of UNICEF have been in particular successful in finding new partners for social mobilization including telecom companies, but also religious and community leaders as well as other ministries. Such collaboration assists with sharing resources including for supportive supervision activities, with having a wider network for social mobilization and dissemination of information including through mobile phones, and enhanced referral mechanisms. Involvement of such partners also helps to bolster ownership, especially at community level.

Tracing those missing services

Another factor for success was the finding of those who are missing services (children who do not come for vaccinations or have missed some, children who are not attending community MUAC screening and pregnant women who do not attend ANC). In doing so, CHDs contribute to higher attendance at integrated health and nutrition services during the CHDs and by referring

this group to health facilities. In **Sierra Leone**, data indicated that the vast majority of pregnant women identified during the CHDs who had missed ANC visits, attended ANC at the first opportunity.

Integrating CHDs in the health system

In **Sierra Leone** in an effort to further institutional sustainability, piloting of VAS and the provision albendazole through a package of services at 6 monthly contact point is being considered, following positive evidence in a pilot undertaken by MoH and HKI. Also in **Tanzania** discussion takes place about integration of CHD within the regular services versus institutionalizing the campaign. Nutritional experts indicate thereby to be more in favour of an institutionalized campaign approach, while reproductive health experts are more in favour of integration.

6.5 Conclusions and recommendations

In this section, we first bring together the relevance, efficiency, effectiveness and sustainability conclusions that were already provided at the end of the different sections in the previous chapter. By doing so, we hope to provide better insight in these conclusions as a whole. We then try to provide some further reflection on these conclusions in the light of the evaluation objectives and the reconstructed Theory of Change, followed by recommendations.

Conclusions relevance

The CHD activities - in all three case-study countries so irrespective of being an early transitioning country, a late transitioning country or a fragile state - are very much in line with the various relevant Government plans, UNICEF policies and international best/promising practices and build upon available evidence of what works. The CHDs interventions are well suited to address major causes of child morbidity and mortality, as they build upon the best available evidence what works, at a large scale. The package of health and nutrition services is flexible and can be adjusted to contextual needs. However, there is also a tension between the numerous needs and indications that the effectiveness of CHDs may be compromised if too many services are being co-delivered. Thereby there are limitations to the package, as it does not address an issue as stunting which is increasingly recognized as a large problem in countries as hardly any progress has been made to address stunting.

In all three case study countries strong efforts are made to reach underserved populations and low performing districts during CHDs. The data base analysis shows that similar efforts are made in the other 10 countries. Within this approach, no specific attention is given to particular vulnerable children in line with a vulnerability framework developed by UNICEF⁸⁰. However, further analysis of DHS 2016 data in Senegal and Tanzania showed that in spite of this, the campaign in Senegal was very successful in reaching out to those children as well, this was less so the case in Tanzania.

While HMIS data are systematically disaggregated by sex, this is not the case for the CHD campaign data, meaning that it is not possible to measure gender equity in terms of access to the CHD services. Gender inequity is – **at the level of parents or care takers** - not systematically addressed in the design and implementation of CHDs, even there where male and female community health workers selected with gender parity are involved in the sensitization and implementation of CHDs. Bringing the child to the services is mostly seen as a women's issue, men only marginally attend CHDs. This is also reflected in by-laws in Tanzania for instance that hold mothers accountable in the case they fail to bring their child to the services, although in **Sierra Leone** it was the household that was kept accountable. This while gender transformative programmes have found to lead to better health status outcomes.

CHDs make use of existing community structures for its implementation through for instance the active involvement of community leaders, CHWs, teachers, women's groups, etc. in the mobilization of the population. This is not the case in terms of planning or supportive supervision activities.

Conclusions efficiency

CHDs take place as scheduled, with a few exceptions caused by for instance conflicts, Ebola outbreaks, or late arrival of funds and or supplies in combination with lack of leadership and flexibility at district level. Micro-planning, which makes use of HMIS or population projection data, numbers to be targeted and number of health facilities and available/necessary staff, is a useful tool to ensure implementation. However, there are possibilities to better make use of

⁸⁰ Idele, P.A., et al. (2012), *Redefining "Vulnerable Child" in the Context of HIV/AIDS...*

micro-planning. Bottom-up instead of top down planning (**Madagascar**) or more possibilities to address contextual challenges (geographical, population density for instance in **Sierra Leone**) are examples in case. Also the decentralized approach in **Tanzania** is an example of making better use of micro-planning as it facilitates tailor-made micro plans at district level. In all countries, data from previous CHDs and surveys are being used to address gaps and improve coverage. There are many examples of how agencies collaborate in making the CHDs a success. Although the onus is on working together in mobilization, in all countries support from these partners during the actual implementation (logistics, human resources and supplies) is crucial. A weaker point is that there are virtually no data on the efficiency of some efforts (such as social mobilization).

On average 75% of the GAC budget was for direct project activities for nutrition and immunization and 25% for indirect costs. Country-budgets vary greatly, as do contributions from other donors, NGOs, or contributions in kind such as staff over-time, coordination and/or supervision from the side of governments, making a cost-efficiency analysis difficult. One thing all case studies have in common is that the biggest financial challenges is the funding of per diems both for supportive supervision as well as outreach work. In addition, human resources allocated for the CHDs are based on population figures only. Differences in population density, distances between health facility and communities in the catchment area and/or logistical constraints in reaching communities (isolated, river crossings and so on) are not taken into account. As a result, rural areas where distance are vast and the population scarce are at a disadvantage.

Comparison of the costs per child is not really feasible due to the differences in intervention packages, differences in delivery mode, and differences in items included in the various budgets. In all three case-study countries, building capacities in planning as well logistics and service delivery were among the most frequently mentioned success factors of the CHDs.

Conclusions effectiveness

Across all 13 countries, a gradual decrease of reported measles cases can be seen between 2011 – 2015. There were over 150,000 cases across the 13 countries reported in 2011, a year which also saw epidemics in parts of DRC, Nigeria, Zambia, Ethiopia and Somalia. Cases decreased considerably thereafter. However, given that this is country reported data, caution is needed interpreting this data which is subject as much to fluctuations in reporting as it is to changes in incidence. With regards to assessing trends in immunization rates before and during the project years, according to WUENIC estimates, there was no change in MCV1 rates, and slight decrease in DTP3 rate. South Sudan and CAR both with very low rates at baseline, experience the most severe decreases.

CHD campaigns, or similar campaigns where vitamin A was also administered, were conducted in every year in every evaluation country in 2014 and 2015. Three countries did not conduct 2 campaigns per year: CAR (only one campaign in 2014 and one in 2015), Sierra Leone (only one campaign in 2014) and South Sudan (only one in 2015). Most countries saw an increase in the average number of children supplemented per semester when they did conduct campaigns apart from Burundi, CAR and Senegal and Sierra Leone. Despite these improvements, by analysing coverage data from the UNICEF database, VAS coverage in the evaluation countries decreased in the project years (2013 S2-2015) compared to before (2010-2013 S1)) by around 7 percentage points, or 9% decrease. Thus this overall decrease is mainly caused by decreases where campaigns could not be conducted as well as countries where the number of children supplemented dropped. These are the countries which experienced security crises (South Sudan, CAR, Burundi) and Sierra Leone which had to cancel its second campaign in 2014. It also includes Senegal, which experienced the most severe decrease in coverage, attributed to low coverage of VAS through routine services in the 12-59 months age group

In line with the observations in the case study countries, an analysis of country reported data by district shows improvements in performances. For vaccinations, the number of low performing districts are generally decreasing while most countries saw an increase in the number of districts with coverage above 90%. Trends are even more encouraging for Vitamin A data, with hardly any countries reporting coverage less than 50% in rounds when VAS is conducted and generally coverage above 90% reported in all countries (analyses could not be done for Uganda yet), suggesting a more equitable reach of children with campaigns rather than with routine services. However, it is important to note that these analyses are based on coverage estimates based on HMIS/campaign data which overestimate coverage.

Results from a multivariate logistic models analysis confirm that vulnerability determinants vary considerably across countries. In **Tanzania** this analyses suggest a strong decrease in coverage with decreasing wealth status – the odds of being reached are approximately 3 times higher in the richest compared to the poorest quintile. Household and family characteristics are also associated with provision of services with the odds of vaccination, supplementation and deworming being larger when coming from a smaller household, having more educated parents and living with these parents although this applies more for routine delivery than for campaigns. Finally, in **Tanzania** there were no differences between urban and rural settings in neither routine nor campaign indicators. In **Senegal**, routine service delivery is also inequitable, especially in terms of socio economic status, but less so in terms of children's living arrangements and family characteristics - children from the richest households are more than 4 times more likely to be fully immunized, 20% more likely if they come from a smaller household, and nearly 2 times more likely if they come from a more educated household. Children in urban areas are about 40% more likely to be immunized and there is no difference between boys and girls. However, the striking and very encouraging result in **Senegal** is that none of the vulnerability determinants were associated with services provided in campaigns (i.e. Vitamin A and deworming), suggesting that campaigns were successful in reaching out to the most vulnerable children. Even to the extent that inequity appears to re-appear in a reversed form, with children from urban areas about 30% less likely to be reached than those from rural areas with campaigns. Earlier DHS data comparing equity in 2008 and 2013 indicate suggest a similar positive effect of CHDs on equity coverage. Between 2008 and 2013, disparities in VAS and deworming coverage decreased substantially as opposed to disparities in stunting.

In all three case-study countries supportive supervision was recognized to contribute to enhanced coverage.

Conclusions sustainability

There are many factors that point towards the sustainability of CHD activities. The initiative builds on institutional and organizational governmental capacity and activities. It also capitalizes on community structures including by-laws, civil society capacity and in some cases also private sector capacity. CHD activities have been included in relevant national policies and plans. Core CHD activities have been included in well-established interventions in the health and nutrition sector. Micro-planning processes result in district level work plans and budgets with two contact points per year. District health teams take up local responsibility for the implementation which enhances ownership and pro-actively seeking collaboration with other players. Capacities of community health workers are being strengthened where CHDs receive bi-annual trainings and supportive supervision processes enhance local (problem solving) capacity.

There are also a number of challenges to ensure sustainability. None of the three case study countries, including Tanzania as early transitioning country, is able to finance the CHD from their regular Health (System) Budget, although Tanzania does support operation costs under the basket funding including through the decentralized budgets), which means that financial sustainability seems still far off. There are also challenges with integrating CHDs into regular services such as the fact that extra supplies of Vitamin A, albendazole, and vaccines and resources for this are needed, that are now only being made available for campaigns.

No real negative effects as result of the programme were identified, other than opportunity costs, as the mass campaign approach targeting everybody uses energy and resources that could be used to focus on those further away or the most vulnerable while strengthening the regular system.

Overall conclusions

All in all it can be concluded that the project does contribute towards reaching the aims of the project namely to support national governments in their efforts to deliver integrated nutrition, immunization and other health interventions to their populations. The project does this through supporting the inclusion of CHD and child survival and development activities within health and nutrition strategies and through communication at various levels to increase awareness on nutrition. The project facilitates the implementation of high-coverage child survival and nutrition interventions that have a strong focus towards geographic equity. Thereby approaches are used that are able to reach underserved populations in different environments, although the focus towards the poorest and most vulnerable children in terms of campaign data shows mixed results. The project furthermore contributes to scaled up priority nutrition interventions, although there is a limitation of the package as it does not address stunting. In addition, the technical assistance provided, helps to improve planning, procurement, logistics, and works towards increasing national ownership upstream, at least in the early transitioning and the late transitioning country case study, while in fragile states a more top down approach seems to be used.

In terms of fostering approaches for institutionalization of CHDs in the health system, the Theory of Change included the thinking that the Early transition countries were supposed by the end of the programme to be capable to implement CHD independently from any technical support. During implementation technical support would focus on national coordination. The Tanzania case study does show that this is indeed the case. For late transition countries strengthening of capacity at implementation level was still foreseen so that after the project period the country is able to implement the CHD without technical support. The fragile states however were expected to receive still support at all levels in the system. Financial sustainability is also separately mentioned in the original documents: Early and late countries are suspected to sustain financially on their own, while for fragile states no mentioning of financial sustainability was made. However, the case studies show that in financial terms this is not the case. Campaigns are costly and efforts for strong advocacy to integrate CHD activities into regular service and national health budgets has been limited. Nutrition experts in Tanzania are afraid that such integration would lead to reduced achievements, while health workers are more open towards such an integration. In **Madagascar** health staff at national level wanted the CHDs to continue because it was easier to find donors for campaigns than for the regular health services. **Sierra Leone**, a late transitioning country had the most concrete plans to institutionalize VAS and deworming in the regular health and nutrition services, following a positive pilot. Several key MoH officials emphasized the need to strengthen outreach in the routine service to achieve sustainable high coverage. Sustainable delivery of CHD activities can only be reached when the majority of the clients will receive the services outside the campaign

weeks, while for the group of vulnerable children extra finances and efforts could be made available to ensure their access to the services.

In spite of the great achievements of the campaigns, these have also a downside, namely they take place two times a year but do not facilitate interaction between health facilities (including outreach) and communities in between these two time points, while at least four contact points per year are advisable. The current interface between health facilities, community health workers and communities for CHD mobilization provides a good entry point to advocate for more frequent interaction within the regular health services. Such interaction is necessary to motivate behavioural change to take place such as around breastfeeding, to address stunting and for creating stronger synergy between child survival and development.

Recommendations

The key recommendations below that follow from the findings, and which can help strengthen the Enhanced Child Health Days supported by a follow on grant from Canada covering 15 countries in Sub Saharan Africa, are as follows:

For UNICEF New York and Regional Offices

Continuation CHDs like activities in fragile settings/weak health system settings

- In the context of the new round of funding for the Enhanced Child Health Days (ECHD) grant from Canada, **continue providing support for Child Health Day** type of activities in contexts **where regular service delivery is weak or in fragile settings**, and to bridge interventions while the health system is being strengthened.

Advocacy for integration into Health system

- In those countries that are supported by the ECHD grant **where the regular health services allow** this, provide support for the development and use of **advocacy packages to advocate for**
 - e. **Availability of Vitamin A and albendazole** (free of charge) **through primary health care systems** for all children under five;
 - f. **Inclusion of VAS and deworming within national budgets** for all children under five, and
 - g. **A separate budget for especially vulnerable children and those missing services** for which additional efforts are needed and for which micro planning, outreach, community participation and supportive supervision would be required.
 - h. Advocate for strengthening **involvement of community leaders and community health workers in micro-planning** at health facility and community level and in jointly conduct bottleneck analysis.

Capacity building

- In the context of the ECHD grant, provide capacity building support for
 - i. **strengthening routine supply systems** to ensure that Vitamin A, albendazole and other essentials, can be provided through this to both regular services and campaigns.

- j. Strengthening **forecasting and supplies management capacity** at decentralized levels.
- k. Facilitate technical support to transitioning countries that are planning to **integrate campaign data into HMIS**, with real time data collection systems from the community level and up. This would facilitate to better track which children of what age and what sex have received what service, and provide better data for decision making.
- l. Support UNICEF Country Office in their efforts to build capacity around **evidence-informed decision making** during for example country data review meetings
- m. Facilitate technical support for independent monitoring and/ or PECS after each CHD.
- n. When CHDs are required, provide technical support and advocate for moving towards integration in the medium to long term.
- o. Provide support for tracking costs of ECHD on the basis of pointers provided by this evaluation
- p. Provide technical support for documenting how technical support has strengthened systems to improve planning, centralized purchase of supplies and leadership by Ministries of Health.

Gender Transformative planning

- Provide guidance on gender transformative planning⁸¹ within the CHDs, this as there is evidence that this could contribute to improved health outcomes and assist with addressing gender related barriers during mobilization; in accessing and demand for services.

For Country Offices

Capacity building

- Within the context of the ECHD grant, utilize the two yearly capacity building activities in preparation for the CHDs to strengthen the overall system, including for strengthening the capacity of Health Facility Staff and Community Health Workers to interactively provide information, instead of the one-way communication currently provided.
- Provide technical support for an evidence-informed communication plan on how to best go about collaboration with different partners around social mobilization, outreach, logistics, human resources and supplies.
- Provide technical support to conduct equity assessments and/or bottleneck analysis around under- served populations and low performing areas focused both on the demand and the supply sides that could further inform such evidence-informed communication plan.

⁸¹ Gender transformative planning implies transforming unequal gender relations towards a situation whereby power, control of resources, and decision making are shared, which also works towards achieving positive development outcomes. Adpated from Gupta et al. "Integrating gender into HIV/AIDs Programs: review Paper for expert Consultation, 3–5 June 2002," Geneva

- Strengthen supportive supervision through
 - a. regularly providing orientation and or training on supportive supervision at different levels;
 - b. using a supportive checklist to help make the process more efficient;
 - c. ensuring sharing meetings and finding joint solution meetings; and
 - d. creating reporting mechanisms on the outcomes of the supportive supervision activities.

Advocacy

- Advocate that micro-planning:
 - c. Uses a **bottom-up** approach so that the micro-plans are tailor made and able to reach out to those not accessing the regular system;
 - d. In fragile states settings where bottom-up planning is not always feasible, take geographical diversity and population density into account in resource allocation.