

Joint Appraisal Report

Country	Zambia
Reporting period	<i>January 2014- December 2014</i>
cMYP period	<i>2011-15</i>
Fiscal period	<i>January – December</i>
Graduation date	<i>Only relevant for graduating countries</i>

1. EXECUTIVE SUMMARY

1.1. Gavi grant portfolio overview

GAVI contributes significantly to the success of the national immunization programme in Zambia. The country has since 2001 benefited from GAVI support under various windows such as immunization services support window, injection safety support window, health systems support window and in the recent past the new vaccines support window. This support from GAVI has contributed to the progressive growth of Zambia’s immunization programme, from a national immunization schedule of only 6 antigens - the traditional vaccines, to one with 11 antigens by the end of 2013. Zambia has over the last one and half decade introduced new and under used vaccines – the Pentavalent, Measles 2nd Dose, Pneumococcal conjugate vaccine, Rota virus vaccine. GAVI offers the financial resources needed to procure all these new and underutilized vaccines and the appropriate injection safety materials.

In 2014, GAVI committed to supporting the Zambian Immunisation Programme with funds worth \$12,511,000. The country received support through the New Vaccine support window for DTP-Hib-HepB, PCV10, Rotavirus and Measles second dose. According to UNICEF records, \$9,500,500 (76%) of committed funds were disbursed to support procurement of new vaccines.

As at 2014, the cost of running the national immunization programme was estimated at \$ 18,466,505. The Government of Zambia provided 33% of this cost, while donors among them GAVI provided the remainder of the cost. In particular, GAVI provided 51% of the total budget contributed to the running of the National immunization programme by donors in Zambia. GAVI in 2014, provided \$9,500,500 of the total cost of \$10,545,483 for the new and under used vaccines and related injection safety materials. The Government of Zambia in 2014 contributed 10% to the total cost of new and under used vaccines and related injection safety materials. GAVI has also supported Zambia to increase demand for immunizations services through direct CSO funding. Under the CSO platform, an estimated \$150,000 has been invested in Zambia.

The predictability of the support from GAVI has facilitated Government’s effective planning and implementation of national immunization programme related to commodity availability. Due to GAVI support, the country in 2014, did not report a stock out of new and underutilized vaccines and related injection safety materials. The Governments contribution to the Immunisation Programme reflected in these amounts are underestimated as personnel costs and other operational costs especially at sub national level which are integrated with other services are not included. Of note, there was significant investment to cold chain for Immunisation with Government contributing 67% of the total cost of \$5,130,269 and CIDRZ contributing 32%.

Zambia anticipates further support from GAVI, through the HSS window to further improve immunization services. The Zambia HSS application to GAVI, targets to support 7 rural, hard to reach and underperforming districts of Zambia to improve their immunization coverage. The HSS application also includes support targeted at improving the overall national EPI programme, such

as strengthening EPI training in health worker training institutions, i.e. at the pre-service stage, MLM training, printing of immunization in practice guidelines and supportive supervision. All the foregoing actions supported by GAVI are aimed at improving access to quality immunization services in Zambia. With continued GAVI support, Zambia is poised to achieve even high immunization coverage and prevent hundreds of children under the age of five from death.

1.2. Summary of grant performance, challenges and key recommendations

Grant performance (programmatic and financial management of NVS and HSS grants)

Achievements

Under five children's and infant mortality in Zambia has declined between 2007 and 2013, from 119 to 75 and from 70 to 45 respectively according to ZDHS 2013/2014. Zambia was certified Polio free in 2005 and has maintained that status since. In addition, the country was also certified by WHO to have eliminated maternal and neonatal tetanus in 2007.

In 2013, Zambia introduced 3 new vaccines in the national immunization schedule specifically, PCV10, RV and MCV2. This is addition to penta vaccine which was introduced in 2005 under the under New Vaccine Support (NVS) window. The Zambia 2014 Joint Reporting form reported DTP3 coverage (89%) attaining previously approved set target. This is a reversal from the notable progressive decline of DTP3 coverage in the 3 preceding years.

The penta1-3 dropout rate was 10%, PCV1-3 dropout rate 12%, RV1-2 dropout rate 7% and MCV1-2 dropout rate 55%. RV1 (85%) & RV2 (78%) coverages were lower compared to penta doses given at the visits. Service delivery levels frequently ran out of stocks of RV vaccine. PCV1 (93%) and PCV3 (81%) coverages were also lower than penta 1-3 vaccine given at the same visit. There was a significant dropout between MCV1 (93%) and MCV2 (38%). The reasons for the differences noted between antigens given at the same visits could be attributed to misdistribution of vaccines at district and sub-district levels as well as inadequate community awareness on MCV2. The recent Demographic and Health Survey 2013-14 shows that 86% of children were vaccinated with the third dose of DTP which is comparable with the achievement reported in the Zambia JRF of 2014.

Reported coverage compared to approved targets

Antigen	2014 Target	2014 Coverage
DTP3	88%	89%
PCV3	71%	81%
RV2	82%	78%
MCV2	39%	38%

Except for RV targets set for 2013 and approved by GAVI in the decision letter for Zambia EPI programme were generally met. Denominator problems continue to be an issues for the programme.

There survey report notes significant difference between children from the lowest quintiles compared to those from the highest quintile, those with mother with no education compared to those whose mothers had more than secondary education, as well as those from rural locations compared to those from urban settings. In order to address the high dropout rates and inequities between the highest and lowest quintiles the Government of Republic of Zambia (GRZ) with partners have embarked on district REC trainings for frontline health workers, provision of transport and financial resources for outreach activities. In addition, GRZ is submitting to GAVI HSS proposal which is targeting low performing and hard to reach districts. In order to strengthen

routine demand creation, a CSO immunization platform has been created to assist on social mobilization activities.

2014 Provincial coverage of Selected antigens (Administrative HMIS data)

% COVERAGE BY PROVINCE (for district specific data kindly refer to JRF 2014)					
Province	DTP3	OPV3	PCV3	RV2	MCV2
Central	102	103	82	66	41
Copperbelt	94	93	130	92	45
Eastern	93	91	90	90	38
Lusaka	87	87	71	77	50
Luapula	88	89	71	58	40
Muchinga	82	78	72	70	32
Northern	85	82	79	78	22
North Western	92	96	75	81	47
Southern	92	87	80	72	45
Western	90	95	71	74	30

HMIS data in Zambia neither disaggregates data between rural and urban nor by wealth quintile. The data provided is from the recent DHS survey. While it shows no significant difference between sexes, there are differences between wealth quintiles as well as rural urban distribution. It also shows high dropout rates between doses of the same antigens as indicated in the table above.

Status of Implementation of IRC recommendations

IRC Recommendations

- a. EPI Review notes failure to RED Prioritisation criteria that could lead to non-identification of areas of low performance. Also notes that only 62% of planned outreaches session were conducted for a variety of reasons-

Response: The National EPI programme prioritizes the Reaching Every Child approach. The challenges faced as noted in the review report were mainly due to inadequate funds (delayed disbursement of less funds than committed for districts from treasury) which affected outreaches services. Currently, there has been notable improvement in disbursement of funds through government and partner support. GRZ also procured motorbikes and motor vehicles to strengthen outreach services.

In addition to updating the operational guidelines for REC approach for use at service delivery level, the program has been reaching out to local partners to support immunisation programs. With full implementation of the approach in the 11 EU supported districts orientations have been conducted and districts have developed plans for implementation as per guidelines. The RED approach has been included as part of RMNCH interventions in other donor projects such the RMNCH project targeting all district in Central province, in the World bank project which is soon to be operationalized as well in the GAVI HSS proposal which is targeting underserved populations and is also submitted for considerations.

These efforts are supplement GRZ efforts to strengthen immunization services.

- b. Zambia to complete the transfer of balance of funds to GAVI account and inform GAVI secretariat accordingly.

Response: The Ministry of Community Development requested for Ministry of Health to effect the transfer of funds from the MOH GAVI account to GAVI. The Ministry of Community Development is still following up the issue with MOH/MoF. Updates to be provided to GAVI once transfer is affected.

- c. Zambia to reconsider reviewing targets for GAVI supported antigens to ensure they are appropriate and achievable

Response:

The country has in the recent years revised the targets following GAVI recommendations. Again this was done and submitted with the 2014 APR. The annual increments in targets have also been adjusted for subsequent years beyond 2015 in light of the 2014 achievements

- 2. Compliance to Data quality and Survey activity planning (annual desk review & every 5 year data quality/system evaluation), data quality improvement plan

- a. Zambia published its 2013-2014 Demographic and Health Survey in 2014. The immunisation results are explained in section 1.2 under achievements. The last data quality self-assessment was conducted in 2011. Data quality was recognized as an issue and efforts to address these were initiated. There are efforts in country to improve data quality, data collection tools and use of interventions at all levels through better immunization data (BID) initiative under PATH. The Government of Zambia believes that BID initiative will bring broad recognition of the need for a standard set of immunization tools, processes and software across the country such the use of barcodes and scanners and in turn leading to increased investment in IIS and improved immunization outcomes. It is envisioned that the electronic data collection tools will improve data quality as it will reduce data entry errors and enhance real time data

As Zambia plans to introduce MR vaccine, a survey is planned and this shall be used as an opportunity to ascertain immunisation coverage. Efforts to improve data coverage as well as the quality of data through current efforts shall continue.

- 3. Role on NV Introduction or campaigns introduction in advancing comprehensive disease control

- a. The introduction of new vaccines such as PVC10 has contributed to comprehensive control of diseases. Zambia has been implementing the Global Action Plan against Pneumonia and Diarrhoea interventions in all districts (at least for 4-5 GAPPD interventions). Through these concerted efforts in comprehensive approach to pneumonia and diarrhoea have been encouraged. Through the introduction of Rotavirus vaccine, all the other interventions around diarrhoea prevention and control have been promoted as noted in the guidelines. Zambia has been implementing integrated community case management (iCCM).

- 4. Lessons learnt to inform future Routine vaccine intros or SIAs: Lessons learnt from the previous introduction to inform NV introduction include mobilisation and secured funding as requirement for successful planning and introduction of a new vaccine.

Zambia is also planning with support from partners to implement interventions to improve uptake of second year of life interventions riding of the second dose of measles. According to the recent GAVI Full country evaluation report 2014, experience gained through the pilot implementation of RV in Lusaka and adaptations based on the informal lesson learnt during the launch of PCV10 in 2013 contributed to improve preparation, launch and rollout of the Rota vaccine compared to the previous introduction.

5. Overall programmatic capacity of entity to manage NUVI grants

The management of NUVI Grants in Zambia was through UNICEF. There were no major issues in the management of these resources.

6. Financial Performance and challenges

The Government of Zambia last received cash grants in 2008-2009. GAVI initiated a Financial management Assessment to be conducted in the country. There has been a delay in concluding this process due to the change of portfolio of Immunisation from MOH to Ministry of Community Development Mother and Child Health in 2012. A Performance Agreement Framework was signed in 2014 and submitted to GAVI. The government awaits finalization of FMA and signing of aide memoire with GAVI.

Challenges

The health sector in Zambia is challenged by having limited financial and human resources, this affects the management of the entire health system and immunization services in particular. There are limited funds to procure transport equipment as well as to facilitate the day-to-day operations of the immunization programme especially the conduct of outreach immunization services by the staff at health facilities to communities. That human resources are limited in number and skills contributes to inadequate use of data collection tools thus poor quality of data and ultimately this manifests in inadequate data use for action at the service delivery points. Limited data use at local level is further compounded by absence of a reliable national civil registration of vital statistics (CVRS) such that the district and health facility managers respectively, are unable to accurately estimate their target populations. Until recently the programme faced challenges of access to HMIS data. Completeness, timeliness and overall quality of data remains a challenge. The existence of two ministries having control over different components of the immunization program as reported in various reviews/evaluations is no longer a challenge because the ministry of community development, mother and child (MCDMCH) is solely responsible in managing and reporting the immunization coverage. Surveillance reporting remains under the ministry of health (MoH) but MCDMCH has a team that works in collaboration with the counterparts of MoH. Accessibility to HMIS data is no longer a challenge most program managers at different levels have been oriented and given access to HMIS data. However, completeness, timeliness and overall quality of data remains a challenge. The ministry is planning to enhance data quality surveys to address the data quality and completeness. Districts are given a due date for report submissions and of late there has been a great improvement in timely reporting. There are efforts in country to improve data quality, data collection tools and use of interventions at all levels through better immunization data (BID) initiative under PATH. The Government of Zambia believes that BID will bring broad recognition of the need for a standard set of immunization tools, processes and software across the country and in turn leading to increased investment in IIS and improved immunization outcomes. The use of barcodes and scanners will improve the data collection tools and quality as it will reduce data entry errors and enhance real time data. The vaccine procurement budget line remains at the ministry of Health and has in some cases been a challenge to access particularly when variation of excess funds for programming is required or has been granted by Ministry of Finance

Additional challenges to the programme include;

Item	Issue	Action taken/to be considered
1	HRH	GRZ re-opened nursing schools and increased intakes in the pre-services training institutions. Training and deployment of community health assistants by GRZ
2	Transport	GRZ procured motorbikes for outreach services at district levels and budgeted for additional motor vehicles and motorbikes

3	Operational Funds for outreach activities and support supervision	GRZ has provided dedicated budget line for outreach services at service delivery level.
4	Data quality/ Data collection tools/ Denominator issues	There are efforts in country to improve data quality, data collection tools and use of interventions at all levels through better immunization data (BID) initiative. The Government of Zambia believes that BID will bring broad recognition of the need for a standard set of immunization tools, processes and software across the country and in turn leading to increased investment in IIS and improved immunization outcomes. The initiative intends to capture birth registration at both community and facility level link and them to immunization schedule. This will create birth cohorts and will to address denominator challenges. The use of barcodes and scanners will improve the data collection tools and quality as it will reduce data entry errors and enhance real time data.
5	Surveillance (IDSR/AEFI) at District level	Advocacy to treasury include position of surveillance at district level. National AEFI committee is in process of establishment with plans to be replicated at sub-national levels.
6	Inadequate information, education and communication for immunization (C4I) for routine immunisation programmes	GRZ through EPI programme is working collaboration with civil society organizations (CSOs) to strengthening communication for immunization.
7	Limited involvement of the private sector	The private sector is being involved during Child health/MCH technical working groups meeting at national levels. At district level the private sector works closely with the district health management teams in provision of immunization services. Data from private sector on immunization is captured at district level under the health facilities that work with the health centers in their catchment areas.
8	Limited community participation in planning and implementation of immunization and other child health interventions	Advocacy for support to local partners (i.e. EU, World Bank, USAID) for the strengthening implementation of reaching every child approach at sub-district level. Through GAVI support, a CSO immunization platform has been created to increase community awareness on the benefits of immunization.

Key recommended actions to achieve sustained coverage and equity (list the most important 3-5 actions)

- Dedicate funding and resources to revitalize RED/REC strategies
- Build capacity in newly appointed staff in immunization and surveillance (pre and in-service)
- Increase availability of transport for immunization activities (outreach, supervision and distribution of logistics)

The way forward for the three bullets above is described under challenges in the above sections.

- Monitor MCV1 and MCV2 coverage and dropout rates and address reasons for high dropout rates
 - -a mission to understand reasons for this was undertaken, a concept note and plan developed to address uptake for intervention of the second year of life.

- Prepare and avail guidelines for standard monitoring indicators for systematic collection and use of M&E indicators for decision making.
 - BID initiative will bring broad recognition of the need for a standard set of immunization tools, processes and software across the country, and in turn leading to increased investment in IIS and improved immunization outcomes. The initiative will promote data culture among program manager at all levels by promoting data visualization through dashboards for selected indicators to strengthen data utilization for decision making process. The country has developed an RMNCH score cards which is yet to be operationalized.
- Build capacity and effect vaccine management systems at all levels to ensure availability of adequate and safe vaccines and supplies
 - The country is scheduled to train EPI logisticians at provincial level and has also planned to undertake an EVM training and assessment.

1.3. Requests to Gavi’s High Level Review Panel

Grant Renewals

New vaccine request renewal: Zambia immunisation programme request renewal support for measles second dose, DTP-HepB-Hib, PCV10, Rota and IPV in existing presentations.

1.4. Brief description of joint appraisal process

Literature Review: in the process, a comprehensive literature review of the key documents describing progress during the year 2014 was conducted based on different reports including the EPI Review, PIE and Surveillance Report (2014), HMIS data, EPIC Study, CIDRZ cold chain report, UNICEF cold chain report, and GAVI FCE Report (2014)

The process reviewed successes and challenges in immunization services according to the following thematic areas: External Environment; Partnership and Programme coordination; Immunization system; Programme management; Planning; financing; service delivery; new vaccine introduction; vaccine supply, quality and safety; Surveillance; Supervision, Monitoring and Evaluation; Training and capacity Building

The draft reports were circulated for review and comments to Gavi, WHO and Unicef regional offices. The comments received were addresses and the report was finalized.

More details are available in the annex C.

2. COUNTRY CONTEXT

2.1. Comment on the key contextual factors that directly affect the performance of Gavi grants.

The projected 2015 population for Zambia by the Central Statistical Office is 15,473,905, the number of live births is under ones is 656,403 and the surviving infants is 626,825. According to the 2007 Zambia Demographic and Health Survey (ZDHS), it is evident that years of investment in primary health care services have yielded positive results in select indicators such as Maternal Mortality Ratio (MMR) whereby maternal deaths were reduced from 591deaths per 100,000 live births in 2007 to 398 in 2013/2014; Under-Five Mortality Rate

(U5MR) reduced from 119 per 1000 live births in 2007 to 75 in 2013/2014; and Infant Mortality Rate (IMR) reduced from 70 to 45 deaths per 1,000 live births, respectively. In the same period between 2007 and 2013/2014, Neonatal Mortality Rate (NMR) reduced from 34 to 24 deaths per 1000 live births. HIV prevalence in adults, aged 15 to 49 years, was reduced from 14.3% to 13%.

Health System: In the health system, the main providers of health care services include public health facilities under the Ministry of Community Development Mother and Child Health, Ministry of Defense, Ministry of Home Affairs and the Churches Health Association of Zambia (CHAZ) which is a faith based umbrella organisation that oversees many faith based clinics and hospitals spread across the country, predominantly in rural and hard-to-reach areas running about sixty percent of rural health facilities in the country.. The majority of the workforce is employed and remunerated through the MoH. Other providers in the formal system include private-for-profit clinics, diagnostic centers, hospitals and drug sellers.

Leadership, Governance and Programme Management

The structure of the health sector in Zambia was realigned in 2011/12 into two ministries. The Ministry of Health (MOH) and the Ministry of Community Development, Mother and Child Health (MCDMCH). The MCDMCH is responsible for primary health care services at the subnational level, this reflects the Government's wish for increased emphasis on strengthening the district level as the engine for delivery of health services to the citizens. The realignment built on Zambia's long established health sectors reforms aimed at increasing efficiency and improving standards in service delivery, especially with regard to reduction of maternal, newborn and child morbidity and mortality. The realignment took advantage of the pre-existing Ministry of Community Development and Social Welfare's sub-districts structures to increase synergize efforts in providing integrated social development services. The national immunization programme is under the day-to-day leadership and management of the MCDMCH. In the realigned health sector, the MOH retained responsibility for policy setting, resource mobilization, statutory boards, and training and referral institutions. The Government envisions "to promote access, as close to the home as possible, of high quality, cost-effective health services through the current NHSP. There are plans to develop a follow on NHSP from 2016 and beyond. The national Roadmap for Accelerating Reduction of Maternal, Newborn and Child Mortality 2013-2016, complements and elaborates in detail the NHSP's vision, objectives and operational strategies. The MNCH Roadmap was developed through a comprehensive process of bottleneck analysis, costing and budgeting of MNCH services in the country. The Roadmap's general objective is to accelerate the reduction of maternal, newborn and child mortality to meet Zambia's MDG goals by 2015. The roadmap identifies and details strategies and actions to overcome bottlenecks for the implementation of high impact interventions along the continuum of care and following a life course approach. The foregoing strategic plan is supplemented by programme specific plans such as the comprehensive multi-year plan (cMYP 2014-2016) under the expanded programme of immunization (EPI).

The immunisation program structure falls under Child Health which is headed by the Child Health Specialist at the national level and comprises a team of 7 staff specifically, two chief EPI Officers, one EPI Logistician, three cold chain officers. A logistics office seconded by CIDRZ is attached to the unit to support EPI Logistics activities. Technical Working groups exist with the Child Health Technical Working group overarching the other sub TWGs which include EPI TWG. This TWG has sub group including service delivery, monitoring and evaluation, social mobilisation and Cold chain and logistics. The composition of these technical working groups is based on available partners and experts for each sub-group mainly from WHO, UNICEF, CHAZ, Better Immunisation Data, World Vision, CIRDZ.

There is currently no NITAG in the country but processes to establish one are underway. The Child Health TWG forms part of the secretariat for the Integrated ICC. In the period under

review, the ICC met three times and key issues discussed as indicated in the minutes attached to 2014 APR submission. The ICC chaired by the Minister or designated authority provides oversight for the EPI program and plays an advocacy role. (TORs for ICC have been provided to GAVI through the different proposal development processes.

At sub-national levels, the provinces have an MCH officer whose portfolio deals with EPI as well as a provincial Surveillance Officer. At district level, the district health management team has MCH coordinators who is the EPI focal point as well as administratively appointed cold chain technicians and health promotion focal points. There are no Surveillance focal points at this level.

The Health Sector has a Sector Advisory Group (SAG) that meets twice annually with a very wide membership comprising of bilateral, multilaterals, CSOs, NGOs, academia to mention among others. This entity is housed by the Ministry of Health. A CSO Platform on immunisation now exists led by the Churches Health Association of Zambia with view to advocate to raising awareness of the benefits of immunisation among CSOs and communities for ultimate increased demand for immunisation services.

Costing and Financing

As indicated in the Gavi grant portfolio overview section 1.1, government's financial contribution has been highlighted. It is worth noting that the government commitment to immunisation as reflected indicates that aside from GAVI contributed, it is the major funder of the Immunisation program in the country while partners supplements its efforts.

The government has shown commitment to the Immunisation program through provision of dedicated budget lines from treasury for the procurement of vaccines, procurement of cold chain equipment and spares, procurement of under five cards, as well as provision of operational costs for health such as salaries, and other operational costs although these are inadequate. Other Operational costs for EPI such as supportive supervision, and more recently persistent power outages, optimal operationalization of REC has at all levels have been a challenge.

The government since 2002 has been self-procuring traditional vaccines and co-financing to the new and underused vaccines supported by GAVI. The country has not defaulted in its obligation for the required co-financing which since 2009 has been at the lowest level of the required amount. The government has over the years taken ownership of provision of resources by introducing specific budget lines in addition to the Vaccine procurement budget at the Ministry of Finance to include funding lines on cold chain, under five cards and continues to advocate to additional lines as need and justification is identified.

Immunisation Priorities:

Human Resource Management As elaborated in section 1.2 under challenges Human resources for health have continued to be a challenge across the sector. Efforts to address this issue have been made by government through the reopening of pre-service training institutions as well as increasing annual intakes of students in the institutions. Other efforts in limited areas in the past and possibly for the future through partner support include the Performance based financing through incentivizing staff to improve performance and also attract them to underserved areas.

Cold Chain and Logistics

Following 2011 effective vaccine management (EVM) assessment, a vaccine cold chain expansion strategy was developed to address cold chain gaps identified in the assessment. At national level, the following measures have been effected - rehabilitation of the vaccine storage warehouse to house five new walk-in cold rooms (WICR) and dry store, installation of stand by generator, rehabilitation and refurbishment of national cold chain workshop. Further vaccine

cold boxes were procured for all levels in addition to the recent procurement of two 15 ton trucks. The trucks have reduced the challenge of transporting supplies to the subnational level. At provincial level, 8 provinces have had their vaccine stores expanded, each of the 8 provinces have had a WICR of 30m³ cubic meter capacity installed including stand-by generators. Two additional 30m³ WICR have also been procured and are awaiting installation following once their protective shelters are constructed by the end of 2016. The latter action will complete the expansion of provincial vaccine storage capacity as was envisioned in national vaccine cold chain expansion strategy. At district level, positive vaccine storage capacity has been increased. Additionally, refrigerators have been procured and distributed to increase district level vaccine storage capacity. At facility level, 716 solar fridges and 250 electric fridges for health facilities have been procured including 1000 vaccine carriers. While the country has made significant efforts in the replacement and expansion of Cold Chain equipment as well as improving logistics and management at national level there remains a great need for strengthening Immunisation Supply Chain management particularly vaccine management practices at the subnational level, an area requiring support from partners.

Zambia has plans to conduct its next EVM this year with funding and support from WHO.

Immunisation Service delivery

At subnational level, the planning and implementation for immunisation services in the period under review was not without challenges. Operationalization of the fully complement of the REC Approach is challenged by inadequate funds for the orientation and implementation (fuel and allowances for outreach services and supportive supervision) as reported in the 2014 Comprehensive EPI review on the implementation rate of outreach services. Technical support required in this area includes identification of training needs, Strengthening and monitoring of EPI Training in the Pre-service areas for both medical schools as well as nursing and clinical officers training schools. The rolling out of the computer based self-learning interactive integrated EPI /IMCI tool would be beneficial.

Surveillance and Reporting

Active surveillance activities for polio, measles and for epidemic prone diseases, such as cholera and dysentery, are on-going. The measles and polio laboratories passed the 2014 annual accreditation. The sentinel sites for Rota vaccine surveillance expanded to two hospitals in the Copper belt Province. Zambia has met all performance targets for Rotavirus surveillance. Zambia continued implementing Acute Flaccid Paralysis (AFP) surveillance activities designed to provide evidence that there is no circulating wild poliovirus in the country and this is illustrated in the sustained certification level standard AFP surveillance. In addition, measles case based surveillance has been implemented since 2003. The country has been conducting pediatric bacterial meningitis (PBM) sentinel surveillance site since the year 2006. Zambia commenced case-based surveillance activities in 2013 for Yellow Fever. As reported in the 2014 JRF, number of cases of reported/confirmed and outbreaks investigated were highlighted. Zambia had no AEFI committee in 2014 and as such there were no AEFI investigated and causality assessment done. AEFI reporting has remained weak in 2014. Efforts to establish an AEFI committee are underway and progress made in this area will be reported in the 2015 report as they are currently under way.

Demand generation and communication

In 2014 prior to the introduction of measles second year of life, Zambia conducted a number of campaigns that aimed at generating demand for immunization uptake. The establishment of CSO immunization platform lead by church health association of Zambia (CHAZ) has helped to increase on the number of organizations participating in the social mobilization for demand creation.

4.2 Economic, policy, cultural, gender and social barriers to immunization

Economic Environment:

Zambia has enjoyed 5 decades of political stability since independence. The economic situation has also continually improved, and the country's per capita Gross National Income (GNI) increased from US \$680 in 2006 to an estimated \$1,350 by 2012. A combination of prudent macroeconomic management and market policies, and a steep increase in copper prices helped drive investments in the copper industry and related infrastructure to achieve an average annual growth of about 6.4% during the last decade. The copper sector underpins the economy and has been the driver of economic growth; however, the country's main sector of employment is the agriculture sector (employing 70% of the population). However, Zambia's economic growth has not translated into significant poverty reduction. The proportion of people living in extreme poverty decreased from 58% in 1991 to 42.3% in 2010, a reduction of 15.7% in almost 20 years, which is too slow to meet the country's MDG 1 goal in poverty reduction. This mismatch between economic growth and poverty reduction is apparent through Zambia's Gini coefficient of 57.5, which places Zambia in the top 10 most income-unequal countries in the world. The United Nations Development Programme (UNDP), ranked Zambia 141 out of the 187 countries included in its Human Development Index. This places Zambia in the category of countries with Medium Human Development, and represents a 7-rank increase in Zambia's position from 2008, a promising achievement. Zambia's population is one of the fastest growing in the world, estimated at 13.3 million in 2010. A large proportion of Zambia's population are children, including adolescents- around 53% of Zambia's population is under the age of 18, and 18% of the total population is under the age of 5. As a result, Zambia has a very high dependency ratio.

Zambia's long term developmental aspirations are elucidated in the country's Vision 2030, wherein, the Government envisions the nation becoming a "prosperous middle-income nation by 2030". The country's progress towards the Vision 2030 is effected through a succession of national development plans, with its most recent being the revised Sixth National Development Plan (rSNDP) 2013-2016. The theme of the rSNDP is "People Centered Economic Growth and Development". The rSNDP acknowledges that despite the economic growth achieved in the recent past and the improvement in some key human development indicators, reduction of unemployment and poverty levels has not been significant. The rSNDP has re-oriented its policies, strategies and programme focus towards job creation, rural development and inclusive growth

The classification of Zambia as a low-middle income country by the World Bank, has resulted in its reclassification by GAVI as intermediate country. By this GAVI reclassification, the Government of Zambia is expected to increase its proportion to the requisite financing of the national immunization programme. To achieve, the foregoing, the Ministry of Community Development Mother and Child Health (MCDMCH) will need to strengthen advocacy with the Ministry of Finance and National Planning for increase resource allocation to the health sector and immunization programme in particular, in the national budget.

Policy: The existing Child Health Policy identifies immunization as one of the priority high impact interventions to be provided to all Zambian children. *It is under this policy guidance that immunisation services are provided*

Gender: Zambia has made commitments towards promoting gender equality in support of MDG 4 and Southern African Development Community (SADC) regional targets. The national immunization programme offers services to eligible children without regard to their gender. The Zambia Demographic and Health Survey 2013/14 shows a one to-one ratio of coverage for all immunization antigens between girls and boys. The education sector's Gender Parity Index (GPI) for primary education improved from 0.90 in 1990 to 1.01 in 2009, however, for secondary level education decreased from 0.92 in 1990 to 0.87 in 2009, and for the 15-24 years old population it stagnated at 0.8 from 2003 to 2005. Zambia's women representation in parliament

increased from 3.8% in 1991 to 13 % in 2014, the country is still below the regional target of 30% for women representation in parliament.

The gender barrier predominantly affects women engagement in economic activities. Women in both rural and urban areas are involved in small businesses to supplement their families' incomes. On the other hand, in Zambia, women are the main caretakers for children's health care needs as such, women involved in small scale business have to make economic choices which deprioritizes timely health seeking. Immunization services among others in most cases become subservient to economic activities, leading to low coverage of such services and putting lives of children at risk. To address this barrier, in line with the ministry vision, the immunization programme will intensify outreach in order to reach the communities where these women live including places where they trade from.

3. GRANT PERFORMANCE, CHALLENGES AND RENEWAL REQUESTS

(MAXIMUM 3-5 PAGES)

3.1. New and underused vaccine support

3.1.1. Grant performance and challenges

Achievements

Under five children's and infant mortality in Zambia has declined between 2007 and 2013, from 119 to 75 and from 70 to 45 respectively according to ZDHS 2013/2014. Zambia was certified Polio free in 2005 and has maintained that status since. In addition, the country was also certified by WHO to have eliminated maternal and neonatal tetanus in 2007.

In 2013, Zambia introduced 3 new vaccines in the national immunization schedule specifically, PCV10, RV and MCV2. This is addition to penta vaccine which was introduced in 2005 under the under New Vaccine Support (NVS) window. The Zambia 2014 Joint Reporting form reported DTP3 coverage (89%) attaining previously approved set target. This is a reversal from the notable progressive decline of DTP3 coverage in the 3 preceding years.

The penta1-3 dropout rate was 10%, PCV1-3 dropout rate 12%, RV1-2 dropout rate 7% and MCV1-2 dropout rate 55%. RV1 (85%) & RV2 (78%) coverages were lower compared to penta doses given at the visits. Service delivery levels frequently ran out of stocks of RV vaccine. PCV1 (93%) and PCV3 (81%) coverages were also lower than penta 1-3 vaccine given at the same visit. There was a significant dropout between MCV1 (93%) and MCV2 (38%). The reasons for the differences noted between antigens given at the same visits could be attributed to misdistribution of vaccines at district and sub-district levels as well as inadequate community awareness on MCV2. The recent Demographic and Health Survey 2013-14 shows that 86% of children were vaccinated with the third dose of DTP which is comparable with the achievement reported in the Zambia JRF of 2014.

Reported coverage compared to approved targets

Antigen	2014 Target	2014 Coverage
DTP3	88%	89%
PCV3	71%	81%
RV2	82%	78%
MCV2	39%	38%

Except for RV targets set for 2013 and approved by GAVI in the decision letter for Zambia EPI programme were generally met. Denominator problems continue to be an issues for the programme.

There survey report notes significant difference between children from the lowest quintiles compared to those from the highest quintile, those with mother with no education compared to those whose mothers had more than secondary education, as well as those from rural locations compared to those from urban settings. In order to address the high dropout rates and inequities between the highest and lowest quintiles the GRZ with partners have embarked on district REC trainings for frontline health workers, provision of transport and financial resources for outreach activities. In addition, GRZ is submitting to GAVI HSS proposal which is targeting low performing and hard to reach districts. In order to strengthen routine demand creation, a CSO immunization platform has been created to assist on social mobilization activities.

2014 Provincial coverage of Selected antigens (Administrative HMIS data)

% COVERAGE BY PROVINCE (for district specific data kindly refer to JRF 2014)					
Province	DTP3	OPV3	PCV3	RV2	MCV2
Central	102	103	82	66	41
Copperbelt	94	93	130	92	45
Eastern	93	91	90	90	38
Lusaka	87	87	71	77	50
Luapula	88	89	71	58	40
Muchinga	82	78	72	70	32
Morthern	85	82	79	78	22
North Western	92	96	75	81	47
Southern	92	87	80	72	45
Western	90	95	71	74	30

HMIS data in Zambia neither disaggregates data between rural and urban nor by wealth quintile. The data provided is from the recent DHS survey. While it shows no significant difference between sexes, there are differences between wealth quintiles as well as rural urban distribution. It also shows high dropout rates between doses of the same antigens as indicated in the table above.

3.1.2. NVS renewal request / Future plans and priorities

Renewal request

Zambia immunisation programme request renewal of support for measles second dose, DTP-HepB-Hib, PCV10, Rota and IPV in existing presentations as in the APR.

Emerging new priorities for the national immunization programme (based on cMYP)

In line with GVAP priorities, and its domestication in the Immunisation multiyear plan, the country identified the following priorities:

- Country commitment to immunization as a priority – this has been shown by the government’s commitment to procurement of vaccines, cold chain equipment, and

support for outreaches at district level as demonstrated by the specific budget lines in the Yellow Book.

- Ensuring that Individuals and communities understand the value of vaccines and demand immunization as their responsibility – this has been demonstrated through provision of free immunisation services by all citizens and the population at large who are eligible to receive such services.
- Ensure the benefits of immunization are equitably extended to all people- the government is making efforts to ensure the optimal operationalization of the Reaching every child approach from all stakeholders, partners and Civil society organizations.
- Ensure strong immunization system are an integral part of a well -functioning health system
- Ensure immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies.
- Generating local evidence through research and development innovations to maximize the benefits of immunization.

The EPI Program aims to achieve this through the targets it has set in its comprehensive multiyear plan as follows:

- 90% of Zambian infants fully immunized
- Polio-free status sustained
- Measles mortality reduced by 95%
- Maternal and neonatal tetanus is elimination sustained
- New generations are protected against pneumonia
- Diarrheal disease burden from Rotavirus reduced
- Zambia on track to meet Millennium Development Goals Immunization programme financially sustainable
- Evidence and data-both coverage and social data used to make immunization decisions
- Strengthening synergies between immunization and related interventions such as iCCM, MNCH
- Strengthen synergies between communities and services in order to increase demand for services

Future Plans - Introduction of IPV, Switch from tOPV to bOPV, MR introduction, GAVI HSS Priorities- Operationalization of Reaching Every Child/community, Data quality activities, vaccines management, surveillance/AEFI

Reasonableness of targets for next implementation year:

Based on the previously approved target for 2014 and achievements-

- Proposed targets for Penta 3- 5% increase
- PCV 3- 4% increase
- Rota 2- 12% increase (considering that this vaccine is administered at the same visit as second doses of Penta and PCV which are currently higher than the reported second dose of Rota, it is feasible raise this coverage).
- Measles second dose- 5% increase

Targets proposed are all reasonable.

The projected growth by year in coverage performance given the recent trends are all reasonable.

Plans for change in any vaccine presentation- Not in 2016

Risks to future implementation and mitigating actions

- Funding for immunizations/graduation from GAVI support

<ul style="list-style-type: none"> – To mitigate this, there has been continued advocacy for the increased funding from treasury as well as from local partnership in the provision of RMNCH through the continuum of care. • Competing priorities <ul style="list-style-type: none"> – this is being addressed through joint planning and integration • Availability of adequate and skilled human resource for immunisation <ul style="list-style-type: none"> – The government has increased outputs from the pre-service training institutions for medical personnel, to bridge the existing human resource for health gap. In addition, the government has introduced a cadre, Community Health Assistant to address human resources at primary health care level. <p>Expected future application to GAVI for new vaccine introductions or campaigns</p> <ul style="list-style-type: none"> • IPV introduction (possibly early 2016 in view of limited IPV vaccine supply at global level as communicated to the country as communicated to the country through Regional Offices) • MR campaign and introduction • HPV application
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3.2. Health systems strengthening (HSS) support

3.2.1. Grant performance and challenges

[Comment on all bolded areas listed in the table in this section of the guidance document]
Not Applicable

3.2.2. Strategic focus of HSS grant

[Comment on the extent to which the HSS grant contributes to improve and sustain coverage and equity in access to immunisation. See guidance document for more details]

Not applicable

3.2.3. Request for a new tranche, no-cost extension, re-allocation or reprogramming of HSS funding / Future HSS application plans

[Indicate request for a new tranche of HSS funds (and the associated amount) or no-cost extension, or any planned changes in terms of re-allocation or reprogramming. Also describe future HSS application plans]

Not Applicable

3.3. Graduation plan implementation (if relevant)

Zambia is categorized in the intermediate group of GAVI country classification and is currently in the process of conducting consultations with various stakeholders including GAVI on the development of graduation plan

3.4. Financial management of all cash grants

The Government of Zambia has not directly received any cash grant since the disbursement of the second HSS grant in 2008-9. It has however, Vaccine Introduction grants through UNICEF for PCV, Rota and MSD in 2013. In the year under review no VIG grants were received as the country did not introduce any new vaccines.

The grants received through UNICEF were managed through MOU agreement between GAVI and UNICEF. There were no major issues with the performance of the grants provided to the country through this funding mechanism.

In 2012, an FMA was initiated at the time when the Immunisation program was realigned to a different Ministry (Ministry of Community Development Mother and Child Health) from the Ministry of Health. No follow visit was made to the country.

The Government of Zambia did sign a performance Agreement Framework in 2014 which was submitted to the GAVI Alliance.

3.5. Recommended actions

Actions	Responsibility (government, WHO, UNICEF, civil society organizations, other partners, Gavi Secretariat)	Timeline	Potential financial resources needed and source(s) of funding
Build capacity to improve skills and knowledge in immunization, vaccine supply chain management & surveillance at sub-national level	Government, WHO, UNICEF, CIDRZ, GAVI	GRZ - 2016	<ul style="list-style-type: none"> • GRZ- Vaccine Procurement US\$ 1,044,983; • GAVI – US\$ 9,500,500 • Total cold chain investments- \$ 5.37 million • World Vision
Fully implement and revitalize RED/REC strategies to reach every child including strong community engagement	Government, WHO, UNICEF, EU, USAID, World Bank, SIDA, GAVI, World Vision	<ul style="list-style-type: none"> • GRZ-2016 • MDGi – 2014/15 • USAID-2016-2020 • SIDA/DFID-TBD • RMNCH Trust Fund-2015/2016 • GAVI HSS-2016-2018 	<ul style="list-style-type: none"> • GRZ- \$ 31,000 • MDGi (11 Districts in Lusaka/Copperbelt Provinces) - \$640,000 • USAID-\$1million SIDA/DFID • \$ RMNCH Trust Fund - \$ 160,000 • GAVI HSS • World Vision
Procure transport for integrated service delivery and support supervision	Government, GAVI, UNICEF	<ul style="list-style-type: none"> • MDGi 2015-17 • USAID-2016-2020 • RMNCH Trust-2015/16 • GAVI HSS-2016-2018 	<ul style="list-style-type: none"> • GRZ • MDGi (9 Motorbikes) – \$ 17,000 • USAID - \$1 million • \$ RMNCH Trust Fund - \$10565,000 • GAVI HSS-2016-2018
Strengthen immunization, surveillance, EPI logistics & supply chain data analysis and utilization including completeness and timeliness of reporting for decision making (including private sectors).	Government, WHO, BID, UNICEF, GAVI, World Vision		<ul style="list-style-type: none"> • GRZ - \$136,000 (U5cards budget) • WHO -\$300,000.00 • Better Immunization Data (BID)

<p>Improve availability of routine BCC; strengthen linkages between services and communities and CSOs. Engage communities in planning, implementing and supervising, monitoring EPI programme and interventions for routine immunization with additional emphasis on intervention of the second year of life</p>	<p>Government, WHO, UNICEF, CHAZ, CIDRZ, CRS, CMMB, World Vision</p>		<p>MDGi CHAZ</p>
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4. TECHNICAL ASSISTANCE

(MAXIMUM 1 PAGE)

4.1 Current areas of activities and agency responsibilities

[Comment on technical assistance received and the responsibilities of the different agencies which provided the support. See guidance document for more details]

In 2014 the following activities were undertaken with partner TA;

- Comprehensive EPI/surveillance review/PIE
- Supported by WHO; Information from this review help in targeted and prioritized interventions in areas of weakness,
- GAVI HSS proposal development
- Supported by WHO ; this was a resource mobilization effort to mobilize funds for strengthening immunisation services
- Cold Chain capacity building for WICR cold room installation
- Supported by WHO to strengthen capacity local level for maintenance and repair (limited) of the new cold rooms
- EPI Logistics TA provided to EPI unit through the services of a logistician through CIDRZ; this has supported improvement of EPI logistics management at national level and provision of supportive supervision to Provincial Vaccine Cold stores, updating of SMT, and forecasting. A pull system is under development for vaccine distribution of vaccines between national and provincial stores.
- M and E officer provided to EPI unit through PATH (BID) to support the unit in its data needs; this has improved access to HMSI data and monitoring of Immunisation data performance at subnational levels.
- Child Health Officer TA targeted at the 11 EU funded MDGi districts and supporting the Unit in Child Health activities including EPI; this support has helped roll out the REC approach to the 11 targeted districts in this project.
- Other organizations were instrumental in providing financial assistance

4.2 Future needs

Future TA needs: Prioritization of technical assistance needs

TA need	Justification / Actions	Intended outcome	Modalities (Long Term or short term TA; Workshop; training etc.)	Possible provider (WHO, Unicef, other partners-specify)	Included in HSS	Tentative cost in US\$
Social mobilization and communication for Immunisation:	Increased awareness of benefits and for continued utilisation of immunisation services to all targets	Improved immunisation outcomes, reduced drop-out rates, reduced inequities	Short term TA; workshops and training	UNICEF/ CHAZ	No HSS in Zambia yet	
Immunization Supply Chain Management	<p>With introduction of new and costly vaccines, good management of vaccine stocks at all levels and the need to ensure the potency of vaccines at service delivery points through the supply chain;</p> <p>Support the implementation of Effective Vaccine Management Improvement and develop sustainable Vaccines capacity building for ISCM through Technical Assistance</p> <p>Support the effective use of Logistics Data for action including Stock Management Key indicators, Cold chain inventory leading to multi-year replacement and expansion plan development through UNICEF Technical Assistant</p> <p>Support the implementation of Effective Vaccine Management Improvement and develop sustainable Vaccines capacity</p>	Improve accountability for vaccines and provision of potent vaccines at all levels of service delivery and Improved immunisation supply chain system	Short term TA; workshops, training	WHO/ UNICEF		

	building for ISCM through Technical Assistance Development of sustainable Cold Chain Equipment Maintenance Management System through Technical assistance					
Data quality	Conflicting denominators (CSO vs Head count), coverages beyond 100%, Inconsistencies between survey and administrative data	improve the quality, efficiency and utilization of the HMIS to meet the needs of all stakeholders	Long term/Short term TA; workshops, trainings	WHO/BID/ UNICEF		

5. ENDORSEMENT BY ICC, HSCC OR EQUIVALENT & ADDITIONAL COMMENTS

(MAX. 1 PAGE)

<p>Brief description of how the joint appraisal was endorsed by the relevant national coordination mechanism:</p> <p>The members of the technical team involved in drafting the report from partner organizations in the drafting included whose heads of agency were at the meeting and had been debriefed on the report.</p> <p>In the ICC meeting held on 2 September, 2014 was table the Joint Appraisal as an agenda item. The report was presented to member highlighting key areas in the report including the portfolio performance, achievement, status on implementation of IRC recommendations</p> <p>Issues raised during debrief of joint appraisal findings to national coordination mechanism:</p> <ul style="list-style-type: none"> • Concerns raised included the differences in vaccination coverages for antigens given at the same visit • Need to the country to commence preparations in readiness for graduation from GAVI support • The need to look into strategies to strengthen the optimal implementation of the reaching every child approach • Critically review bottlenecks related to data quality <p>Any additional comments from</p> <ul style="list-style-type: none"> • Ministry of Health: • Partners: • Gavi Senior Country Manager:
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6. ANNEXES

[Please include the following Annexes when submitting the report, and any others as necessary]

- **Annex A. Key data** (this will be provided by the Gavi Secretariat)
- **Annex B. Status of implementation of the key actions from the last joint appraisal and any additional High Level Review Panel (HLRP) recommendations**

#	Current status of implementation
<p>Targets: Follow up with country with regard to revised targets for set for DPT1, Penta1, PCV1 and Rota1 for 2015.</p>	<p>DTP1: 626,865 Penta1: 626,865 PCV1: 626,865 Rota1: 626,865</p>
<p>Supply Chain: Country to provide additional detailed information on status of the EVM Improvement Plan.</p>	<p>Zambia conducted an Effective Vaccine Management (EVM) training and assessment, to aid the country in strengthening its national Expanded Programme on Immunization (EPI). Following this assessment, data were analyzed and a report was developed siting conclusions and recommendations targeting areas needing support to overcome existing gaps for system-wide improvements.</p> <p>The EVM report identified key priority areas needing improvement:</p> <ul style="list-style-type: none"> • Integrate and use appropriate EVM criteria indicators into the EPI supportive supervision activities. Start implementing at NVS and PVS as first priority. • Establish and use a standard record keeping and filing system for EVM key indicators: Vaccine Arrivals, Temperature, Stock Management, Distribution and Maintenance. • Conduct on-job training for storekeepers / EPI staffs about estimating vaccine needs, wastage calculating and monitoring, "shake test", temperature monitoring, stock management, preventive maintenance, vaccine packing for distribution, ice packs conditioning, distribution , stock and report record keeping and filing system. • Prepare self-learning guide on EVM, print and disseminate to all facilities. <p>Specific recommendations were:</p> <ul style="list-style-type: none"> • Temperature monitoring: Procurement and use of continuous

	<p>temperature monitoring device for all cold and freezer rooms at NVS; and establish a formal monthly temperature records review system at all levels.</p> <ul style="list-style-type: none"> • Storage capacity: Expansion of capacity at NVS, PVS, DVS and health facilities with total population more than 40,000. • Building, and equipment: Rehabilitation the existing vaccines storage buildings and NVS and some provincial vaccine stores. • Maintenance: Institute planned preventive maintenance and its record. • Stock control: Procurement of computer and use of appropriate computer-based stock control system at all PVS. • Distribution: Establish a distribution plan and monitoring system at all storage levels. • Vaccine management: Introduce a system that enable to collect data on vaccine used with children vaccinated for wastage calculation and monitoring performance
<p>Non HSS Cash Grant: A revised table 7.3.1 should be provided and a corrected financial statement from UNICEF will be required.</p>	<p>UNICEF working towards providing required information</p>

- **Annex C. Description of joint appraisal process** (e.g. team composition, how information was gathered, how discussions were held)

The Joint Annual Appraisal consisted of the following:

- a. Meeting with child health technical working group to orient members on the new GAVI guidelines for reporting required by countries through the joint appraisal.
- b. The inter-agency coordinating committee (ICC) meeting were members were updated on joint appraisal and also technical and financial support requested to fulfil this requirement.
- c. The planning department developed terms of reference for the joint appraisal with view to seek technical and financial support from partners.
- d. The planned joint appraisal through field visits and technical support through a consultant could not take place due to financial constraints; the country embarked on desk review.
- e. Working with the planning department in the Ministry of Community Development, Mother and Child Health the EPI technical working group comprising of GRZ and

partners (WHO, UNICEF, CHAZ, PATH, CIDRZ, World Vision, UNZA-GAVI FCE) held a series of meetings to review documents and draft the report.

- f. Information was gathered through various assessment and evaluation reports as well as 2014 JRF and APR.
- g. The reporting template was completed using available information and data.
- h. The draft reports were circulated for review and comments to Gavi, WHO and Unicef regional offices. The comments received were addresses and the report was finalized.

Annual Appraisal Planning Committee

The Joint Annual Appraisal Planning Committee was the EPI TWG formed as a sub- committee of the ICC with the following composition:-

- Ministry of Community Development Mother and Child Staff
- Health Partners
- Civil society representatives-CHAZ, Zambia Civil Society Health Partnership

- **Annex D. HSS grant overview**

General information on the HSS grant							
1.1 HSS grant approval date							
1.2 Date of reprogramming approved by IRC, if any							
1.3 Total grant amount (US\$)							
1.4 Grant duration							
1.5 Implementation year		month/year – month/year					
(US\$ in million)	2008	2009	2010	2011	2012	2013	2014
1.6 Grant approved as per Decision Letter							
1.7 Disbursement of tranches							
1.8 Annual expenditure							
1.9 Delays in implementation (yes/no), with reasons							
1.10 Previous HSS grants (duration and amount approved)							
1.11 List HSS grant objectives							
1.12 Amount and scope of reprogramming (if relevant)							

- **Annex E. Best practices (OPTIONAL)**

Using evidence for Cold Chain Expansion - Building Strong Partnerships

Following the July 2011 Effective vaccine management (EVM) assessment supported by the World Health Organisation, CIDRZ and EPI stakeholders; the government with other EPI stakeholders developed a Vaccine Cold Chain Expansion strategy.

The strategy document was used to advocate for support around cold chain expansion; building on a model that was initiated by WHO on the installation of a new technology in the Zambian EPI Program- a state of the art Walk-in-Cold Room (WICR) in order to improve vaccine management in the Copperbelt Province of Zambia.

Evidence from the EVM assessment provided information on the gaps and requirements for improved programming around cold chain. The mounted support for improving vaccine management through cold chain was accelerated by the need for introduction of new vaccines between 2012 -2013 and implementation of the mass measles vaccination campaign in 2012. The Installation of the Copperbelt WICR set the standard and pace for which immunisation stakeholders would support the Cold chain expansion strategy. Cascade cold chain investments and improvements have been seen over the last 4 years at all levels of service delivery.

The result of the strategy in the last four years has seen major improvements for cold chain through EPI stakeholders supporting the government efforts which included CIDA through UNICEF, WHO ARK through CIDRZ and JICA. Through this collaborative efforts, the initial investments were targeted to the national and Provincial levels with the national level vaccine cold store being expanded by 5 state- of - the-art WICR of 40m³ each and 8 Provincial level vaccine cold stores having been installed between 2012-13. Currently, the two remaining provinces have had cold rooms procured and awaiting installation.

The momentum is still alive with efforts now focused on district and health facility levels where over 1,000 solar and electric vaccine fridges have been procured and all appropriate personnel at district level trained in repair and maintenance through strong partnerships and installation exercises are underway in line with the strategy developed four years earlier. The year 2014 saw the cold chain expansion (procurement and installation) at district and facility levels and these efforts are still ongoing. In addition in the same period the National Cold Chain Training and Maintenance workshop was rehabilitated and refurbished for purposes of training and maintenance of cold chain equipment. The evidence generated for the EVM Assessment culminated in the Vaccine Cold chain expansion strategy play a major role in defining the needs, mobilisation of financial resources and mapping the way for the huge investments seen in Cold chain improvement process.