

## Joint appraisal report

When submitting this report, the country confirms that the grant performance framework has been reviewed as part of this joint appraisal. Performance against agreed metrics has been analysed, and explained where relevant.

<b>Country</b>	Sudan
<b>Reporting period</b>	2015
<b>Fiscal period</b>	2015
<b>If the country reporting period deviates from the fiscal period, please provide a short explanation</b>	To be completed by the country
<b>Comprehensive Multi Year Plan (cMYP) duration</b>	2012 – 2016
<b>National Health Strategic Plan (NHSP) duration</b>	2012 – 2016

### 1. SUMMARY OF RENEWAL REQUESTS

[These tables will be pre-populated by the Gavi Secretariat. If there are any changes to be made, this should be discussed as a group during the joint appraisal and flagged in the report – see the guidance document for more details]

Programme	Recommendation	Period	Indicative amount to be paid by Gavi
NVS – PCV in existing presentation	Extension	2017	US\$ 15,406,000
NVS – Pentavalent in existing presentation	Extension	2017	US\$ 7,502,000
NVS – Rotavirus in existing presentation	Extension	2017	US\$ US\$ 3,275,000
NVS -Yellow Fever in existing presentation	Extension ( <i>Subject to the availability of supply</i> )	2017	US\$ US\$ 19,865,000
NVS – IPV in existing presentation	Renewal	2017	US\$ US\$ 705,500

Indicate interest to introduce new vaccines or HSS with Gavi support*	Programme	Expected application year	Expected introduction year
	Measles SIA	2017	

\*Not applicable for countries in final year of Gavi support

### 2. COUNTRY CONTEXT (maximum 1 page)



*This section does not need to be completed for joint appraisal update in interim years*

- In 2015 Sudan achieved Penta3 coverage of 93% with the drop-out rate of less than expected 6% against 7%. For PCV3 coverage Sudan achieved 93%. The target coverage of 95% for Rota 2 was not achieved due to the age restriction policy of Sudan. The coverage achieved was 84%. This is expected to change during 2016 due to changes in the guidelines and release of age restriction. Similar to other sub-Saharan African countries, Sudan experiences significant rates of malnutrition and communicable diseases,

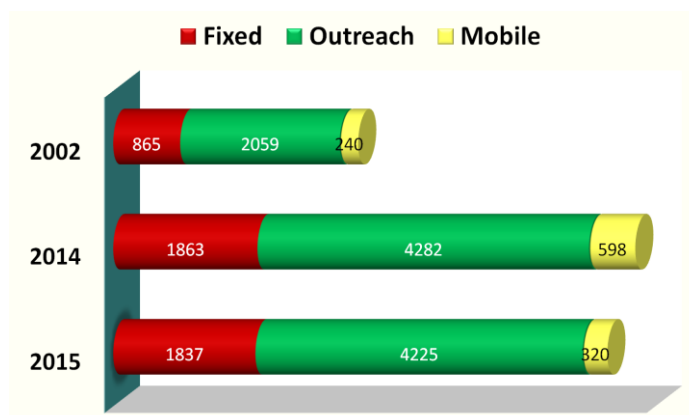
which is driven in part by ongoing natural disasters and internal conflict. The main causes of morbidity and mortality are infectious and parasitic diseases, particularly malaria, tuberculosis, Schistosomiasis, diarrheal diseases, acute respiratory infections (ARIs) and protein-energy malnutrition. Life expectancy at birth in Sudan is 59 years (58 years for males and to 61 for females). Young people and children represent the largest proportion of the population in Sudan, with 45% of the population under 15 years.

- Difficult access to some areas, rural-urban migration, natural disasters, the longstanding civil war and limited resources has a significant impact on the provision of immunization services. The problem is increased with the influx of refugees in 2015 and 2016 from Eritrea, Ethiopia and Somalia are estimated to be 83,071 located in 7 camps in East Sudan. Furthermore there are an additional 3,000 South Sudanese Refugees resettled in White Nile State that are additional burden for health system. As a consequence there are wide variations within the country in delivery of services, vaccination coverage and disease incidence.
- The NHSCC committee is comprised of FMOH staff, representatives from development partners and non-government organizations was established within the national health system to co-ordinate HSS programme activities funded by GFATM. Subsequently the NHSCC was merged with ICC to ensure harmonization in planning, implementation and monitoring of HSS and immunization activities supported by GFATM and GAVI and renamed "NHSCC/CCM HSS Sub-committee". The principal role of the NHSCC/CCM HSS Sub-committee is to provide oversight and coordination and discuss critical issues affecting the implementation of GAVI/GFATM HSS programmes. The committee meets, twice a year and convenes extraordinary meetings when deemed necessary for example in the case of reprogramming or any other major issues that need urgent decision. During the annual meetings Annual Progress Reports are reviewed and endorsed before submission to GAVI.
- National health financing policy and strategy were developed and endorsed followed a national dialogue involving Ministry of Finance and other line ministries, in addition to wide range of health partners; this strategy is expected to support the implementation of UHC strategy .
- The third national health sector strategic plan 2017-2021 is currently being developed. Sub-sectoral health strategies including cMYP will be developed for the same period of NHSSP III to ensure coherence and consistency.

#### **Coverage & Equity:**

Health services including immunization are provided by MOH supported by different partners including; police, military, health services, universities and National Health Insurance Fund (NHIF) and the private sector (both for profit and non-for-profit). In the areas affected by conflict Non-Governmental Organizations (NGOs) and Civil Society Organizations (CSOs) under the leadership of the government support the EPI program.

During the last years -Knowing that mobile strategy for Immunization service delivery is costly and unsustainable- Ministry of Health started an intensified work to expand fixed immunization network as part of PHC expansion project utilizing an appreciated support from the Government of Sudan and the HSS Grant. PHC expansion project is a government led programme supported by key health partners aiming at ensuring universal coverage by basic PHC package including immunization services. This project started in 2014 with a target to increase the coverage by services from 74% to 100% by 2020. Outreach and mobile services continue to play a crucial role in expanding EPI services, particularly in areas where there are no fixed EPI services due to lack of infrastructure, geographic inaccessibility or humanitarian response situation as a result of conflict or natural disaster

**Figure 1: Trend of EPI service by strategy 2010-2015:**

The EPI target is distributed into 33% urban and 67% rural with population hard to reach either due to geographical or security reason.

#### **Immunization Financing:**

The Government of Sudan is highly committed to immunization as reflected in the timely payment of co finance, over all GoS contribution for EPI in 2015 has reached 19% compared to 13% in 2014 from the overall expenditure. Despite establishment of a specific budget line and the increase in the co-finance after introduction of new vaccines (Men A) still the MoF confirmed its commitment and timely payment. For 2017 onwards the MoF has made commitment to contribute to the procurement of traditional vaccines that are currently being provided by UNICEF availing of the ongoing systems in place.

#### **Human resources:**

Between 2002 and 2011; EPI programme structure has been operated by high qualified staff at federal, state and locality level that contributed to the high quality performance of Sudan EPI programme.

Recently; human resources is the greatest challenge to EPI with the frequent turnover of staff at all level e.g. at the federal level the EPI manager changed more than 3 times in the last years, with massive movement of the trained and expert staff out the country. This brain drain endanger the EPI in Sudan and overloads the program with extensive replacement training program resulting in increased work load.

Political splitting of localities continues to be a real challenge that increases the program cost by establishing EPI units in the new localities. Additionally despite the high government commitment the issue of volunteerism of the vaccinators working in the EPI post need to be addressed and solved to ensure sustainability of immunization services delivery.

#### **Vaccine management and supply management :**

The cold chain infrastructure in Sudan has been improved over the last decade as part of introduction of new vaccines to the EPI programme. During 2015, and in line with the on-going efforts to support strengthening vaccines and immunization supply management, different partners had contributed to this objective through procurement of cold chain equipment and vaccine monitoring devices. UNICEF with support from OFDA and Rotary International equipped 149 facilities with vaccine refrigerators for both replacement and new fixed immunization sites. It also provided cold rooms to two states in addition to strengthening passive cold chain equipment in 8 states, provided pack-up generators to 14 localities in conflict affected areas and helps upgrading the temperature monitoring devices at all levels (30 days refrigerator data logger and freeze indicators). At the national level WHO supported EPI by constructing 2 cold rooms and provision of 15 vaccine refrigerators, this help expanding the national storage capacity to meets the current needs for both routine and supplementary immunization activities. Government invested also on procurement of more than 400 cold chain equipment through PHC expansion and HSS2

funds. This investment on cold chain equipment expected to have remarkable improvement on cold chain capacity at all levels during 2016.

UNICEF had supported the government to train 30 cold chain technicians on cold chain maintenance and installation of new cold chain equipment.

Despite all effort from MOH and its partners to increase the storage capacity and strengthen vaccine management, still the aging cold chain equipment, poor maintenance capacity and availability of spare parts in the local market due to the sanctions affected cold chain functionality at state, locality and health facility levels. Due to these facts, during 2016, the focus will be to support the country in conducting cold chain equipment inventory, conduct EVM assessment and to develop and submit to Gavi a quality cold chain optimization platform proposal in January 2017 for a systematic improvement on cold chain capacity and vaccine management aspects.

### **Data Quality And Surveillance**

A reform is being implemented for the HIS to improve the quality of the data and strengthen the HIS. The support has three components: integrated HIS, DHIS2 and strengthen the community health information system. To achieve the objective a huge investment is being provided by the different HSS partners that includes support for infrastructure including IT equipment in addition to the trainings programmes. The EPI is part of the integrated data collection tool and training programmes for the statisticians and data collectors. Support is also being provided for the regular supportive supervision at state and locality level.

#### Data quality

EPI information system was updated to include all new vaccines e.g. IPV, bOPV and Men A jointly with update for all EPI staff at all levels. The support through the PHC expansion project continued and EPI information is well addressed through the integrated PHC information.

EPI Sudan is one of EMRO countries that used DQS tool for regular supportive supervision since 2003 to monitor the quality of the reporting system and insure data quality at all level.

The effect of high turn over among the EPI staff at all levels has a negative impact on the data quality. To mitigate against this investment in replacement training and strengthening the supportive supervision is a priority and remains a high priority for partners support.

#### Surveillance:

EPI Program has an integrated sentinel site case based surveillance system for AFP, measles and neonatal tetanus since 2006. In 2011 AEFI was added to the integrated case based surveillance. For other VPDs data is collected on a monthly bases. EPI runs weekly surveillance review meeting to discuss vaccine preventable diseases (VPD) surveillance, review the surveillance performance indicators and make sure that they achieve the recommended WHO standard. This meeting is attended by the laboratory focal persons for EPI diseases.

Recently, and due many rumors around vaccine preventable diseases like pertuss, dephteria and neonatal tetanus, MOH and partners decided to strengthen other VPD surveillance as it lack the technical and the laboratory capacity. Addition to that many of the surveillance systemes used to be supported by other donors need to be expanded to increase the represenativeness e.g. measles . Building the country capacity in other disease surveillance and sustain measles, rota and bacterial meningitis surveillance are most important areas need support.

key challenges:

- VPD surveillance system is not fully integrated in the routine integrated surveillance system
- Lack of technical and financial capacities for the surveillance of other disease (NT, Diphtheria, Pertusis, HB and tuberculosis)
- Lack of labrotories capacity in term of equipment, consumable and trained staff.

- High turn over of experts staff and care providers which mandate frquent conduction of training and orientation sessions.
- Under funding of the previously well-function system for measles, Rota and Meningities

**Measles Surveillance:**

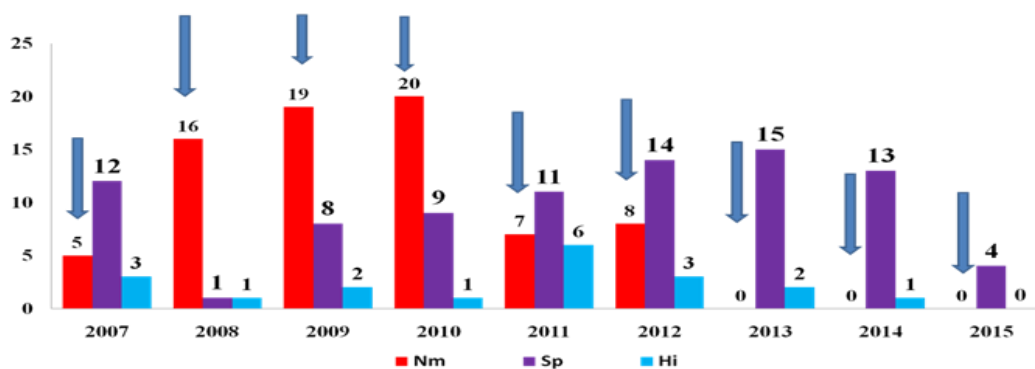
Measles surveillance was established as case-based surveillance since 2006 integrated with AFP and reached the target of the required performance indicators in 2014.

In 2011 – 2013 Sudan faced a big measles outbreak that affected all states with total confirmed cases of 11317 cases. This was due to delayed implementation of the follow up campaign in addition to accumulation of susceptible due to relatively low routine coverage of measles first and second doses. By the end of 2013 Sudan implemented follow -up campaign with extended age up to <15yrs which had an impact on the reduction of measles morbidity until November 2014. By the end of December 2014 there was 676 confirmed measles cases reported, attack rate was 15.6/1,000,000 population and CFR was 1.7%. This outbreak continued during 2015 with reported 6824 suspected cases (3585 confirmed) attack rate was 104.2/1,000,000; the outbreak affected all age groups; 55% of the cases in the age group <5 years, and 74 % in the 9 month 15 year of age group and 26% were above 15 years. In spite of conducting the campaign in 107 localities prioritized at high risk, the epidemic spread to the all 18 states over the country. Frequent and large scale population movements inside the country (conflict induced IDPs, pastoralists, economic migration) and through the open borders with neighboring countries (South Sudanese refugees, Sudanese returnees) are significantly increasing the risk of continuation of measles outbreak.EPI had submitted proposal for MRI to conduct nationwide follow up measles campaign targeting age 9 m-15 years.

**Bacterial meningitis surveillance system:**

MenA campaign was conducted in 2012-2013 supported by Gavi, which had a huge impact on reducing the Neisseria Meningitis as reflected by the surveillance reports shown in the chart below:

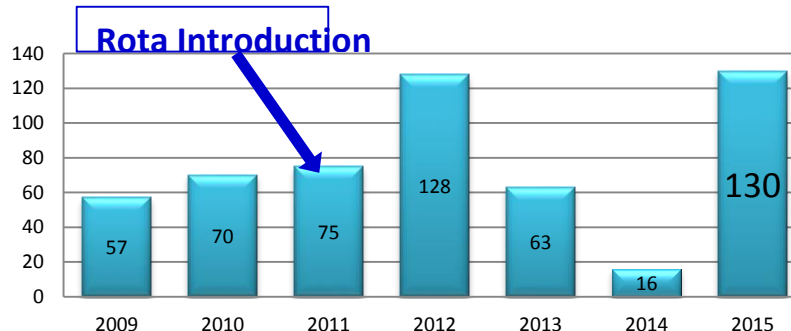
**Figure 2: Meningitis surveillance - incidence report**



**Rotavirus and intussusceptions Surveillance system**

The introduction of Rotavirus vaccine in the National EPI program was launched 17 July 2011. Rota surveillance introduced since 2007; The surveillance provides baseline data for measuring the impact of Rota vaccine introduction. As outlined in figurew 3 below there was a reported increased in cases mainly because of increase in reporting sites, orientation for medical staff however the reported cases of intussuscetion were not linked to Rota vaccine.

**Figure 3: Distribution of intussusception Reported Cases, 2009 – 2015**



**Polio /AEFI surveillance:**

The National Polio and Measles Laboratory provide support for the diagnosis of suspected cases with high score of accreditation for many years. There are two national expert committees for Polio and measles that support the surveillance system in classification of inadequate cases.

Sudan polio free final certification document was accepted by the regional certification commission in April 2015. While Sudan’s AFP surveillance continues to meet or exceed eradication standards of specificity and sensitivity, areas that have been inaccessible for more than three years due to insecurity and the recent detection of two cases of WPV1 in Nigeria represent significant threats to Sudan’s polio free status. Sudan should reaffirm its participation in regional surveillance and cross border coordination mechanisms, such as the Horn of Africa Technical Advisory Group, to mitigate the risks of WPV importation.

**Demand Generation, Communication and Engagement with the CSO**

Many health educations campaign has been conducted to promote the routine vaccines uptake especially measles vaccine, but still this area need more focus especially with introduction of Men A and release of Rota age restriction. Work on building partnerships with CSO’s and making the available ones functioning are areas of concern.

Social mobilization is also conducted by vaccinators who conduct house visits in their catchment area. Vaccinator conduct home visits 4 times a months and cover 20-30 houses per week. The vaccinators are not trained on IPC since long time and there is a need for capacity building for the vaccinators to have more understanding on IPC.

**3. GRANT PERFORMANCE AND CHALLENGES** *(maximum 3-4 pages)*



**3.1. New and underused vaccine (NVS) support**

**3.1.1. Grant performance, lessons and challenges**

**CURRENT AND NEW VACCINE SUPPORT**

Sudan is supported with Penta, PCV, Rota and IPV as part of routine vaccination and Yellow Fever for preventive campaign. In 2015 Sudan achieved Penta3 coverage of 93%. The drop-out rate for Penta3 was less than expected 6% against 7%. For PCV3 coverage Sudan achieved 93%. The target coverage of 95% for Rota 2 was not achieved due to the age restriction policy of Sudan and the coverage achieved was 84%, this is expected

to change during 2016 due to change of the guidelines and release of age restriction. Age restriction was removed as recommendation of the NITAG based on the new WHO position paper and the findings of the intussusception surveillance, circular updating all EPI staff at all levels was done but sure refresher trainings, care providers orientation, demand generation and manual update are needed. 87% was the MCV1 achieved in 2015 compared to the target of 90%.

**Performance of Routine Immunization**

**New Vaccines**

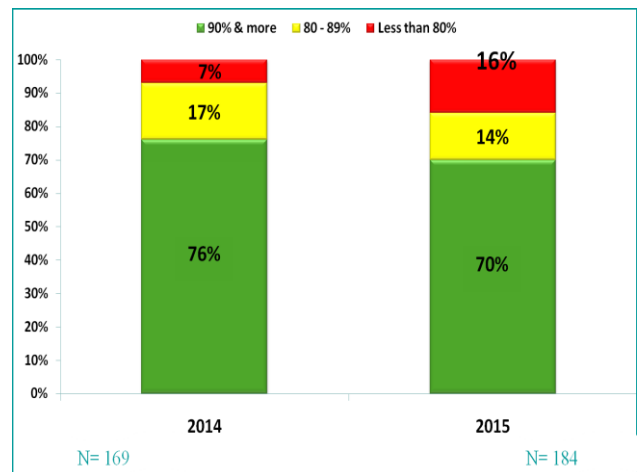
During 2015 IPV was introduced into routine immunization schedule. Good introduction and satisfactory coverage was achieved, where 69% in six months as the vaccine was introduced in 1<sup>st</sup> of June 2015. Preparation for Men A introduction in the routine was completed as the proposal was submitted timely and approved.

**Equity and gender analysis**

**Existing immunization coverage**

- 12 states out of 18 achieved Penta 3 coverage of 90% or more, 5 states achieved 80-89% and only one state less than 80%
- The total number of localities was 188, five of them were not accessible; 129 localities out of the accessible localities achieved more than 90% Penta3 coverage rate
- Vaccine wastage rates were within the acceptable limits: 3% for pentavalent vaccine, 4% for PCV, 3% for Rota, and 23% for measles vaccine.

**Figure 4: EPI coverage by accessible localities 2014-2015**



Some variation exists between localities regarding the vaccination coverage achievement. During the year 2015 70% of localities achieved 90% or more Penta 3 coverage while 16% (12 localities) achieved less than 80%. out of these 12 localities; 10 are affected by war (5 in North Darfur, 3 in West Darfur one in Northern, one in West Kordofan and one South Kordofan).

There lack of documented evidence to conclude existence of gender based disparities in accessing PHC/immunization services in Sudan. The 2015 reported vaccination coverage of third dose of pentavalent vaccine shows no significant difference related to gender (48.5% males, and 51.5% females)

Findings from MICS 2014 (published 2016) also supported the reported coverage in relation to gender equity and vaccination coverage among males and females were found comparable(72.6% for males and 75.2% for females).

Findings the MICS 2014 showed variation in coverage between rural and urban (70% and 82% respectively). Also effect of mother education on child vaccination was clear as only 60% on illteration mothers vaccinated their children compared to 82% among mothers with education higher than high school. Difference between lowest and highest Wealth Quintles was found to be -38% (MICS 2014)

EPI conducted a bottleneck analysis of the issues hindering these localities from reaching the target group, reasons include limited access due to security situation, unreliable denominator in one locality, withdrawal of NGOs from some conflict areas in North Darfur, destruction and looting of solar refrigerators, the lack of adequate staff and the rapid movement of pastoralist communities in Red Sea.

**Major activities conducted in regard to strengthen routine immunization services include:**

Planning

- Micro planning meetings for 18 states and 184 localities with especial focus on hard to reach and disadvantages population have been organized and plans have been developed and updated.
- Update the micro planning for the inaccessible areas in South Kordofan, Blue Nile and Jabel Merra

Training and capacity building

- One MLM training course in Kassala State for 19 participants
- Seven Refresher trainings in Gazeria, South Darfur, Sennar, Blue Nile, West Darfur, Khartoum and Northern states for 1214 vaccinators

With the problem of the brain drain the country facing and the high turnover among the trained EPI staff at all levels, replacement training plan and investment in this area is highly need with strong coordination with all partners

Supply and logistics

- Continuous rehabilitation and maintenance for cold chain equipment to maintain functionality of the cold chain at sub-national levels.
- At central level; the storage capacity remained same as that in 2014 which is 143921litre and the freezing capacity is 14752 litre
- At state levels many state storage capacity was increased to this lead to storage capacity of 149477litre compared to 123567 litre in 2014 due to installation of new cold rooms e.g. South Kordofan

Service delivery

- High implementation rate of EPI session 96% for fixed sites, 94% for outreach and 75% for mobile teams.
- Conduct integrated outreach services focusing on localities with low EPI coverage by 94%.
- Two acceleration campaigns of 3 rounds for routine immunization covering 53 localities were implemented in Darfur. Conduct integrated EPI/PHC mobile sessions for disadvantaged populations and communities with low access to fixed facilities in rural and remote settings by 83%.
- Microplanning for switch from tOPV to bOPV on 25<sup>th</sup> of April 2016 as the nationally selected day and submission of compiled national plan timely.

Monitoring and Evaluation and data quality

- Monthly monitoring review meetings at state level (states with localities & localities with service providers)
- Submission of state monthly performance reports whereby feedback was provided, c) bi-annual review and evaluation meetings with states to assess the implementation of the plans were conducted,
- Follow up of implementation of the supervision plan at state and locality level to verify their reports.
- The DQS tool was used as a supervision tool enabling immediate analysis of the findings and feedback at state, district and health facility levels. Studies done for evidence generation as immunization coverage survey; community acceptance for multiple injections (to generate evidence for Social mobilization plan for IPV introduction)

Performance of supplementary immunization activities



During November 2014, the Yellow Fever campaign phase two was implemented. The yellow fever preventive campaign phase three was not implemented as planned because of the vaccine shortage, Sudan received only 6,800,000 dose out of 13 M planned, and this used to cover North Kordofan, White Nile, Red Sea and Gadarif states. In addition to yellow fever campaign, many measles outbreak response campaigns were conducted in different states to clear the susceptibles and improve the children immunity.

To ensure the quality of campaigns, EPI with support from partners revised the training package, micro planning processes, implementation arrangement, number of monitoring and supervision teams and validation of coverage by the end of each campaign through coverage survey and based on the results correction measures were timely implemented.

#### **Challenges**

- Fund shortage for the measles outbreak response which lead to phases implementation
- Yellow fever vaccine availability is a real challenges facing national implementation of the SIA and introduction in the routine. The country has only completed two phases of the campaign, the remaining target will be reached once the supply situation has improved.

#### **Polio Transition Planning in Sudan**

In alignment with Objective 4; Legacy Planning of the Polio Eradication and Endgame Strategic Plan 2013-2018, and acknowledging the global ramp down of GPEI funding for all polio priority countries from 2017 - 2019, Sudan has initiated a transition planning process to ensure that valuable polio assets are integrated into government health priorities by 2019. As part of the recommended process, Ministry of Health, WHO, and UNICEF country office leadership has endorsed transition planning and an oversight body for planning has been created.

The chronology of Sudan's planning includes: 1) conducting an inventory of polio assets, 2) a workshop, led by MOH, of stakeholders to identify assets that align with Sudan's health priorities, 3) the development of a business case for each identified priority asset that provides programmatic and financial analysis, 4) resource mapping for identified assets, and 5) a country transition plan. Sudan's transition planning team, composed of MOH, WHO, and UNICEF meet weekly and have preliminarily identified a number of polio assets for mapping including the integration other VPDs into AFP surveillance and the use of IDP and community based surveillance among nomadic populations. Other polio assets that will be unfunded after 2019 include cold chain support and polio-funded EPI and surveillance staff. GPEI has approved \$251,000 for the costs of consultants and coordination support for polio transition planning in Sudan.

#### **Advocacy and communication**

Health promotion directorate is mandated to support all health programs for communication and social mobilization activities. The focal point for social mobilization for EPI is located in health promotion department which was part of EPI team in the past.

The focal point for EPI in health promotion receives the data from EPI and conducts analysis on this data. Data analysis shows issues around utilization highlighted by high dropout rates which can be solved through Inter personal communication efforts. The data and distribution of drop out is not uniform among regions and some states have specific problems. Dropout rates are more pronounced for MCV1 to MCV2, Penta1 to Penta 3 and PCV. The rates are not very noticeable at national level but pronounced at state and locality level. Sometimes families prefer to take vaccine of subsequent dose from a different place than first dose which cause drop out. The drop out is also pronounced in families working in fields like farmers who take children to field early morning and they miss the immunization session.

Social mobilization is also conducted by vaccinators who conduct house visits in their catchment area. Vaccinator conduct home visits 4 times a months and cover 20-30 houses per week. The vaccinators are not trained on IPC since long time and there is a need for capacity building for the vaccinators to have more understanding on IPC.

The refusals in polio campaigns is noticed in some areas especially in Eastern zone. There is however no clustering of refusals in particular areas. Generally there is acceptance for vaccines.

As a part of strengthening Surveillance, there is a need to focus on Community based surveillance in nomadic populations as per communication guidelines, and increased community awareness regarding strengthening AFP cases notification.

Advocacy is required to identify strong and sustainable leadership to support health promotion department. In the light of strengthening outbreak preparedness and response efforts there is a need to conduct the C4D training for health promotion focal points from the states, preposition resources and communication messages and plans. There is a need of boosting the capacity of vaccinators on IPC skills.

Challenges:

- Health promotion is given mandate but not given authority to implement the program activities. Turnover in health promotion staff is high.
- Request for funds for Polio campaigns is received to UNICEF at late stage. Similarly health promotion do not received funds directly on their plans.
- Social mobilization/Communication and EPI need to have closer collaboration.

Proposed Community based initiatives:

- Revisit Communication strategy for EPI (2016)
- House visits through paid network of volunteers (2017),
- Habooba clubs, awareness campaign, mass media communications, community engagements (2016)
- Revitalize friends of EPI society (2016)
- IPC training of volunteers, vaccinators and other service providers

#### **Key Implementation Bottlenecks In Routine Immunization**

- The brain drain of the trained EPI staff from all levels federal, state and locality levels.
- Sub-optimal communication and social mobilization activities for demand creation at all level for routine EPI activities; as social mobilization activities are usually active during campaigns and with new vaccine introduction only due to budget constraints.
- Weak interpersonal communication (capacities and implementation)
- Completely inaccessible areas due to armed conflict are five localities in South Kordofan state, partially in Blue Nile and West Kordofan accounting for around 163,522 under five child whom represent 2.5% of the total country target. This cohort of unvaccinated children poses a threat to disease prevention and eradication programs.
- Measles outbreak have exhausted the program technically and financially
- Strengthen the capacity of vaccinators on IPC skills

### **3.1.2. NVS future plans and priorities**

*[Comment on the relevant bolded areas listed in the table in this section of the guidance document, e.g.: for existing vaccines - reasonableness of targets for next implementation year, plans for any changes in presentation or type, risks to future implementation and mitigating actions; for new applications – any expected future applications (include in table 1 above), emerging new priorities for the national immunisation programme]*

#### **New and underused vaccine support**

- Request for renewal of DTP-HepB-Hib (Pentavalent), 1 dose(s) per vial, LIQUID vaccine in the existing presentation for the year 2017.
- Renewal of Pneumococcal (PCV13), 1 dose(s) per vial, LIQUID vaccine in the existing presentation for the year 2016.
- Renewal of Rotavirus, mono tube of one dose vaccine for the year 2017
- Renewal of IPV, 10 dose(s) per vial, LIQUID with VVM on the vial to allow applying the open vial policy.
- Request renewal of yellow fever mass preventive campaigns to complete the remaining districts.(subject to supply availability)

### 3.2. Health systems strengthening (HSS) support

#### 3.2.1. Strategic focus of HSS grant

[

The strategic focus of the HSS grant is to achieve the UHC and strengthening the health system in the country in line with the national health sector strategic plan 2012-2016.

GAVI has contributed significantly in the area of equitable distribution of the health services by its contribution to evidence generation used to develop and advocate for PHC UHC program.

As a strategic direction of the country; GAVI HSS grant is also supporting the PHC expansion project vertically and horizontally by providing support for the basic and supplementary training programmes of the medical assistants, community health workers, vaccinators, nutritionists and other health cadres and constructing and rehabilitating health facilities where needed based on the health mapping results.

The Integration that has been adopted is also one of the main areas that are being supported by GAVI to achieve the efficiency and sustainability of the health services by producing a multi-task health care providers.

A complementarity approach has been adopted in the planning and implementation of the different HSS grant (GF with total amount of 21 million USD and EU 11 million EUR) to avoid overlapping and to ensure the efficiency and effectiveness. Equity is one of the major strategic directions considered during the design and implementation of the support program. This is reflected in the focus of reducing inequality and improving service delivery in disadvantaged States on which contribution of GAVI HSS in the development of PHC Universal Health Coverage plan was a major strategic investment; it is clear in the production of HRH took into account the issues of equity in the implementation. Overall, there is an investment to rehabilitate and establish new health facilities in the targeted states, which will help to create access for those that do not have the chance to do so before.

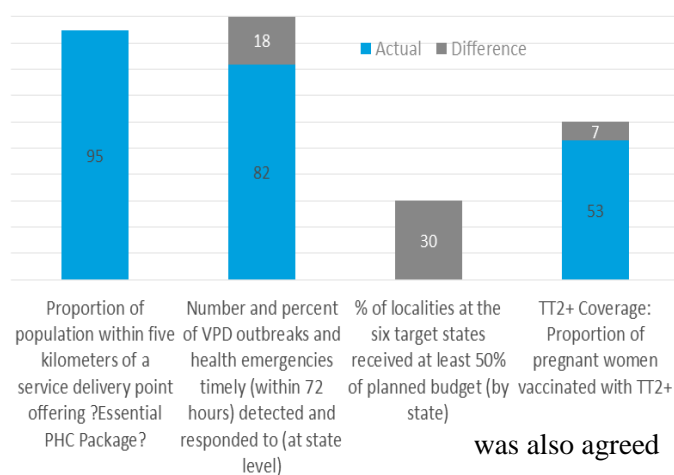
Other investments in the different areas and components of the health system by the government and other health partners are complementing GAVI HSS grant and also enabling achieving the grant objectives including the support to strengthen the HIS and HMIS and the significant contribution in adopting an integrated HIS (DHIS).

#### 3.2.2. Grant performance and challenges

##### HSS Grant Performance

In addition to the core indicators, the performance framework included five tailored outcome indicators, 11 tailored intermediate indicators and 7 tailored process indicators.

Out of the five outcome indicators, four indicators were reported and one met the target. During the JA it was agreed that indicator measuring availability of PHC services needed to be revised to reflect a better definition and measurement method. The indicator related to budget allocation could only be measured from 2017 onwards. It



that indicator related to VPD surveillance should be included as an intermediate result indicator with a revised definition and scope.

Table above presents the tailored indicators at the intermediate results level. The country reported

	HSS	Baseline		2014		2015	
	Objective	Value	Year	Target	Actual	Target	Actual
Percent of underserved/disadvantaged population covered by DTP3	1	68%	2012	73%	74%	78%	NR
Percent of target population served by fixed immunization sites	1	44%	2013	55%	55%	60%	51%
Number of states that have cold chain functionality of 80% or more	1	11	2013	13	14	15	12
Percent of PHC facilities in target states with system quality index of 80% or above	1		2012	50%	NR	60%	85%
Percent of PHC facilities at target states submitting regular integrated reports according to standards;	2	32%	2012	50%	38%	60%	50%
Percent of PHC facilities (disaggregated by urban/rural) with the required number and quality of staff according to standard at six target states	3	20%	2012	30%	NR	40%	32%
Number of states implementing the revised organizational structure	4	0	2013	3	9	6	12
Number of localities implementing the revised organizational structure	4	0	2013	0	NR	15	39

on all except one indicator. The target was missed for four indicators, however, this needs to be seen in the light of the fact that the implementation of the activities was only undertaken in three out of four quarters of 2015. Two additional indicators that were included in the tailored intermediate indicators included timeliness and completeness of reporting for EPI reports and VPD surveillance reports. The inability to report timeliness and completeness in the same indicator, it was decided that going forward separate indicators for timeliness and completeness will be tracked.

In terms of process indicators, all except two indicators were reported in 2015 and three missed the target, as shown in the table above. As mentioned above, given that the implementation period was shorter than expected, the targets were not missed by a huge margin except for trainings which could not take place during the year.

It should be noted that during the JA extensive discussion took place to review the current indicators and significant changes have been proposed for indicators for 2016 and beyond. A revised list of indicators was agreed upon by country stakeholders and partners to be tracked for 2016. Intermediate as well as process indicators have been revised with new indicators added to reflect the change in the budget allocation for some activities.

	HSS	Baseline		2014		2015	
	Objective	Value	Year	Target	Actual	Target	Actual
Percent of PHC facilities providing essential package including immunization	1	24%	2012	30%	24%	40%	32%
Number of target community health workers received training according to the	1	0	2014	882	685	5006	579
Number of localities with functional CSOs engaged in EPI activities	1	124	2013	130	179	145	NA
Number of states conducting data quality monitoring and shared reports (during the quarter)	2	0	2013	10	NA	12	NA
Number of health training institutions graduating target number and quality of allied health workforce at six target states	3	NA	NA	4	4	8	6
Proportion of locality health management teams in 6 target states conducting regular integrated supervisory visits (during the quarter)	4	NA	NA	25%	25%	40%	38%
Number of localities with functional health management teams	4	92	2013	102	NR	125	92

**Leadership Management and coordination**

Sudan comprises of 18 States which are divided into 184 localities. The constitution and the Federal System Act (1999) regulate the relationship between the three tiers of the political system (federal, states and localities). The decentralized health system defines the roles and responsibilities of different levels. For EPI programme, the federal level is responsible for planning; development of policies and guidelines; resource mobilization, both domestic and external; monitoring and tracking the performance progress; strengthening the capacities of sub-national levels and the overall coordination. EPI teams at Sub-national levels (states and localities) are responsible of the operational planning; support implementation of different EPI activities; ensure the implementation of different EPI strategies and plans including service provision and community mobilization.

Challenges around EPI leadership and management include high staff turnover at different levels, particularly, highly qualified staff at federal level and lack of HR retention strategy. Plans has to be developed to fill the technical capacity gap in the priority areas that include supply chain management; leadership skills, financial management, process management and stakeholders management.

The NHSCC committee and the ICC have been merged to ensure harmonization in planning, implementation and monitoring of HSS and immunization activities supported by GFATM and GAVI. The role of the new NHSCC/CCM HSS Sub-committee is to provide oversight and coordination and discuss critical issues affecting the implementation of GAVI/GFATM HSS programmes.

The key challenges in the area of coordination include low level of representation in the meetings (attendance not ensured or inappropriately delegated); lack of systems and tools to support NHSCC/CCM HSS Sub-committee functionality (e.g. dashboards). Assessment of the effectiveness and efficiency of the current coordination mechanisms is needed to support FMOH plan to improve the coordination with all health partners and stakeholders.

### **HSS: Achievements**

- Support implementation of outreach, mobile and acceleration EPI activities (routine immunization services intensification in areas with access problems and no well established routine services mainly in Darfur states).
- Implementation of the integrated supportive supervision.
- Contribution to the implementation of the DHIS2 to complement GF support (training of HIS teams in 8 states and provision of IT equipment).
- Support the implementation of the integrated HIS to complement GF support (training, printing of data collection tools and supervision).
- Support provided to maintain the Sudan Health Observatory.
- Provided support to establish CSOs network (Sudan Health Network)
- Training of CSOs on resource development and project management.
- Organized in 2016 Joint financial management assessment according to the commitment of the partners in local health compact(Gavi has participated).
- Participation in the fifth round of the IHP monitoring process(Gavi has participated).
- Development and endorsement of the national health financing policy and strategy.
- Conduct extensive financial audit by Gavi secretariat for the period of 2010-2015.
- Introduction of new finance software to enhance and improve the financial management system.
- Development and endorsement of operational manual and SoPs for HSSgrants.

### **Challenges**

#### **HSS:**

- Delayed and partial disbursement of HSS year 2 budget:
  - Only the budget for one quarter has been released.
  - Challenges in fund transfer due to sanctions (took four months).
  - Lengthy process and detailed requirements for disbursement.
- Conflict in some states and neighboring countries (IDPs, Refugees).
- Despite the significant increase in the Gov support to PHC universal coverage plan still there is funding gap.
- High staff turnover and inadequate capacities at different levels.

### 3.2.3. Describe any changes to HSS funding and plans for future HSS applications

HSS Year 2 tranche was not fully disbursed, Euro 1,723,913 (US\$ 1,965,761) has been transferred. This constitute only 25% of year 2 budget. Gavi is requested to release the remaining budget for year 2 (US\$ 4,391,707) in addition we are requesting approval of year 3 budget (US\$ 6,330,000). The justification for requesting this tranche are:

- The need to address the critical gaps in the health system and enhance the immunization coverage according to the acceleration plan for Gavi HSS and the overall PHC UHC plan for 2016/2017.
- FMOH has responded to all requirements including completion of financial audit conducted by Gavi secretariat for the period 2010 - 2015; organizing FMA for 2016; installation and operationalization of a financial software to replace the excel-based program.

Sudan was eligible for PBF performance reward for 2014 coverage, the utilization of these funds was discussed prior to and during the JA. There are various needs where these funds can help strengthen the programme, and while a detailed budget and workplan for the utilisation of these funds is to be submitted, they key activities proposed are the following:

- Strengthen capacity in vaccine management (wastage and temperature monitoring study)
- Support scale up of the surveillance reporting sites for integrated VPD surveillance with increased alertness to polio.
- Strengthening of C4D strategy and social mobilisation of paid volunteers who follow up on defaulters

### 3.3. Transition planning (if relevant)

In 2016 the World Bank (supported by Gavi) is planning to lead an exploratory mission to undertake review an assessment of UHC outcomes, including coverage and equity of immunization, before reviewing strengths and weaknesses of health financing systems, and, within this context, immunization programs. This activity is in preparation of the Sudan program that will enter accelerated transition in 2020 and fully self financing in 2025.

### 3.4. Financial management of all cash grants(e.g. HSS, VIG, campaign operational cost grant, transition grant)

During 2015, Sudan has received US\$7.1M of cash support for Yellow Fever – Operational Costs through UNICEF and WHO. Funds remaining from the IPV Vaccine Introduction Grant (US\$1.0M) and the first year of HSS2 support (US\$7.9M) were also utilized in 2015 and reported to Gavi as per the reporting requirements.HSS2 first year of support had a utilization performance of 89%.

A constrain of making funds available to the country was the recent restriction of UBS to transfer funds to countries under US sanctions, ongoing discussions with UBS resulted in the inclusion of Gavi to a “green list” as an exception under certain conditions into countries that are under sanctions.

Following the recommendations made in Financial Monitoring visit that took place in December 2015 a new financial software has been installed to replace the excel-based program. Now the system is operating and the financial reports for 2015 and 2016 were generated from the system in compliance with Gavi requirements.

Gavi has conducted an audit of its cash and vaccine support to Sudan in March 2016 for the period 2010-2015. The draft report has been shared with the FMOH and is currently being reviewed.

A Joint Financial Management assessment in collaboration with the Global Fund, World Bank, WHO, UNICEF has taken place in July 2016 and has identified the strengths and weaknesses of the Sudan fiduciary and public financial management arrangements for implementing donor financed projects. The draft report is currently being finalized.

A new financial software has been installed to replace the excel-based program. Now the system is operating and the financial reports for 2016 were generated from the system.

**4. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL(filled in during JA attached as annex )**

Prioritised strategic actions from previous joint appraisal/HLRP process	Current status
1.Perform advocacy with political leadership/parliamentarians to increase government contribution to immunization and prepare for graduation and traditional vaccines Cofinancing.	Ongoing. World Bank to conduct a immunisation financing sustainability assessment study (fiscal space) in the end of 2016. UNICEF has received commitment from the government for funding traditional vaccines starting in 2017. Domestic government contribution to health financing is increasing and there is a strong commitment from the government to increase it further.
2.Conduct barrier to immunization study in the different low coverage localities.	TOR developed. recruitment underway. The study is expected to be finished by the end of the year 2016.
3.Develop and finalize comprehensive context-specific state communication strategies and initiate implementation of communication plans	TOR developed, recruitment underway. The strategy development and implementation is expected to be started by September 2016 and to be completed by August 2017.
4.Enhance support for the sub-national level to strengthen the decentralized system (TAs and establishment of the zonal support units).	Recruitment process has been completed.
5.Provide support and develop operational guidelines for the integrated approach at the state and locality levels.	Ongoing through other sources of funding

**5. PRIORITISED COUNTRY NEEDS<sup>1</sup>**

Prioritised needs and strategic actions	Associated timeline for completing the actions	Does this require technical assistance?*(yes/no) If yes, indicate type of assistance needed
To undertake a capacity gap analysis of Management of EPI program at different levels (subject to tool being available by end of 2016)	June 2017	Yes under SFA of LMC

<sup>1</sup>Subsequent planning and discussions on Targeted Country Assistance will take place - detailed guidance on the process will be shared in May 2016.

Strengthen LMC	2017	Yes, funds to be confirmed by Gavi
Finalization of development of HR retention policy	June 2017	Yes, covered under HSS
Enhance capacity and involvement of CSO's in immunization program with a focus on underserved areas.	Dec 2017	Yes, covered under HSS
Strengthen capacity in vaccine management (wastage and temperature monitoring study)	June 2017	Yes, covered by PEF and PBF
Strengthen VPD surveillance system	Dec 2017	Yes, travel cost covered by PEF
Support scale up of the surveillance reporting sites for integrated VPD surveillance with increased alertness to polio.	Dec 2017	Subject to funds not being available from other sources opportunities though PBF will be explored.
Provide support to ensure financial sustainability of service delivery	January – December 2017	Yes, TA is needed in the form of providing hands-on support and technical guidance for the implementation of the Health Financing Strategy by The World Bank to complement WHO/EU support
Support participation in the One JANS (Joint Assessment of the National Health Sector Strategic Plan and cMYP 2017 – 2021)	December 2016 – January 2017	NO
Resource estimation to approach universal coverage by essential health benefit package	December 2016 – June 2017	Yes, World Bank is to continue providing technical assistance to design and conduct the study
Enhance and strengthen the financial management capacity by hiring two finance staff	January – December 2017	No
Strengthening of C4D strategy and social mobilisation of paid volunteers who follow up on defaulters	January – December 2017	Yes PBF
Review and finalise external audit report	September 2016	No
Conduct barrier to immunization study in the different low coverage localities.	October 2016 – December 2016	Yes, Cost available in Country under PEF
Develop and finalize comprehensive context-specific state communication strategies and initiate implementation of communication plans	October 2016 – August 2017	Yes, Cost available under PEF
Support the strengthening of the unified supply system	October 2016 – December 2016	Yes, Cost available under PEF
TA to support supply and cold chain system	October 2016 – August 2017	Yes, Cost available under PEF
Complete yellow fever mass campaigns depending on supply availability	2017	Funding to be confirmed through the vaccine renewal processes

*\*Technical assistance not applicable for countries in final year of Gavi support*



**6. ENDORSEMENT BY ICC, HSCC OR EQUIVALENT AND ADDITIONAL COMMENTS**



*This section does not need to be completed for joint appraisal update in interim years, instead the EPI manager is expected to endorse the joint appraisal report.*

Brief description of how the joint appraisal was endorsed by the relevant national coordination mechanism	
Issues raised during debrief of joint appraisal findings to national coordination mechanism	
Any additional comments from: <ul style="list-style-type: none"> <li>• Ministry of Health</li> <li>• Gavi Alliance partners</li> <li>• Gavi Senior Country Manager</li> </ul>	

**7. ANNEXES**



*This section does not need to be completed for joint appraisal update in interim years. Please include the following Annexes when submitting the report, and any others as necessary*

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

**Annex B: Changes to transition plan** (if relevant)

Changes proposed	Rationale for changes	Related cost (US\$)	Source of funding for amended activities	Implementation agency	Expected result