

Evaluation of Gavi Health Systems Support  
2008-2013 in Sudan

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## Acronyms and Abbreviations

AHS	Academy of Health Sciences
ANC	Antenatal care
APRs	Annual Performance Reports
BHU	Basic Health Units
CCM	Country coordinating mechanism
CHW	Community Health Workers
cMYP	EPI Multi-Year Plan
CPD	Continuing Professional Development
CSOs	Civil Society organizations
DAC-OECD	Development Assistance Committee- Organisation for Economic Cooperation and development
DHIS	District Health Information system
DHS	Demographic and Health Surveys
DPs	Developing Partners
DPT <sub>3</sub>	Diphtheria Pertussis & Tetanus 3 Vaccine
EPI	Expanded Programme of Immunization
FMA	Financial Management Association
FMOH	Federal Ministry of Health
Gavi	Global Alliance for Vaccine and Immunization
GF	Global Fund
GFATM	Global Fund for HIV/AIDS, TB and Malaria
GHI	Global Health Initiative
Go	Government of Sudan
HIC	Health Information Centres
HMIS	Health Management Information System
HRH	Human Resources for Health
HSCC	Health Sector Coordinating Committee
HSS	Health Systems Strengthening
ICT	Information, computing and technology
IDP	Internally displaced people
IRC	Independent Review Committee
JANS	Joint Assessment of National Strategies
KAP	Knowledge, Attitude and Practice
KIIs	Key Informant Interviews
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MDTF	Multi-donor Trust Fund
MNT	Maternal and neonatal tetanus
MTR	Midterm Review
NCD	Non-communicable diseases
NGO	Nongovernmental organization
NHIF	National Health Insurance Fund
NHSSP	National Health Sector Strategic Plan
NVI	New Vaccine Introduction
PER	Public expenditure review
PFM	Public financial management

PHC Primary Health Care  
PHI Public Health Institute  
PMU Project Management Unit  
SDG Sudanese Pound  
SMOH State Ministry of Health  
TOR Terms of Reference  
TWG Technical working group  
UHC Universal Health Coverage  
UNICEF United Nations Children's Fund  
UNFPA United Nations Fund for Population Activities  
USAID United States Agency for International Development  
WB World Bank  
WHO World Health Organisation

## Map of Sudan

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States: 1-Khartoum 2- North Kurdufan 3- Northern State 4- Kasala 5- Blue Nile 6- North Darfur 7- South Darfur 8- South Kurdufan 9- Gezira 10- White Nile 11- River Nile 12- Red sea 13- Gadaref 14- Sennar 15- West Darfur 16- Central Darfur 17- East Darfur 18- West Kurdufan

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Any shortcomings or mistakes encountered in this report are the evaluation's team sole responsibility.

Gavi HSS Evaluation Team  
October 2015

## Executive Summary

The purpose of this evaluation is to assess whether the objectives and expected results of HSS support were achieved. It specifically aims at assessing whether core systems and capacities have been built; whether capacities for the production, deployment and retention of PHC workers were strengthened; and whether Gavi HSS has contributed to the increased EPI coverage, and equitable access to quality PHC and MCH services in their targeted states and localities.

The DAC-OECD evaluation criteria of efficiency, effectiveness, equity, and sustainability with the inclusion of design and implementation issues was used to generate the evaluation questions. A mixed methodology of data collection including reviewing the documents, semi structured key informant interviews at the federal, state and locality levels and selected field visits were used.

### Major Findings:

GAVI HSS support was timely, the activities, system plans and strategies were and still remain relevant to the HSS priorities in Sudan.

The implementation of the support is fully in line with GAVI values of country ownership, alignment and harmonization, catalytic and additional effect. Gavi HSS support is found to be country owned and driven as its proposal development was driven by the TWGs and drafting committee led and endorsed by the HSCC. The support has been fully aligned with the NHSSP and it is the first support to use national systems for planning, monitoring, finance and procurement in Sudan.

The support was effective in generating evidence that informed the government decision making to shift its priority from tertiary and secondary care to primary health care and increase government funding on PHC and health systems in general. The support has been flexible to accommodate changing and evolving HSS priorities over time. The evaluation team is of the opinion that the support's catalytic role was more important and impactful than its actual resource contribution.

It was further effective in strengthening institutional systems and capacities, especially strengthening decentralized locality teams. It was able to increase the production of middle level human resources and institutionalize the HRD and Planning Directorates in the states. Assisted the development and implementation of PHC with its norms and standards; contributed to the establishment of the health observatory and the rehabilitation of health facilities and cold chain equipment.

As a result of these successes, the country managed to meet most of the impact indicators as well as some of the outcome indicators. All the impact indicators with exception of reduction in under-five children mortality either met or very close to meet targets. The country managed to realize 5 of the 8 planned outcome targets. Another two were achieved but successes were compromised by changes in the strategy for strengthening planning and M&E processes. The only target not achieved is increased utilization of services.

### Best practices and lessons learnt

There are best practices and lessons learnt in the implementation of the GAVI HSS support that can inform the second round of Gavi HSS and other HSS support. The following are the main examples:

- Harmonization between GAVI and other HSS projects through the operationalization of One Project Management Unit, one coordination structure (HSCC and CCM HSS sub-



committee), one implementation strategy, and One assets management system. This is a best practice for many other countries.

- The commitment and vision to change course and priorities when necessary by the top management without compromising the results helped to achieve most of the set targets
- The move towards consolidating coordination and overseeing structures into HSCC/ICC/CCM seems to have reduced the transaction cost and also enhanced the alignment of the different sources of funding to health systems strengthening. This is also a lesson for many other countries where there are parallel coordination structures.
- The need to have clarity and common understanding of roles and responsibilities and costs between the FMOH and TA provider is one of the major lessons that have been acquired from the pitfalls of the GAVI HSS support. Technical assistance needs to be demand driven, should work with and through the national plan and structures while also providing an opportunity for skills transfer.
- The design of the new programme support could benefit from an inclusion of the 'theory of change' to clearly map the reason for providing support and define the results chain. Any changes during implementation will be associated with its revision and makes it easier for the evaluation. The involvement of SMOHs in the development of proposals should also be considered as mechanism for better ownership at that level.

### **Gaps and challenges**

There are also important gaps and challenges that still hamper the realization of a well-functioning health system in Sudan. The major challenges identified by the evaluation team include but are not limited to the following:

- Not all structures at the state and locality levels are filled with HR and some are still not functioning well, especially at locality levels.
- Capacity building efforts focused more on building individual skills, than teams and in most of the cases hasn't been complemented by development of tools and systems. Implementation of decentralized governance system was not accompanied by clear policies to empower both states and localities to exercise full power on resources including finance. - Poor working environment and shortage of qualified staff at locality level together with the dominance of vertical approach resulted in poorly performing locality health management teams. There is still lack of concrete evidence on how much these efforts impacted on service delivery.
- Production of more human resources alone will not address the root cause of shortage and skill imbalance in Sudan. The retention mechanisms introduced have not significantly altered the course of migration. There is still an inadequate salary scale and incentives which led to high turnover and brain drain (60% of 21,000 doctors). There is also inadequate capacity at the state levels to produce some middle level cadres like technicians and anaesthetic nurses. Moreover, the health system is unable to absorb all the trained allied health workers -10% of nurses and 60% of midwives remain unemployed. Unless there is better commitment by the states and localities to absorb them, it is important to question whether there is a need to continue investing on training some of the middle level health professionals.
- The Impact of CPD on improving service delivery is yet to be observed and documented as well.
- Most of the annual operational plans of states and localities are not resource constrained; most of the localities do not have operational plans at all. The concept of 'One- plan' one budget and one report' still requires more investment and effort before it becomes a reality. The capacity of CSO coordinating committee is weak and works on ad hoc basis and is not supported by a secretariat.

- The HIS implementation is yet to show progress. Unskilled personnel continue managing data at locality levels; there are questions on readiness of facilities and localities in terms of internet, computers and staff for the scaling up and implementation of DHIS-II. Because of the gaps in one plan-report and review, there is weak culture of using information for decision making that needs to be tackled.
- Providing full PHC package of services in health facilities continue to be a challenge due to shortages in human resources and equipment. There has been huge investment in training CHWs but their functioning varies from state to states. Incentive- and payroll- based approaches were used to motivate and retain them by different states but there seems unclear national strategy in this regard.
- There is delay in the implementation of the program by at least a year and even after that the project was not able to absorb all the funding budgeted for it- managed to utilized 75% by end of 2013. This is caused by two factors: (i) delay in transfer of funding from Gavi and (ii) weak implementation capacity by FMOH (limited staff, limited delegation to states; implementing directors not submitting technical and financial reports on time).

## **Recommendations**

### *For Government*

- Develop a consistent roadmap and strategies for health system strengthening and continue implementing the strategic shifts as envisioned in NHSSP II.
- Strengthen processes and systems of government ownership and leadership as well as charting out alignment and harmonization mechanisms. Government should strengthen its coordinating role to bring HSS partners through open and functional policy and programmatic dialogue, with clear action plan for addressing system weaknesses in financial management and procurement.
- Support and advocate for strengthening of the NGO network to ensure that their plans and resources are well reflected in sector plan to complement government efforts.
- Continue to invest on strengthening integration of HSS and ensure that there is confidence by all stakeholders on its functioning before starting eliminating systems related to vertical programs.
- Continue advocating for increased allocation of more resources to the health sector from government budget. The FMOH may consider leveraging the mobilized resources from partners like GAVI and GF as a means to mobilize counterpart funding/matching funding for some system strengthening at the State level as experienced in Gadaref State. For instance, motivate disadvantaged states to allocate a matching investment on PHC unit from external resources for each new PHC unit funded through state government resources.
- The Ministry of Finance and Economy and the FMOH may consider undertaking a joint cost-benefit analysis of migration to the overall economy in general and health sector in particular and develop an appropriate strategy based on the evidence generated (balancing retentions and/or production or both).
- Review the design of the PHC approach and the scaling up plan to ensure that its components are comprehensive and have a greater impact at the community level.
- Fast track and invest on bottom up and top down planning process ("one plan", "one budget", "one report", "one review") as means to translate the NHSSP targets into action.
- Reassess the effectiveness of CPD trainings and devise training strategies that balances building individual skills with team work and addressing specific HSS challenges;
- Enhance implementation capacity through fostering delegation both within the FMOH and to states. This should be accompanied at the same time by strengthening the capacities of the States (PFM and reporting) and accountability towards delegations. Assess PFM risks at the state level and work mitigation measures when opening up for delegation to the States as part of one plan, one budget and one report to strengthen the absorptive capacity.

- Develop and implement technical assistance guideline ensuring it is demand driven, coordinated and aligned, with reduced overhead cost.

*For Gavi*

- Future support should build on its strength of flexibility, using government systems of planning, budgeting, financial and procurement; may consider including the 'theory of change' as part of the future proposal development.
- Strengthen the efforts working with other partners to align their activities and work together. It may consider assisting the government to explore some sort of pooled mechanisms in the medium terms to reduce the transaction cost and achieve more value for money.
- Continue investing on the software part of HSS strengthening -planning and budgeting, M&E and information systems, leadership and management-to ensure that they are functioning well.
- Review its fund channelling mechanisms and take actions on the causes of delay to ensure timely completion of support.

*For Gavi and Government together*

- With the post MDG agenda moving towards universal health coverage and developing 'health in all policies', develop strategies to bring holistic approach to HSS that is aligned to country strategies and support the realization of sustainable development goals (SDGs).
- Undertake a midterm review of the second round of GAVI HSS support to explore the overall programming considers long term strategic thinking and transformation of health systems and whether it is on course to achieve its planned results.

## 1. Background, objectives and methodology of the support evaluation

### 1.1. Introduction

Sudan is the third largest country in Africa. Its strategic geographical location links Sub-Saharan Africa with the Arab world. After the referendum and resultant secession of South Sudan, Sudan was left with 15 states, and but has increased to the current 18 states since then. The current Sudan has 8 bordering countries where populations often move freely across them. According to the last census in 2008, the total resident population is 30.9 million. The World Bank's 2013 estimation of the population was around 37.9 million. Environmental factors (such as drought, flooding), poverty and conflict contribute to humanitarian emergencies, infectious disease outbreaks, malnutrition and communicable diseases. These factors affect access to care and delivery of health care services, especially for the hard to reach communities. The infant mortality rate in Sudan household survey 2010 was reported to be 57 per thousand live births. Combating these health problems in Sudan need a strong health system that addresses the context and different needs of the population.

The health system in Sudan is decentralized and is made up of three tiers: the FMOH, SMOHs and locality health teams. The hierarchy starts with the FMOH. The FMOH is responsible for the formulation of national policies, plans and strategies; setting national quality standards; health information and surveillance systems; mitigation of major or interstate disasters and epidemics; medicines policy and regulations; overall monitoring and evaluation, coordination, supervision, training and external relations. The second tier is the State's Ministry of Health (SMOH) (Republic of Sudan has 18 states). Its responsibilities include implementing policies, programming, developing and funding projects with detailed plans. SMOH's works in liaison with and support localities. The third tier is the locality level, which is mainly concerned with the implementation of national/state policies and service delivery, based on the primary health care approach.

Other partners in the health system include police and army health services and the National Health Insurance Fund (NHIF) Non-Governmental Organization (NGOs), and civil society organizations (CSOs). They all have been playing different significant roles in delivering health services, overseeing the development of health policies and strategies, generating evidence and monitoring implementation and service delivery especially in hard to reach areas.

Sudan has a 25-year strategy and the national health policies and sector strategies of 2007-2011. The current strategy, NHSSP II is from 2012-2016 and is aligned with this strategy, with an ultimate goal of Universal health coverage. The NHSSP II has adopted the six "building blocks" defined by the WHO of health systems namely: (i) service delivery, (ii) health workforce, (iii) health information systems, (iv) access to essential medicines, (v) financing, and (vi) leadership/governance with emphasis on the role of social determinants of health and achieving equity to analyse the situation of the health system and set its desired outcomes. Consequently, the strategic direction emphasizes strengthening PHC, strengthening referral care and ensuring social protection in an attempt to achieve the Millennium Development Goals (MDGs) which Sudan has adopted and signed in year 2000.

The governance of the health system is a function of the Federal MOH with oversight from a multi-sectoral National Health Sector Coordination Council (NHSCC). The health system in general suffers from a number of challenges: equitable distribution of health facilities, services and human resources and issues of verticality. Donors contribute to the financing of strengthening the health system with

the government; important role players are the MDTF, Global fund, Gavi and third parties through UN agencies.

For immunization, the cMYP plan is in line with the 25 strategic plan of the ministry of health, which has set clear outcomes regarding immunization. The major objectives for the EPI, are to achieve and sustain 95% coverage of the third dose of Pentavalent vaccine and 70% TT2+ nationally, achieve polio certification and maintain polio free status, and eliminate measles (cMYP 2012-2016). The Gavi support proposal for Health System Strengthening has been designed in alignment with those strategic objectives and to address those contextual health system issues.

Sudan carried out a thorough assessment of health systems before submitting a proposal for Gavi funding. The main challenges identified during this assessment and used as a rationale for HSS support 2008-2012 were:

- Weak organization capacity to drive decentralization: 50% of states and localities didn't have health sector administrative structures to lead and manage health service delivery. This was especially very poor at locality levels.
- Weak planning and budgeting process at all levels;
- Lack of evidence and capacity to generate such evidence to inform policy and decision making;
- Shortage of middle level HR and imbalance skill mixes in the system: Sudan was one of the countries categorized as having human resource for health crisis with less than 23 per 10,000 populations. This is in spite of the fact that at that time, the country had more than 30 medical schools producing HRH.
- Some States are disadvantaged in terms of providing PHC services in general and EPI services in particular due to the inadequate PHC infrastructure (buildings, equipment and human resources)

The Gavi HSS support started when the issue of addressing health system constraints became a national agenda.

## 1.2. Objectives of the Evaluation

The evaluation aims to assess whether the objectives and expected results (see annex) of HSS support were achieved, and determine if unplanned effects have occurred and why. It also aims to provide insight into why some interventions work and others do not and accordingly provide recommendations to improve implementation of the new HSS Grant, 2014-18 or potential reprogramming where appropriate.

The Specific objectives of the evaluation are:

- To determine whether core systems and capacities (organization and management; health planning and development, health financing; health management information system and monitoring and evaluation) have been strengthened/ built among the target states and localities.
- To determine whether systems for human resources for health have been developed and capacities strengthened for the production, deployment and retention of PHC workers among the targeted SMOH.
- To assess whether Gavi/HSS has contributed to the increase of EPI coverage among the target population.

- To assess whether Gavi/HSS has contributed to the increase of equitable coverage and access to quality PHC services for MCH in the four target states.

The Terms of references (TORs) for the evaluation clearly defined the scope of the assignment (see annex 8). It covers the design and implementation -including preparation and submission of annual reports- and results -output, outcome, impact- phases of the project under different themes.

## 1.3. Evaluation Methodology

### 1.3.1. Methodology

The team used the DAC-OECD evaluation criteria of efficiency, effectiveness, equity, and sustainability with the inclusion of additional design and implementation issues. The main evaluation questions, data collection methods and information sources used for evidence generation are outlined in table 1.1.

**Table 1.1: The Evaluation framework**

THEME	EVALUATION QUESTION	METHOD	DATA SOURCE
DESIGN & IMPLEMENTATION	(i) To what extent, and in what ways, did Sudan's HSS application demonstrate clear linkages with the overall sector strategies and HSS development priorities in general and to immunisation outcomes in particular?	- Desk review of results chain, including any available underlying Theory of Change - Plot and examine programme logic in terms of major process activities, outputs against sought outcomes - Interviews	Country HSS Application HSS M&E Framework Key Informants (e.g. Gavi Secretariat, IRC representative, MOH, WHO, UNICEF country level)
	(ii) To what extent were Civil Society Organisations (CSOs) actively involved in the design of the application?	- Document review - Interviews	Meeting Minutes (Proposal Development) Signed proposal statements (if applicable) Key Informants (e.g. CSO representatives, MOH)
	(iii) To what extent were the activities set out in the HSS application implemented as planned (quality, quantity, ways and means)? <ul style="list-style-type: none"> <li>• (a) To what extent, if at all, were planned activities reprogrammed? What process was followed for this reprogramming?</li> <li>• (b) To what extent did programme management appropriately adapt to challenges, changes in context and delays?</li> <li>• (c) To what extent were the contracted CSOs effective in delivering immunisations services?</li> <li>• (d) What are the lessons learnt during the implementation process? What worked well and why? What did not work well and why?</li> </ul>	- Desk review of documents - Interviews - Field visits (State / Locality Level)  <i>Note: Different data sources will be triangulated</i>	HSS programme documentation Country annual progress reports (including monitoring of performance against plan) IRC reports Gavi grant re-programming guidelines Key informants (e.g. EPI manager, health service workers, CSO implementers, UNICEF, WHO etc.)
	(iv) To what extent were activities, resources and results appropriately coordinated, monitored and reported by MOH to the Gavi Secretariat and Alliance partners?	- Benchmark quality of annual reports against Gavi reporting guidelines	Annual reports Gavi Guidelines – Annual Reporting

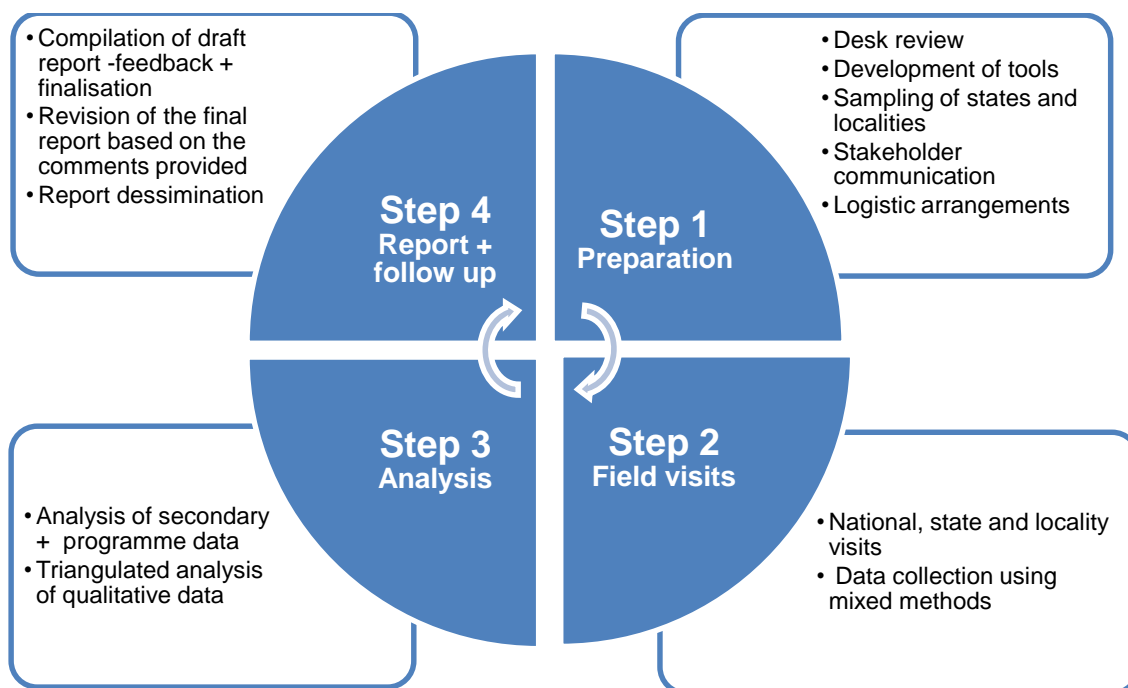
THEME	EVALUATION QUESTION	METHOD	DATA SOURCE
	(a) What were the challenges associated with monitoring and reporting of the HSS grant? (b) To what extent was the feedback received useful and led to appropriate actions?	- Documentary analysis (e.g. track example of questions /issues raised and follow up pathway). - Interviews	Key Informants (e.g. IRC representative, Gavi country representative, EPI Manager)
	(v) To what extent were the findings/recommendations from previous evaluations and assessments, including those commissioned by the Gavi Alliance, helpful and used to inform actions at the country level, including the preparation of Sudan's second round HSS application for Gavi?	- Document review and comparison - Interviews	Previous evaluations and assessments (Gavi HSS and Tracking study, immunisation coverage studies and other population based surveys – DHS etc.). Key informants
EFFICIENCY	(i) To what extent were the funds used efficiently and as planned?	- Review of financial data, including disbursement history	Gavi HSS programme financial data
	(ii) What contextual factors explain the utilisation of the funds received?	- Field visits - Interviews	Key informants – national and sub-national levels
	(iii) What could have been done to improve the efficiency?	- Interviews	Key informants – CSOs, MOH, Gavi Country Rep.
	(iv) To what extent did Sudan use Gavi Immunisation Services Support (ISS), CSO and HSS funds in a complementary and coherent manner?	- Comparative mapping of areas of resource allocation	Application and programme documentation for relevant funds.
EQUITY	1. To what extent the HSS support interventions are relevant and appropriate in limiting inequality in access and utilization of PHC services?	- Document review - Interviews	Proposal review and KIIs at state and locality level
	2. To what extent were objectives of equity achieved during the support years?	- Document review and key informant interview	Performance reports and state and locality level interviews
	3. What are the best practices and lessons learnt in planning, implementing and monitoring equity focused interventions	- Key informant interviews	KIIs at federal, state and locality levels
RESULTS (Effectiveness)	(i) To what extent did the programme achieve the objectives and targets as described in the HSS proposal?	- Review of programme log frame (end point versus baseline review of indicators)	M&E Log Frame Annual Country Progress Reports
	(ii) To what extent did the HSS programme contribute to observed trends in the following indicators: - Under-five child mortality? - DTP3 coverage? - Percentage of states and localities attaining at least 80% DPT3 coverage? - Other indicators selected by the country as part of its HSS grant?	- Contribution Analysis (including trend analyses)	Relevant population based data (DHS, other coverage surveys), HMIS etc.
	(iii) To what extent did the grant effectively address bottlenecks to immunisation identified in the original proposal and subsequent analyses?	- Investigate via case study approach - Document review - Interviews	HMIS data Annual sector reviews Health sector MTR Key informants – national and sub-national levels
	(iv) What added value did Gavi HSS support offer compared with other types of financing (both donors and domestic)?	- Review of gap analysis (drawing on available analyses) - Interviews	Health sector funding data Key informants (MOH, CSOs, donors and development partners)
	(v) To what extent were Gavi's HSS funds catalytic to other funding sources in the health sector?	- Qualitative 'stories' - Interviews	Key informants

THEME	EVALUATION QUESTION	METHOD	DATA SOURCE
	(vi) To what extent were Gavi's HSS funds complementary to other funding sources in the health sector?	- Document review - Interviews	Key informants
	(vii) What are the positive and negative unintended consequences of the HSS programme (if any)?	- Interviews	Key informants
SUSTAINABILITY	(i) How sustainable in financial and programmatic terms are the achievements of the HSS programme, at national, State and operational levels? For example: (a) To what extent has the training supported by the HSS programme been integrated into the country's routine health workforce training programmes? (b) To what extent has turnover of trained staff affected sustainability of the capacity building efforts made so far? What are the lessons learnt? (c) To what extent have the various types of investments (capital and recurrent) contributed to sustainability at the country level?	- Data / document review - Interviews	Training curricula review HMIS and HRH Statistics Health Sector Financial Reports Key Informants
LESSONS FOR THE FUTURE	(i) What are the major lessons learnt to improve future design, implementation and monitoring of HSS programmes? (a) What were the major strengths and weaknesses of this Gavi HSS grant? (b) To what extent do current HSS application guidelines address the main issues identified?	- Analytical review of evaluation evidence - Document review - Interviews	Current Gavi HSS application guidelines Key informants

The evaluation process had preparatory, field visits, analysis and report writing phases as presented in Figure 1.1.

**Figure 1.1: Four steps evaluation**





The evaluation team developed the inception report based on document review and a week’s visit to Sudan. The HSS evaluation Steering Committee reviewed the inception report and approved the methodology and tools after providing constructive comments. During evaluation field visits, the team collected additional data, verified its secondary data and captured the perspectives of a range of stakeholders in order to generate comprehensive and reliable responses to the evaluation questions about the achievements, challenges, best practices and lessons learnt in implementation of Gavi HSS support in Sudan.

### 1.3.2. Sampling of States

The Evaluation team proposed to visit 4 states, selected purposefully, one strong and one weak in each of the two components of the HSS support to learn factors behind success or lack of it. The HSS steering committee selected the following four states as a sample for the evaluation (see table 1.2).

Table 1.2 Selected sample states

Components	Sample States
Component 1	River Nile and Blue Nile
Component 2	Gadaref and Sennar

Data Collection Methods:

Mixed Methods (Quantitative and qualitative data) were used:

- Documents, records and secondary data were reviewed (see references for the documents reviewed)
- Key informant and stakeholder interviews with FMOH, DPs, civil society organizations, Gavi Secretariat, former project focal person for Gavi HSS support and state and locality HSS managers were carried out (see Annex 7 for list of interviews). The team also interviewed

Triangulation of the information collected from the field visits and different KII with secondary sources were carried out to ensure the reliability and validity of findings. The evaluation data collection tools are presented from annex 1-6.

### 1.3.3. Limitations of the evaluation

Although the evaluation team tried to generate and use as much evidence as it can using its proposed methodology, the evaluation has also some limitation which include:

- Achievements and constraints were largely generated from the government's approved documents and APRs. The findings of this evaluation are therefore as credible and good as the quality and evidence of the information systems and surveys carried out in the country.
- There was no attempt to generate primary data. Given that the evaluation team has incomplete information on the contribution of the government and other partners, it was not possible to provide the percentage of contribution of Gavi for each interventions.
- The delay of the evaluation from 2013 to 2015 and the high turnover of staff at all levels of the system may have resulted in gaps of information and recall bias, which may negatively affect the findings.
- The HSS support is one of the different sources of funding for strengthening health systems in Sudan. As a result, the evaluation is not able to attribute the changes to the Sudanese health system due to the HSS support. It only shows its contribution to the changes as part of the overall funding of the system.

## 2. The HSS Application and Review Process

The initiation of the proposal writing was driven by the need to strengthen the initial gains made through MDTF support. The FMOH was looking for support to address the HSS constraints. This is evidenced by its two proposals submitted to Gavi in about a year's time, the second of which was successful. The first one was developed by EPI and focused on strengthening the EPI program, and its failure to pass the IRC appraisal contributed to the improvement of the process and content of the second attempt.

The proposal development was guided by the HSCC with membership from the government, CSO and DPs. The HSCC established a proposal drafting committee whose members were composed of the departments within FMOH and partners. The drafting committee conceptualized and crafted the proposal. The draft proposal was enriched through consultation meetings with partners. The HSCC endorsed and submitted the proposal for IRC review.

The IRC reviewed the HSS proposal and clearly valued the inclusiveness of process, its contextualization of interventions including conflict, alignment to NHSSP and cMYP, its reflection of different sources of funding and clarity about intervention states. The IRC also highlighted some of the weaknesses of the proposal including its ambitiousness given the context of Sudan, lack of criteria for selecting AHS tuition supported candidates, and inadequate description of motivation and retention mechanisms (see Table 2.1 for IRC comments).

**Table 2.1: Proposal Review and Dialogue with Gavi**

IRC Comments	
Strengths	Weaknesses
Broader, an inclusive process with in-country partners providing technical assistance	Proposal activities appear rather ambitious against the background of the country but considering the level of TA planned may be insignificant
Cognizant of the conflict in the Darfur states, the proposal incorporates the needs of the conflict states	No clear mention of any specific guidance or selecting process to be instituted that will promote equity and transparency especially for the fragile regions when tuition free students are selected
Goal and objectives of the proposal are clearly well linked to the country national health strategic plan, the JAM and the cMYP	The process for implementing the planned incentives for staff and free/subsidized services were not highlighted
An excellent analysis of the available resources from donor and their situation, contributions, and focal areas in relation to the national health strategy plan and thus succinctly identifying the funding gap and the additionality of the Gavi fund to the process	The activity/implementation table does not match the budget table
Have clear geographic scope and coverage of the Gavi-supported HSS activities based on selected parameters	Some activities still appear more like strategies and are too broad to be monitored e.g. Activities under Objective 2.1.
Presents an explicit procurement mechanism and the only one that has recognized corruption as an inherent problem and has mentioned the use of its guidelines and processes to ensure transparency and accountability	The indicator table is not clear on how funds and specific activities in the Darfur region will be monitored
Reasonable overall management support =3.9%	

The main success factor for the development of the proposal that contributed to the favourable IRC rating was its inclusiveness. As it was the second attempt<sup>1</sup>, DPs that were active in Sudan at that time- WB, WHO and UNICEF-were involved during its design in drafting and reviewing. Two CSOs –Plan Sudan and Sudanese Red Crescent- were also active in the drafting process. However, it was noted that States were not involved, due to limited time available for proposal writing.

DPs continued to be engaged in the implementation of the support. The WHO was funded to provide technical assistance for system's strengthening. UNICEF was contacted to procure long lasting nets. However, CSOs were not directly funded.

Government priorities-NHSSP I- drove the design of the program. There is an awareness currently that the NHSSP 2007-2011 was not clear enough about HSS in general and the development of integrated systems in particular. This caused changes in some strategies during implementation. As a result, Gavi HSS support was not instrumental enough to bring strategic shifts on integration of programs in the first round of support.

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<sup>1</sup> The first attempt was driven by EPI division-with ISS focus, which was not inclusive enough and Sudan was not aware of the process of development of the proposal. The lessons learned informed the process and the content of the HSS proposal of 2008-12.

### 3. Implementation of Gavi principles and values

The Gavi HSS implementation was, and is coordinated by the Project management unit within the General Directorate of Planning and International Relations. The Government mainly implemented the HSS support through the EPI, Planning, M&E, HRH, Development and States support, Health Economics directorates of the FMOH as well as the different agencies like NHIF, and training institutions within the HRH directorate (PHI, AHS, CPD). Some funding was also provided to States Ministries of Health in Gadaref, Sennar, White Nile and North Kordofan.

Gavi's values in the implementation of its HSS support revolves around country ownership, alignment and harmonization, additionality and catalytic effect, predictability and flexibility of the fund. The following sections highlight how far those principles and values were achieved.

#### 3.1. Country owned and driven

Gavi HSS proposal 2008-2012 is found to be country owned and driven for the following main reasons:

- (i) The Health Sector Coordination Committee (HSCC)<sup>2</sup> oversaw and led the overall development and endorsement of the proposal;
- (ii) The technical working groups guided the drafting committee;
- (iii) A drafting committee composed from different directors and programs in the FMOH identified the main barriers of health systems strengthening and the needed interventions; and
- (iv) The overall implementation and management of the support uses government systems.

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<sup>2</sup> Health Systems Coordination Committee was responsible to: oversee and steer the process for the development of Gavi/HSS proposal; guide the TWG and Drafting Committee (DC) in identifying health system barriers to EPI, and for defining the objectives of the proposal; review the set of activities proposed and validate their importance in strengthening the health systems in support of improving EPI coverage; ensure that the proposal is not only technically sound but also dwells on the mechanisms for its efficient management and sustainability; and review/authenticate budget and other details on the financial implications of the proposal. **Technical Working Group** was established to: discuss the barriers hindering the efficiency and effectiveness of the EPI and tease out recommendations for HSCC and guidance of Drafting Committee; define objectives for Gavi/HSS and guide the DC in defining component interventions; assist and advise Drafting Committee on costing and budgeting of Gavi/HSS proposal; review periodically the work done by the DC and make suggestions for improvement; ensure a technically sound proposal with adequate mechanisms for efficient management of resources from the window as well as the proposed interventions are sustainable; and recommend to HSCC for the approval of the Gavi/HSS proposal for submission. **Drafting Committee** comprising core technical team was set up to: gather input from key stakeholders interested in improving health system and EPI; bring together the ideas and guidance of the TWG (members of DC are also on TWG); draw details of the proposal including identification of component activities and tasks for the variety of interventions suggested by the TWG; develop budgetary details and cost the activities and tasks; draft different components of Gavi/HSS proposal for exchange amongst its members; share the draft proposal with TWG and seek its comments; and incorporate the comments received from stakeholders; and finalise the proposal readiness for submission to the Gavi/HSS secretariat.

## 3.2. Alignment with National Plans and Systems and Harmonization

The Gavi HSS priorities were in general aligned with the then national development plan and national health HSS priorities as stipulated in the NHSSP 2007-2011. The HSS support was built from the experience of the health system development effort introduced by the Multi Donor Trust Fund (MTDF) managed by the World Bank. There was clear resource identification and synergy between the MTDF, Gavi HSS support and government contribution. During implementation, alignment of Gavi and the Global Fund HSS supports were managed under one Programme Implementation Unit to enhance the alignment and synergy of these funds. All the support interventions contribute to the realization of sector and country level set targets.

While in principle Gavi HSS support is using the health sector's planning and budgeting systems, Sudan is yet to fully establish an annual "one plan" and "one budget" system for the health sector. There is divergence between the bi-annual planning systems in place and the annual government allocation process. Gavi HSS support is the first support to use national systems for planning, monitoring, finance and procurement. All the stakeholders interviewed in Sudan view this as one of the major strengths of the Gavi HSS support as compared to other forms of support being implemented in the country.

### Box 1: Funding for Results

"The main strength of Gavi HSS support was its result based nature of its funding. While all other funds were following up each and every activity with details of audits, in the Gavi funding, I was asked to produce middle level HR and get funded for the production I delivered in the AHS. It has less transaction cost for me as a manager."

Former Director of AHS

## 3.3. Additionality and Catalytic Effect

The major contributions of Gavi HSS support to Sudan have been its catalytic effect in influencing strategy and priority changes. It contributed to generating evidence that convinced decision makers to rethink the prioritization and allocation of resources. The major evidences generated through different studies were:

- Services and human resources are inequitably distributed across and within states;
- Only 24% of health facilities were providing the full package of primary health care in Sudan;
- The main source of health sector funding was out-of-pocket spending;
- Resource allocation was biased towards secondary and tertiary care-as much as 80% of resourcing going to these services; and
- Government financing of health care is not increasing as per the Abuja Declaration and/or to meet the growing needs of the population.

As part of the NHSSP II, the government has made PHC its priority and is working to enhance equity through the development and implementation of PHC expansion project. As a result, there is now shift from tertiary and secondary care to primary health care in financing, where efforts are being made to enhance both vertical (completeness of PHC packages at different levels) and horizontal (among states and localities) equity in access to care.

The government is investing additional resources on the PHC expansion project with approximately \$ 30 million a year for 5 years, which is the biggest government support to PHC over the past 20 years. Allocation increased from 14 million to 150 million SDGs between 2012-2015(see table 2.2). Its disbursement rate for PHC fund increased from about 30 % in 2013 to 100 % in the 2014.

The national government has also started in 2014 to provide free drugs to under-five, with an allocation of 115 million SDGs. The national government requested States to also allocate as much as 25% counterpart funding for this expansion plan. However, not all states are committed as much as the national government, as evidenced by varying levels of states performance. Some have invested very well others are yet to meaningfully contribute.

**Table 2.2: Allocation of Funds to PHC Expansion Plan by national government (in SDGs)**

Year	Allocation in Million SDGs
2012	14
2013	14
2014	83
2015	150

Source: PHC expansion report

On the other hand, with the support of Gavi, the additionality to government support is not ensured for all programmes. For instance, to AHS, the HSS support was not additional, as the government reduced its support when new funding was sourced to the Academy. On the positive side, Gavi's HSS support is reported to be instrumental in mobilization of additional resources from other development partners. For instance, AHS obtained additional funding from the Global Fund, WHO, UNFPA and some bilateral like the Turkish.

Another area where Gavi HSS support is seen as catalytic is in its use of the government system for Health system strengthening, which is currently being used as evidence to encourage other development partners (e.g. the Global Fund) to start using the same mechanism. FMOH and the GF are working towards making the FMOH the Principal Recipient for the GF HSS funding and Gavi support has been used as an evidence to lift GFATM's Additional Safeguard Policy.

### 3.4. Predictability and flexibility of funding

One of the major strengths of the Gavi HSS support mentioned by all stakeholders is the flexibility in the management of the program. All the interviews stated that the 15% reprogramming opportunity has increased the room for meaningful contribution, as the priorities of HSS changes with new challenges and opportunities. Supporting the NHSSP II development and its JANS for instance was not anticipated in the proposal. There has been a lot of reprioritization either in terms of timing of implementation or to new initiatives and priorities made. The Undersecretary of the FMOH stated that 'Gavi should not only be flexible and use government systems for itself but should help us advocate for other partners to follow as it has the evidence that it is working effectively in the context of Sudan'.

**Box 2: Gavi the 'Kind Man'**  
*"In Sudan, due to the sanction imposed, budget and sector budget support using country systems is not practiced. All the DP programs are managed using a project approach. Because Gavi's system includes flexibility and has room for programming within the county, it is nick named as the 'kind man' Civil work department (which have to work with different rules and procedures of donors)*

## 4. Achievements by Gavi HSS support components

### 4.1. Overall achievement

Gavi HSS has contributed, together mainly with Global Fund and GoS, to major shift in the HSS in Sudan. Some activities have brought significant improvements to the functioning and operation of the Sudan's health systems, some others started recently but their effect is expected to be visible in the near future.

Gavi HSS support:

- Generated evidence that helped the government to focus on PHC, achieving equity and to redirect the focus and strategic nature of the NHSSP 2012-16 to move towards integrated strengthening of the health care system;
- Acted as a catalyst for both Global Fund and GoS to finance HSS in manner that was unprecedented before;
- Helped increase the production of the middle level human resources as well as the institutionalization of the HR and planning directorates in all the 15 states planned in the proposal; however, for the new three states established in 2014, two are yet to put in place HR directorates;
- Assisted the development of the primary health care package with its norms and standards;
- PHC mapping assisted the development and implementation of the universal coverage investment plan;
- Contributed to the establishment of health observatory, together with Global Fund;
- Improved access to services through the rehabilitation of the health facilities in general and the cold chain equipment in particular; and
- Fostered and strengthened institutional arrangement at all levels, building capacities in leadership and management along with other continuing education training programs.

In general, it is the view of the evaluation team and all stakeholders that the contribution of Gavi HSS support was instrumental to bring in systems thinking to health system strengthening in Sudan.

Of the eight HSS outcomes, Gavi contributed with the GoS and the Global Fund towards the achievement of four targets. For those not met the performance of two was satisfactory, but due to changes in course of implementation, the gains were eroded. There was investment and effort towards building planning and M&E capacities but the change of course required a new way of doing the designed systems and the proposed actions were not implemented. In contrast, three PHC targets were not met. Some of the resources for target areas were shifted to support other emerging priorities. See table 4.1.



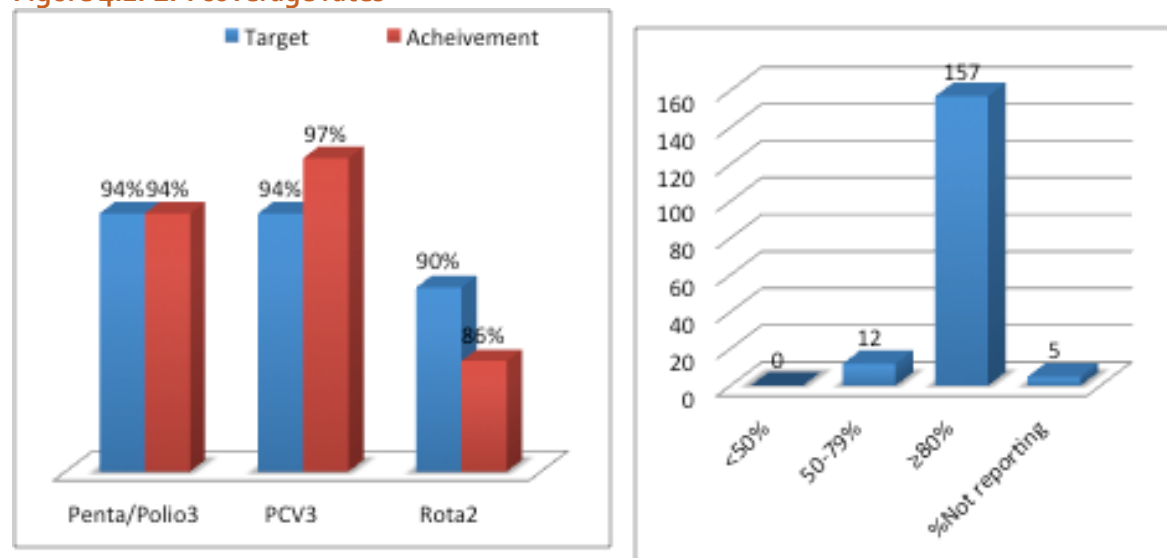
**Table 4.1: status of achievement of HSS outcome targets**

Indicator	Baseline		Target by the end of support		Achievements 2013/2014	Grading
	Value	Source	Value	Source		
% SMOH with functioning organizational structure as per standards	0	Admin. reports	100%	Health facility Mapping, 2011-2012	100%	
% SMOH with functional Planning Directorates	0	Admin. Reports	100%	–	100% was achieved in 2010.	
% States planning directorates using standard planning format	0	Admin. reports	100%	Assessment of Planning System	The change in the planning formats used has reduced the gains made before. Currently FMOH and SMOHs are using annual and bi-annum plan formats	
% of States functioning directorates of human resource	0	Admin.	90%	–	With the exception of Two states, all SMOHs have a functioning HRH Directorate.	
% health facilities (RH, RHC, UHC, Dispensary/BHU) providing essential PHC package	0.35	Health facility survey	50%	FMOH performance report 2012-2015,	60% has been achieved by 2014.	
% PHC workers who received integrated in-service training during last 1-year	0	Health facility survey	50%	FMOH performance report 2012-2015 Report on Integrated Training for PHC Workers	980 medical assistants 1071 vaccinator and nutritionists has been achieved by 2014	
Health services utilization rate	< 1 per person per year	Annual statistical report – for only public sector	> 1 per person per year	S H Health Utilization and expenditure Survey, 2009	.33 per capita in 2012 <sup>3</sup>	
% PHC facilities reported timely for health information	0.33	Annual statistical report	60%	Annual statistical report, 2011	0.32	

Although some of the targets related to the PHC as shown above were not met, the targets set for the immunization service were fully met. According to the proposal, the overall coverage rates were planned to reach 90% and each locality expected to achieve more than 80% coverage. By 2014 the national coverage was 95% and 90% (157 of 174) of localities have reached at least 80 per cent coverage (see Figure 4.1)

<sup>3</sup> The FMOH reflected that utilization rate is under reported and hence they commented that this figure is considered an outdated under estimate which may not be reflecting the true rate of health services utilization

Figure 4.1: EPI coverage rates



Source: FHMO, PHC directorate, 2014 report

The achievements of each of the health system components and their respective areas for improvement are presented below.

## 4.2. Component 1: Health systems strengthening component

### 4.2.1. Organization and management for decentralized systems

Execution of management capacity building component of Gavi HSS was commenced in 2009. The WHO technical assistance carried out the following activities:

- Assessment of health system capacity at state and locality level using the WHO framework for leadership and management for better health;
- Development of protocols i.e. membership, organizational affiliation, and definition of roles and responsibilities of health management teams at state and locality levels.
- Design of training materials, informed by the findings of the assessment, for training the state and locality health management teams.
- First round of training in a local institute (Public Health Institute), which can further assist in building institutional capacity to conduct similar courses.

The HSS support strengthened the capacity of decentralized local health management teams by establishing locality health management teams and strengthening SMOH structures. There is good achievement in this regard. The SMOH PHC, planning and human resource directorates are institutionalised in most states. There are functional locality health management team in place, which is a breakthrough to the system, although this varies from state to state. In Blue Nile for instance the structures of the three MTDF supported pilots were strengthened while the rest were not strengthened. In Gadaref on the other hand, although Gavi support only two localities, after seeing its impact, the SMOH and its partners scaled this up to all localities. This clearly shows that when there is commitment, there is a room to mobilize resources to strengthen systems even within the States.

**Table 4.2: Achievements in the organization and management**

Interventions and targets	Achievement by the end for the HSS support	Achievement %
15 northern states and 20 localities will have active health management teams; provided orientation on protocols, decision-making, teamwork, and conducting effective meetings.	All SMOHs have established active health management teams. Training was provided	100%
Training needs assessment will have been conducted and by 2011 senior and mid-level health managers in all 15 northern states and 20 localities/districts will have attended short courses and on-job capacity building on the above mentioned subjects.	Training needs assessment conducted and leadership and management training conducted. In total 367 managers at different levels were trained (from 84 in Khartoum State to 4 in Red Sea State). In Gezira for instance in the two localities 3 people were trained. The leadership program was evaluated and most of the beneficiaries of the training and stakeholders found it very useful	The total number of senior and mid-level managers was not provided. thus, with the absence of the denominator we could not measure the percentage.
The (SMOH) in the 11 states strengthened by providing them PCs (2), faxes (1), printers (2), photocopiers (1), and vehicle (2) in addition to 20 localities.	11 states and 20 localities were provided with the support, which have facilitated their working conditions	100%
15 Northern states (along with all their localities defined/ adapted of job descriptions, service package for different levels of care/facilities, staffing and resource requirements.	The job descriptions were developed and adopted. They are being updated since then. In some States, it has become one of the indicators for assessing the localities performance (see below)	100%
Training will have been provided to all admin and financial staff of the 11 states in budgeting, financial and resources management		

Gavi support for capacity strengthening focused on the three levels of capacity development: individual, organizational, and the enabling environment. The Gavi support trained and capacitated 13 state management teams through the leadership and management training. The evaluation of this training shows that the skills and attitudes of the trainees improved and they are contributing to better management. The analysis of the performance reports of Gavi and KIs confirm that the major elements of capacity building are captured in the design and implementation process.

**Table 4.3: Elements of capacity building and the Gavi support**

	Elements of capacity building	Support provided through Gavi Support
1	Tools	Guidelines, manuals are developed and shared with the states and localities
2	Skills	Together with Global Fund 107 locality management teams were trained
3	Staff and infrastructure	The necessary staff and infrastructure (vehicles, computers) were procured and distributed.
4	Structures, systems and roles	New organizational arrangements at federal, state and locality levels are put in place with clear TORs and role differentiations, which have been updated to fit in the move towards integration.

The KIIs and evidence generated from the field visits show that the structures are in place and are evolving due to changes in the federal guidelines. However, not all structures are filled by the necessary human resources, especially at locality levels. Concerted effort was made to train the state and locality health teams on leadership and management. Interviews with beneficiaries of training stated it has improved their skills in planning, organizing the structures, and managing resources. The training in the visited localities benefited only two or three members of the locality health management teams and it is reported that some of the localities do not have functional health management teams mostly because there is no structures and staff. The impact of the trainings done to strengthen structures and service delivery is not visible nor documented. The State Minister of Health in Gadaref stated that training alone has not brought the needed change in reaching the desired goal-service delivery- and it should be complemented by the necessary system changes in the processes and tools. The KIIs also reflected that the capacity building needs to be based on a thorough assessment of the system's gaps. Successful management and leadership trainings in Africa that deliver results do not focus on individual skills alone but challenges teams (as management teams) to define a measurable result, to look at obstacles and root causes and determine the priority actions needed to achieve desired results in the states and localities. Future leadership and capacity building interventions may benefit by shifting the approach from developing individual skills to teamwork-sometimes referred to as "the challenge model". Capacity development should focus at strengthening the decentralized system through commitment, investment and putting in the right processes and procedures. The priority should be given to locality HSS capacity building.

**There is no assessment done on the impact of capacity development efforts that were carried out in Sudan by both Gavi and the Global Fund support. It is therefore necessary to consider such an assessment to ensure that investments made on interventions make an impact.**

A recurring theme of concern was that the investment made in building the capacity of leadership and management is being eroded through migration. The country should consider a task shifting strategy, where the government's investment focuses more on middle level human resources whose curriculum should be geared towards providing health care services at primary health care level. It may be necessary to differentiate and have a mix of strategies on the production of the human resources; one suited for the Gulf and other States and another one that provides services contextual to Sudan. For instance, WHO SEARO report recommended interventions to attract and retain health professionals in rural areas by; (i) tailoring education/curricula to the rural needs and issues (ii) enrolling more students from rural areas, (iii) establishing health related schools in rural areas, (iv) more rotations in rural areas and (v) targeting CPD for rural workers. While the curriculum for production to the Middle East may continue as what is being provided today, Sudan may benefit from task shifting of some of the professional cadres that can provide services in the rural areas. A good example is Ethiopia, where due to the inadequate number of the GPs to lead and manage the HCs, it has introduced a cadre called health officers that have a lesser probability of migrating outside the country's health system.

## 4.2.2. Health Planning

As part of Gavi support, the strengths and weaknesses of the planning systems were assessed and a training program was developed to capacitate the planning directorates of states and localities. Gavi HSS supported the development of the National Health Sector Strategic Plan 2012 – 2016 and it's JANS 2012. The major achievements of the support are presented in table 4.4.

**Table 4.4: Achievements in the building the planning capacity**

Interventions and targets	Achievement by the end for the HSS support
The planning software installed and staff trained on its use in the Directorates of health planning in all 15 northern states.	There is a standard planning format and an updated planning manual being used at the federal and state levels since 2013. Software and manual were developed but were no longer useful due to changes in the format for a 'one plan'.
Copies of the planning and instructional manual will be provided	Again the developed instructional manual was no longer relevant but there are new planning guidelines being used.
A short course/on-job capacity building Programme (2-3 weeks duration) on planning of health system recovery and development will have been established in a local university/institute	The Egyptian Government has granted comprehensive planning software to The Federal Ministry of Health. This has been customized and adopted to the health system in Sudan. Training of more than 100 participants from the Federal Ministry of Health on the software has been conducted.
Group of 3-6 experts (at national level) trained to act as trainers; At least two staff from 15 Directorates of Health Planning in Northern states and one staff from each of the 20 localities trained.	
The Directorate of Health Planning in the 11 states strengthened by providing them with PCs (1), faxes (1), printers (1), photocopiers (1), and vehicle (1).	Support was provided to the states.

The knowledge and skills of the states and localities in planning and undertaking supportive supervision has improved. This in turn helped develop the country's strategic vision and targets as part of the NHSSP II. The translation of the NHSSP objectives into operational plans is not yet achieved. Though Sixteen out of the eighteen states have up-to-date annual operational plans only in four states—Darfur East, Northern, Khartoum and Sennar—the plan is accompanied with estimated budgets. Even in these four States plans are resource constrained (available funding); but are rather wish lists. According to the SMOHs, the resources planned from government treasury do not reach the states: for example, the support of free medicine now changed to support the central medical supplies which affected some supplies in hospitals. The underlying reason for change according to the FMOH is necessitated by the new MOF regulations aimed at moving towards pooled procurement to enhance efficiency and effectiveness of the use government resources. Each state is expected to receive its medicines and supplies demands from centrally procured commodities. The only source of funding from the central treasury currently reaching the states is the one planned for universal coverage.

Only 65 localities had some kind of operational plan. Of these, only 19 (which are all of Gadaref state's 12 local areas & all of Khartoum state's 7 local areas) had up-to-date and costed plans (Yohannes Kinfu 2012). The shift towards a resource constrained 'one plan' based on mapped available resources and not costing is yet to be realized. The mechanism of involving communities in the development of this plan at facility and community levels is another missing link in the planning process.

Gavi support has been used to organize the CSOs and strengthen their capacities. A network for NGOs working in the health sector was established and two training workshops have been conducted. This has created better working arrangements between FMOH and CSOs. The FMOH ensures that the

CSO coordination forum are actively involved in policy making, strategy formulation and in contributing towards one plan, one budget and one report. However, the CSO/NGO coordination forum still does not have a secretariat (with coordinator, office and running cost) to bring CSOS/NGOs to the table. The committee is doing its business on ad-hoc basis in addition to their regular individual CSO functions. The coordination structure exists only at the federal level and not at state levels. Therefore, there is a need to look at the capacities of coordination structures at both the federal and state levels and invest more than what is being done to align and harmonize CSO/NGOs members' contributions with the government plans and strategies.

### 4.2.3. Equitable and Sustainable financing

The Gavi HSS support was instrumental in undertaking the household expenditure and utilization surveys that provided input for the development of the NHA. The HH survey documented that 70% of the total health spending in the country is originated from households, which has a negative effect on health service utilization. Major studies carried out through the support were:

- National health accounts
- Household health services utilization
- In depth review of the national health insurance fund
- Development of Comprehensive PHC package
- Estimating the cost of the PHC package
- KAP study of household health behaviour

Gavi support also assisted in the development of the NHA, which estimated the levels and sources of health financing and the inequity in allocation and utilization of health resources around the country. It has also contributed in generating the necessary evidence that informed the development of the PHC package and its expansion plan as well as the national health sector strategy, 2012-16. Nevertheless, the framing of the national policy for sustainable health financing is delayed because the MOH likes to use a WHO's tool called OASIS for Organizational Assessment for Improving and Strengthening Health Financing. The policy is now being finalized with a support from WB and WHO. In River Nile State is the Ministry of Finance allows the Ministry of Health to retain and use its revenues for their priorities. This is one of the best practices that provided flexibility and support to priority health services.

There was a delay in conducting some of those activities due to lack of availability of consultants; underestimation of cost and duration of activities (hence the need to look for additional funding); challenges of accessing funding from the two sources (the MTFD and Gavi HSS) at the same time when an activity is jointly funded (WHO report).

#### Table 4.5 main achievements in equitable financing

Interventions and targets	Achievement by the end for the HSS support
With Gavi/HSS support, household expenditure and health services utilization survey conducted in 11 northern states and	Fully implemented and informed the development of NHSSP II
Equitable and sustainable health financing policies developed	The NHA, PER were carried out and the evidence assisted in developing the NHSSP II and the PHC expansion plan for equity
Train three senior staff in health economics/financing at Master/Diploma level to build the capacity of HED to undertake effectively health-financing functions.	FMOH opted for a diploma program instead of a master program.
11 Northern states (excluding MDTF states) will have pro-poor, comprehensive and sustainable health financing policy and health financing management.	Delayed but The policy is now being finalized with a support from WB and WHO

Gavi support clearly provided evidence on what worked and what did not in health financing, but its influence development of equitable and sustainable financing is limited to increased commitment of the government to enhance the PHC expansion. The HSS proposal itself did not anticipate a follow on intervention plan to develop strategies and support implementation of health financing. As a result, major health financing indicators remains below international benchmarks, without significant change over the years (see table 4.6). Therefore, there is a need to support the design, piloting and scaling up of community based health financing for the informal sector as a road map to universal access in Sudan.

Table 4.6: Health finance Trends in Sudan

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Health expenditure as % of GDP	4.1	4.9	6.1	7.3	7.4	6.5	6.5	6.7	6.5
Government Expenditure on Health as % of total government expenditure	5.4	6.9	8	10.4	11.2	11	11	11.5	11.4
Per capital health expenditure (\$)	34	54	85	118	113	120	121		115
Per capita health expenditure (in PPP \$)	130	176	242	297	304	272	263	241	221
Per capita government Expenditure (\$)	12	18	28	39	35	39	38	25	24

Source: WHO projections

#### 4.2.4. Health Information and M&E

The development of the NHSSP II and the new shift towards primary health care manifested in re-designing and strengthening the M&E and information system. Sudan has an HIS strategic plan developed with the participation of key stakeholders. Fourteen of the eighteen states (except Darfur Central, Darfur South and Sennar) also have an HIS plan developed through the same process. Eleven states established a functioning inter-agency body to guide the implementation of these plans (Yohannes Kiflu). In terms of improving completeness and timeliness of information, evidence from states indicates that health information is yet to show progress. The majority of cadre managing data at locality levels are least qualified to undertake basic data collection and analysis, the better qualified are often taken by the programs; and the system continues to be paper-based.

There is a move towards an integrated health information system. The tools and guidelines on HIS were developed and are being printed. DHIS II is planned to be installed initially in 8 states, and all 18 states are expected to have the DHIS by the end of 2015. The DHIS being scaled up in the country has been used in neighbouring countries and was found successful (Kenya and Rwanda). The necessary conditions for a successful rollout are the availability of internet connections and registry officers. According to the KIIs at federal level, localities meet the conditions for the rollout process. However, KIIs at the state level mentioned that there are shortages of statisticians at PHC levels. The preparatory work is being done to unleash DHIS. Integrated registers were developed for the facility which will be the basis for the electronic system.

#### Box 4.1: State Level Leadership and Functioning M&E in Gadaref

*The Gadaref State has a functional M&E system. At the SMOH level, there are three sector supportive supervision providers who visit each locality every quarter, with one sector responsible for analysing the findings, submitting to the decision makers and providing feedback.*

*The Governor of the state established the ‘commissioners’ council for health, and meets all commissioners every month to monitor the functionality of the PHC structures. They have defined seven characteristics of the functional locality structures and grade commissioners based on localities health system strength (see the table within this box). This has helped to increase the commitment of the localities for strengthening the health sector. If supported with a good and resource based target of PHC services, this can easily be transformed into a forum where health service results can be discussed at that level. The FMOH need to learn and scale up this best practice in other States.*

Locality	Structure	Endorsed plan	Supervisory plan	Allocated budget	Car	Premise	Job description	%
Gadarif	20	20	15	15	10	10	10	100%
East Galabat	20	20	15	15	10	5	10	95%
Central Gadarif	20	20	15	15	10	10	0	90%
AlFaw	20	20	15	15	10	10	0	90%
West Galabat	20	20	15	15	10	0	0	80%
AlFashqa	20	20	15	15	10	0	0	70%
Basanda	0	20	15	15	10	5	0	65%
Alrahad	20	0	15	15	10	0	0	60%
Glaa El Nahal	0	20	0	15	10	15	0	60%
AlButana	0	20	0	15	10	5	0	50%
Almufaza	0	0	0	15	10	5	0	30%
AlGaresha	0	0	0	15	10	0	0	25%
Total								68%



**Table 4.7: Achievements in organization and management**

Interventions and targets	Achievement by the end for the HSS support	Achievement %
A community based health information system designed	This is developed and piloted in Gadaref state and is serving its purpose. But not scaled up due to the change in the design and strategy for HMIS.	8.3%
Community based health information system implemented in 2 localities in each of the 12 states (excluding the three Darfur states).		
A health system observatory developed by end of 2011.	Established and functional. <a href="http://www.sho.gov.sd">www.sho.gov.sd</a>	100%
Mechanisms for regular updating Health system observatory in place	The observatory is not being updated using routine information system. It requires some additional work and support, which is currently is being explored	0%
National and State level comprehensive monitoring and evaluation system for health system performance designed;	M&E framework in place; design for integrated HIS system completed. DHIS will be launched in eight states	100%
National and State level comprehensive monitoring and evaluation system and tested and installed in all 15 Northern states.	Supportive monitoring processes and review meetings are taking place. Basing it on a sound plan and setting accountability mechanisms need strengthening.	-

According to a recent assessment, 10 states health information centres (HICs) have 2 to 4 computers, another 5 states have more. Internet is available in HICs of only 5 states, of which only 2 have internet also at the locality level. Other ICT services e.g. fax, printer and photocopier, are unavailable in many states and most of the localities with exception of Khartoum state. The data quality in terms of completeness, timeliness and accuracy remains an issue. Thus, considerable efforts in designing and implementing an integrated Health Management Information System (DHIS) is required. A plan to reform the health information system has been tested in two states and will be rolled out to all states. Producers and users of information need to be brought into one platform with human resource capacity built to generate, process, analyse, disseminate and use information.

Unless the planning and M&E processes are strengthened, the culture of using information at lower levels will not be improved. This can be facilitated if there are strong processes and procedures to review and monitor the performance at different levels using agreed annual plan targets. There are mixed findings about the performance of coordinating structures at the state level. In Sennar for instance a health coordination council has been established 2010 chaired by the state and the vice chair is the health minister; the council includes representatives of all partners; yet this council has not met even for a single time since its establishment. On the other hand, the Gadaref coordination committee is functioning well (see 4.1). Therefore, there is a need to replicate best practices to other States. Strengthening coordination between federal and state level ministers can be a key factor for success if regular review meetings based on clear accountability mechanisms take place.

## 4.2.5. Human Resources

The review of the NHSSP II and the HRH strategic plan clearly shows existence of inequitable distribution among and within the states. The distribution of HRH is currently at 30% in rural & 70% in urban areas. In addition, the mix of the health workforce is biased towards physicians and specialists when compared with allied health personnel. The major interventions planned in HRH area focused on the following areas:

- Functionality of AHS through rehabilitation and provision of audio-visual equipment
- Provision of tuition fees for students
- Strengthening directorates of human resources at the state levels
- Strengthening the capacities of trainers to produce multi-purpose allied human resources.

**Table 4.8 Achievements Human resource management**

Interventions and targets	Achievement by the end for the HSS support
One Academy of Health Sciences (Sennar) rehabilitated	Sennar/ Nyala AHSs rehabilitated.
The four selected states (White Nile, North Kordafan, Sennar and Gadaref) provided audio-visual equipment, furniture, and computers for skill lab and books for library.	
The Directorate of Health Human Resource in the 11 states (except the MDTF-N supported states) provided with PCs (1), faxes (1), printers (1), photocopiers (1)	Of the 18 SMOHs, 16 of them have their HRD directorates
In every academic year, <b>tuition fee given to 50 students of different categories</b> (Nursing, Midwives, and Medical Assistants) in the 11 states AHSs provided	Overall 1747 students were supported
(i) All instructors in the 11 AHSs will have been trained; (ii) technical assistance provided for adapting curricula for paramedics and development of training material for the training of medical assistance as multi-purpose health workers; (iii) 11 AHSs will have CPD programmes.	The numbers of instructors trained; curriculum revised and adopted were not provided to the evaluation team.
A comprehensive human resource plan for the 11 Northern states developed and measures taken for their implementation.	Human resource planning process in place
The Support to testing financial and non-financial incentives to instructors of AHS	An incentive mechanism to retain HR especially in remote areas instituted

**Generating evidence on inequality of the human resource distribution:** one of the major achievements of Gavi HSS support in HRH was the mapping of health services and human resources. This report provided evidence on the inequality of health service and human resource distribution among states, and the skills imbalance in the health workforce. The finding of this report was catalytic in generating evidence-based arguments for the government of Sudan to start PHC expansion project and mobilize funding from other partners.

The Gavi support also facilitated strengthening the capacities of the HRH directorates within states. Currently, 16 of the 18 States in Sudan have HRH directors to plan, implement and review the performance of HRH functions in the state. The existence of these directorates is reported to have improved prioritization, development of strategies and mobilization of additional resources for HRH within the states. This has also facilitated the establishment of regular planning and review meetings between the directors of HRH and planning in the States and the federal level in order to craft out priorities and review performance.

Establishment of the health observatory is another major achievement. However, the plan to establish routine HRIS tracking system and satellite observatories in the states has not been implemented. There is currently a challenge of regularly updating the HRH information on the observatory. Hence, available information is insufficient for projecting health force requirements. The FMOH is considering conducting another round of surveys through a web-based instrument.

The PHI was established in 2009 and started building its capacity in generating evidence to inform health sector planning and programming. of PHI include reviewed of the implementation of the health care financing policy. It also assisted the FMOH to produce national health accounts. The support of Gavi was reported to be instrumental in establishing such capacity.

The PHI offered training on leadership and management for about 54 officers in three batches. It is reported that 90% of the beneficiaries of the training were coming from the states; but the impact of the training carried out so far has not been assessed and its results have not yet been documented. Furthermore, the government developed a retention policy implemented through the development of career pathways and the provision of some financial and non-financial incentives to retain staff. Despite this retention policy, brain drain remains one of the major challenges facing the health system. The pull factors in Middle East countries seem to be much more powerful than the retention strategies in Sudan.

**Support to AHS:** The AHS/s were established in 2005 but did not start enrolling students before the the start of Gavi HSS support. At the time, they were working on their standards and guidelines. The HSS support helped finalize the preparatory process.

The major HSS support to the AHS/s can be categorized as follows:

- Supporting the training of tutors and teaching staff on how to prepare lessons plans, prepare students for exams, train midwives and medical assistants etc.
- Curriculum development and revision of guidelines. The support helped develop a training framework which was printed and distributed to the AHSs of all states.
- Support the provision of tuition fees to students. At the time government has not clearly articulated a funding flow to the states and there were limited resources for AHSs to enrol students. A total of 1747 tuition fees were supported mainly targeting PHC workers (nurses, community health workers, and medical assistance).

At the States level there was a strong focus to fill the gaps in human resources evidenced by the health map. Academy of Health Sciences in States are reported to not only provide training to fill the required skill gaps, but some also established outreach training sites in localities within the states. Most of the trainees were recruited from the rural area to increase the chances of them staying and serving within their localities.

While the production of the aligned health workers increased over the last few years, they are not fully absorbed by the health systems in the states. For instance, in Blue Nile and Gadaref States, 10 % of the nurses and 60% of midwives remain unemployed. Lack of financiers in some states resulted in students paying tuition fees (1600 SDG/per year) to access the training. One of the visited states is using the federal incentives (250 SDG/Month) to employ 108 midwives. In general nurses have better chances of deployment, but absorption of midwives and community health workers into the health system remains a challenge. Deployment of Community health workers is considered as the responsibility of the locality, yet localities have financial constraints and are not able to absorb them even though there is a high need especially in remote areas e.g. Dali and Mazmom locality at Sennar state. Therefore, there is a legitimate question on whether it is worthy to continue investing on training cadres in the absence of a commitment to employ them within the health system. Although the national government has started in the last two years to employ about 60,000 university

graduates, how much of these will be employed to the health sector and from this trained pool is not known at the moment.

The AHS lack experienced instructors, most of them come from SMOH programs and directors and while they can train them on how the system works, it is difficult for practitioners working in the system to think outside the box and bring change to the health system. There are cases like in River Nile where partners recruited experienced teachers from local universities to improve quality.

**CPD:** Evidence from some states show that CPD contributed to the increasing PHC package coverage by availing skilled staff for some missing services and improving the reporting, for instance on logistic information system. Many of the CPD is now being carried by trained personnel within states supported by videoconferences from the central CPDC. Some states are considering the introduction of the distance learning courses as a mechanism to retain rural health workforce. CPD is used more as means to retain and upgrade the individual skills of health workers. The evidence on how much of the CPD training is designed to tackle real service delivery and management challenges remain unclear; and there is still no evidence of improved quality service delivery as a result of investment in training.

**Retention:** There are efforts made to retain HRH in the health sector. Contribution of Gavi HSS support to retention is very limited. Personnel trained by Gavi support will remain within the system until they complete their training contractual obligation. It provided top-ups for those involved in managing Gavi HSS support at the federal, state level, localities and facility levels (see table 4.9). Although there is still brain drain of managers in the health sector, without the incentives the situation would have been worse. Non-financial incentives in rural areas (provision of free housing, advanced training after serving shorter period of time) are reported to be better retention strategies that need to be explored and implemented.

#### 4.9 Federal, state and locality level Gavi HSS top-ups

Federal Level		State Level		County level	
Responsibility	Top up (\$)	Responsibility	Top up (\$)	Responsibility	Top up (\$)
Director of national Department	1300	State coordinator	300	Locality coordinator	150
Program manager	1000	Team member	200	Team member	100
Deputy Programme manager	750	Support staff	50		
Head of a unit	600				
Staff member	400				
Support staff	100				

Sudan is producing enough human resources in many of the professional categories to be able to meet its health systems requirements. However, there is an emerging challenge of rapid turnover of staff all over the country and especially in remote localities. There is currently massive brain drain evidenced by the fact that 60% of 21,000 doctors registered in SMC have migrated. Currently about 75% of doctors are working abroad, with 85% of the workforce both doctors and nurses are reported to have intentions to migrate.

The CPD program is not adequate enough as more than 75% of the work force didn't receive any sort of Continued Professional Development (CPD), according to CPD management. A new Unified Payment scheme is introduced to motivate health workforce to go to the remote areas. Using this new unified payment scheme, 125 consultants are deployed for the first time. These incentives include (i) increased incentives (monthly bonuses) for those going to remote areas: 7000 SDG for category A, 4000 for category B and 3000 for category C states; and (ii) While the minimum contract for service with the FMOH is 8 years, this has been reduced to 2 years in the localities that are categorized as A, 3 years as B, 4 as C and no incentives at all for all the rest. Despite these efforts, migration of doctors

is increasing and of allied health workers beginning (see table 4.10). While there is a policy on how and when doctors are allowed to leave, this is not the case for allied health workers as they can migrate immediately after graduation.

**Table 4.10 Migration of health workforce in Sudan**

	Migrating doctors	Migrating allied health workers	CPD trainings
2009	3524		5694
2010	5510		14219
2011	6950		18545
2012	7385		24715
2013	8435	2294	25500

### 4.3. Component 2: PHC

As stated in the previous section, one of the major contributions of the HSS support is generating evidence and shifting the priority of health service delivery towards primary care. In this regard the following are the major achievements Gavi HSS contributed towards:

- The development of the Universal health coverage and PHC expansion plan
- The re-definition of the PHC package at different levels of care
- Improved focus to bring the primary health care workers into the system.

Midwives for instance were not considered as part of the PHC system. Currently, as much as 40-50% of the midwives are working as part of the PHC system. There is a concerted effort to increase the number of trainees of CHWs and midwives for PHC facilities as evidenced by the fact that training of midwives increased from 400-600 to 3000 per year.

Although employing trained PHC workers remain a challenge, there are best practices in some states where some of the PHC workers have started to be employed in the government payroll. It is reported that the percentage of midwives on the government payroll has now increased from 10 to 38% in Sudan.

As a result of the efforts made there is improvement in the availability of PHC packages. In EPI, the target was to increase the fixed sites from 1290 by 25%.

The overall general readiness of services to provide PHC is limited. The readiness of all facility types at 2013 was around 30 per cent, which means that on average facilities had 30 per cent of the basic items they need to provide the services that they are meant to provide. This is due to low scores for diagnostic capacity and essential medicines. A closer look at the tracer items in these domains show that on average facilities had only 2 of the 14 tracer items for essential medicines and only 2 of the 15 tracer items under diagnostic capacity (Yohannes Kiflu). Table 4.11 presents the readiness of states' facilities for providing basic services.

**Table 4.11: Percentage of facilities meeting minimum requirements**

	Essential package for NCDs	Family Planning	ANC	Immunization	Diagnostic treatment for malaria
Gadaref	43	39	59	97	98
White Nile	39	31	37	55	90
Sennar	74	68	69	84	100
Blue Nile	24	40	73	74	100
Kordufan North	16	34	42	75	91

SARA Survey, 2013.

By 2013, the number of EPI fixed sites increased to 1685, showing that the target is achieved. But the increase came from converting outreach sites into fixed sites without significantly affecting the number of mobile sites. As a result, the share of mobile sites more or less remains the same (see table 4.12).

**Table 4.12: Share of immunization sites from the total delivery sites**

	2007	2013
Fixed sites	22%	26%
Outreaches	66%	68%
Mobile	4%	5%

Government commitment for EPI improved, both politically and financially. Politically through a dedicated week to celebrate immunization annually and financially it has progressively increased cost sharing contributing to a sum of \$2.412 Million in 2013 as a co-finance for the introduction of new vaccines and cost of injection supplies, which in turn contributes to programme sustainability. In 2013, the government had contributed a sum of \$3 Million to the operational cost of measles campaign.

Improvement of service delivery in the Gavi targeted localities positively influenced communities and policy makers in neighbouring localities to avail resources for PHC/immunization services (Gadaref State Ministry of health annual report 2012). Compared to other programs and HIS, the EPI timely implementation of recommendations in the assessment reports (e.g. data quality assessment report) has improved their information system, gaining them the trust of Gavi and other donors in terms of the quality of the reported data. Nonetheless there are major challenges for sustaining 95% coverage of Pentaz as a national figure. The issues include:

- delivery of immunization services in security compromised areas (Darfur states, South Kordufan, Blue Nile), other special groups (Nomads, IDPs & Ethnic groups) and other NVI in the pipeline.
- weak implementation of social mobilization strategies at service delivery level, poor involvement of the private sector, poor involvement of PHC communication personnel in Routine EPI activities, weak community demand, inadequate use of evidence-based interventions, like Communication for development; inadequate use of CHWs and CHPs role in immunization; low priority of resource's allocation for routine social mobilization activities
- inadequate vaccine management at all levels
- inadequate financing of EPI operational cost and low government allocation
- challenge of fully meeting co-financing requirements and securing and sustaining program funding;
- the challenge of raising population immunity against measles and MNT

### 4.3.1. Physical rehabilitation of primary health care facilities, equipping and furnishing

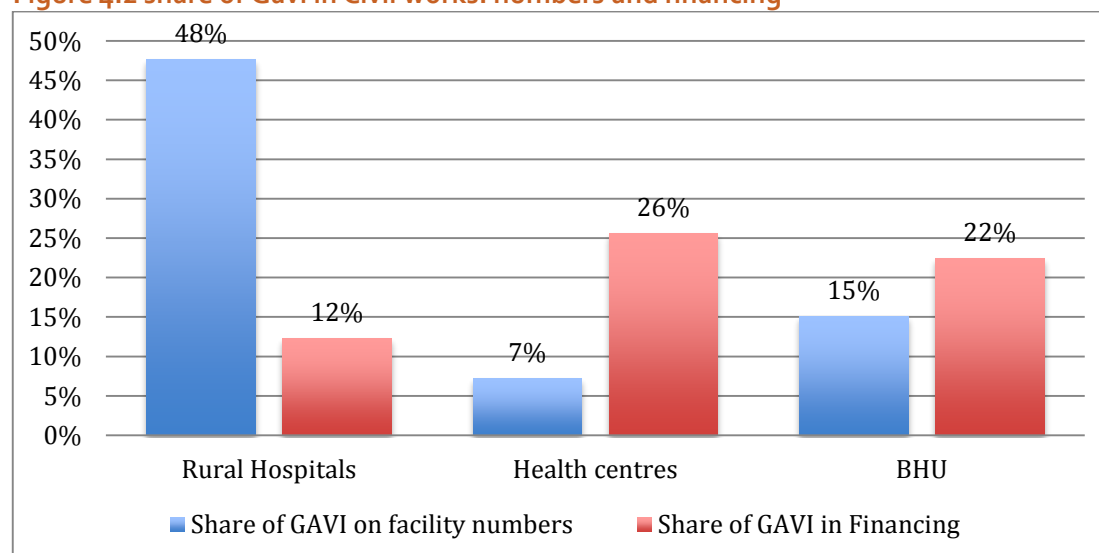
Gavi followed the MDTF in supporting the rehabilitation and expansion of the health facilities in Sudan. Gavi's actual contribution in terms of rehabilitation and provision of equipment is limited. Gavi and other partners like the Global Fund and Islamic Development Bank supported the development of the government's PHC expansion plan.

Gavi support helped to rehabilitate 10 rural hospitals, and 18 family health units and to construct 6 new health centres. The States selected sites for the rehabilitation and construction based on their health map developed for this purpose. While the health map played a very good role in guiding the

expansion plan, existence of errors of inclusion (those included that do not require) and exclusion (those with needs that are not included) points to the fact that the health map needs to be regularly updated by taking into consideration other factors like with the population size, time to reach the closest facility and hard to reach areas e.g. during flood season. Field visits in Sennar State documented that the rehabilitation in general was successful for a number of reasons: timely receipt of finance (when we make a request the money is delivered within 6 days max); continuous follow up and monitoring of the centres and construction workers; high involvement of the community through provision of accommodation to the construction supervisor during the time of construction; providing a water source to the health facility and participating in the electricity expenditure of the health facility.

Gavi also supported the rehabilitated facilities (see figure 4.2). In terms of equipment, Gavi invested \$711, 00 in the procurement of equipment, contributing only to 8% of overall financing of procurement in the country during 2008-2013. Although the support provided to equipment procurement is based on standards, but it was not always adjusted to specific context of a facility as there were instances of over supply in relation to the size of the facility. As a result, some equipment could not be used due to challenges related to readiness of facilities and lack of qualified human resources.

**Figure 4.2 share of Gavi in Civil works: numbers and financing**



Source: FMOH, State support department

According to the 2012 facility mapping report, the proportion of health centres and hospitals that are not functional nationally is 4%; from the targeted states hospital rehabilitation was only required in Sennar. However, 25% of White Nile health centres still require rehabilitation. That is why the PHC expansion plan is still being implemented. (See table 4.13)

**Table 4.13: Functioning and non-functioning health facilities in the targeted states in 2012**

	Functioning			Non functioning			% of non-functioning		
	Health Units	Health Centres	Hospitals	Health Units	Health Centres	Hospitals	Health units	Health Centres	Hospitals
Gadaref	238	58	26	42	0	0	15%	0%	0%
Sennar	121	74	25	32	3	2	21%	4%	7%
White Nile	200	120	37	86	39	0	30%	25%	0%
N - Kordufan	387	160	28	131	14	0	25%	8%	0%
Sudan Total	2838	2078	380	905	178	15	24%	8%	4%

Source; FMOH, 2012 health facility mapping

Civil works and procurement needs are focused on reducing inequalities by focusing in hard to reach and disadvantaged states. A major success factor in implementation was selection of sites by the states themselves, enabling them to select sites in their most remote areas. One of the challenges was the under-budgeting of civil works in the proposal. The 15% flexibility within activities allowed reallocating of resources to fill in some gaps. There were occasions where tenders for equipment were cancelled and re-advertised due to inflationary pressures. Another challenge particularly in the initial phase was the weak supervisory capacity of the civil work at state level. The responsibility has been shifted to the FMOH, which outsourced the supervisory function to providers for better performance. However, there is a need to enhance the skills of the professionals within the Development and State Support Directorate on project management.

In some States like the Blue Nile (MDTF), the constructed facilities do not provide the full package of services. Coverage is only 32% due to factors related to human resources and other resource shortages. The secondary level facilities are also not strengthened well enough to provide referral care. However, this has not been supported by systematically strengthening community health structures and systems. According to the evidence generated from SMOHs and localities interviewed, although a lot of training is provided to the CHWs, they are functioning providing services in a vertical manner. The evaluation team was informed that some States in Sudan started putting CHWs in government payrolls. In Blue Nile state for instance the state used incentive (10 SDGs/case) and payroll methods to motivate midwives to provide service and it is reported **that the incentive-based model is working better than the payroll one.** It is essential to learn from such experiences and evaluate the community health strategy to come out with a sequenced and comprehensive community strategy that will increase access and utilization of primary health care services.

**Box 4.2: Facility Expansion in Gadaref**

*The Gadaref State used Gavi support as a catalytic for funding and expanded the expansion of facilities. It is reported that the Governors (previous and current) committed themselves to provide twice as much as the SMOH mobilised funds from development partners. The expansion of facilities show this commitment*

	2007	2014	Gavi Contribution
Hospitals	19	31	1 new 2 rehabilitation
Health centres	40	70	2 new 4 rehabilitation
Basic Health Units	219	277	3 new 3 rehabilitation

**4.4. Provision of technical assistance:**

One of the major components of the HSS support was the provision of technical assistance at federal and state levels for system strengthening. The TA provision in the HSS support was initially envisioned to be provided through WHO. This arrangement started from 2008 to 2012. The assistance contributed to the conceptualization and implementation of some of the HSS interventions. The support provided covered the following:

- National health accounts



- Household health services utilization
- In depth review of the national health insurance fund
- Development of Comprehensive PHC package
- Estimating the cost of the PHC package
- KAP study of household health behaviour

The evidences generated through these support helped, as described above to influence strategies, priorities and resource allocation. It was therefore effective in supporting the process. However, there were issues related to its efficiency.

The TA provision back then was not guided by clear technical assistance guidelines and the arrangement was complicated. Funds were transferred from Gavi to FMOH then from FMOH to WHO for implementation of TA activities. Since WHO was not the implementing agency, funds were transferred back again to FMOH departments for implementing activities after deducting the management cost. This arrangement was discontinued in 2012. As a result, there were gaps in the recruitment, management and use of TA time for strengthening health systems. According to the FMOH, with time, the TA support was not found to be efficient for the following reasons: (i) the process of recruitment was relatively long in responding to the needs; (ii) some of the international consultants recruited were not able to provide context specific and actionable support; (iii) there was no clear management arrangement that effectively utilize the technical assistance (consultants do not share work plans; have difficulty working with their national counter parts; limited contribution to skill transfer to the national staff, etc.) and (iv) it was costly to recruit using this procedure. The FMOH then shifted to source national consultants through its own systems and procedures.

#### 4.5. Program Management:

The oversight of the overall Gavi HSS funding has evolved over time. Initially the coordination committee was only following Gavi HSS grant. At the same time there was another committee overseeing GF HSS grant and ISS had its own ICC committee. In 2013 the decision was made to unify the oversight and coordination functions for all HSS and ISS grants to avoid duplication and improve efficiency. Currently the **National Health Sector Coordination Committee (NHSSC) sub-CCM is the oversight body**, this brought all three coordination and oversight bodies under one body:

- NHSCC for Gavi HSS
- ICC for Gavi ISS (EPI)
- CCM HSS Subcommittee for GF HSS

Having a single management unit (one PMU for both Gavi, GF and EU HSS grants) has been viewed by the evaluation team and many stakeholders as a best practice that other countries may learn from to improve harmonization and efficiency of resource utilization.

The NHSSC -CCM meets quarterly and more when necessary. It provides coordination and discusses critical issues affecting the implementation of (Gavi/GF) HSS programmes such as reallocation of fund, reviewing and endorsing the Annual Progress Report before submission to Gavi. Underneath NHSSC, the **HSS Grants Steering Committee**, an FMOH internal structure, was established. It meets once a month to take key implementation decisions and refer some issues to the NHSSC to be further discussed. Bi-monthly there is also the **Grants Implementation Team Meeting** with focal persons from the respective Directorates of FMOH, Gavi & GF focal points, Implementing Partners (such as UNICEF, WHO) to monitor progress. In addition, the HSS Grants Coordination Team (GHI Coordinator, Gavi/GF HSS Coordinator, M&E Focal Point, Admin officer, Secretary) and the related Finance as well as Procurement Officer meet weekly.

Unifying the management function was very useful in reducing the management and transaction costs. It helped in developing and unifying financial and administrative procedures. It mitigates

against the risk of staff turnover and supports building an institutional memory. The approach was highly valued by stakeholders. UNDP is considering FMOH as the full PR for the GF grants. PMU has succeeded to bridge the gap between GF and Gavi requirements for implementing HSS grants.

Overall there is delay in the Gavi HSS support implementation. Its implementation was extended by one year and even then not all funds were utilized. According to some key informants, arrangements in the project management process and capacity contributed to the delays in the implementation of the program. Initially, the planning department was responsible to manage the entire HSS support, which resulted in some delay. Then the planning department started to provide a coordination role while the different programs managed the day-to-day management of activity implementation. Finally, the coordination role was taken up by the international health department, which facilitated the implementation processes.

## Fund Management

### Allocation and utilization of funding by components

The proposed resource allocation in the application grants 49% of the total HSS support to component one, 46% for component 2 and the remaining 5% is allocated for planning and management costs. Those percentages were not maintained during implementation, changing priorities allowed reallocation of some funds. Documents shared by the finance unit showed that Sudan was able to utilize 75% only of the available funding (i.e. \$12.1 million from a total of 16.1 million USD budgeted for Gavi HSS). About 25% (\$4 million) were not utilized by 2013. There are several factors that contributed to extension of the support to 2013.

### Delay in Fund Transfer

Delay in the release of funds from Gavi contributed to the inability of the Sudan to implement the HSS support as planned. The APRs clearly documented the delay from Gavi in the second, third and fifth year of implementation. The information generated from the finance manager of the Gavi HSS in the PMU demonstrated the delays in the transfer of funds (see table 4.14). The Bank Statements provided to the evaluation team show that most transfers are made late in the years of support which explains why some of the interventions were not carried out in time.

**Table 4.14: Dates of Gavi HSS disbursements**

	Dates of transfer	Comments
2008	April 22, 2008	Delay of four months
2009	None	We could not identify the reason for the pause in funding that occurred in 2009
2010	August 1, 2010	After 15 months of the first transfer. There was a shortage of resources to carry out activities. Contributed to at least 6 months of delay
	December 28, 2010	
2011	None	
2012	September 30, 2012	Delay of nine months
2013	July 4, 2013	

Source: FMOH, Gavi HSS finance management office

Analysis of the available funding at the beginning of each year to implement planned activities, showed that delays affected 2008 and 2010 activities, as there was a shortage of resources in the accounts of the FMOH (see Table 4.15), hence, Gavi transfer delay may have contributed to approximately 10 months of project delay.

**Figure 4.15 Disbursement Trends in health financing in Sudan**

	2008	2009	2010	2011	2012	2013
Original budget and disbursement plan	3,063,620	3,144,806	3,228,143	3,313,689	3,401,503	-
Revised annual budget		1,597,472	3,471,572	5,011,500	2,142,767	-
Disbursements	3,063,620	-	6,151,831	0	3,878,228	3,106,974
Remaining funds (carry over from previous years)		1,772,092	91,192	4,654,681	1,785,948	3,959,082
Expenditure	1,291,528	1,680,900	1,588,342	2,868,733	1,705,094	5,321,776
Balance carried forward	1,772,092	91,192	4,654,681	1,785,948	3,959,082	1,744,280
Available Funding	3,063,620	1,772,092	6,243,023	4,654,681	5,664,176	7,066,056
Revised annual budget	3,063,620	1,597,472	3,471,572	5,011,500	2,142,767	-
Expenditure	1,291,528	1,680,900	1,588,342	2,868,733	1,705,094	5,321,776
	2008	2009	2010	2011	2012	2013
Expenditure/Available funding (%)	42%	95%	25%	62%	30%	47%
Available funding/annual budget (%)	100%	111%	180%	93%	264%	
Fund at hand at the beginning of the year/Budget	0	111%	3%	93%	83%	
Fund at hand at the beginning of the year/expenditure	0%	105%	6%	162%	105%	74%

When we explored further how much the availability of funding become a barrier for implementation by comparing annual revised budgets and expenditure, we found out that there has actually been adequate funding available each year at the country level with exception of 2011. In that year in particular, the available funding financed only 93% of the budgeted. Even then, the expenditure was only 62 % of the available funding. This clearly documents the fact that the extension of the program for another two years is not only due to delays in fund transfer.

#### **Weak Implementation capacity**

As can be analysed from the above table, the other major factor for low utilization of funding was weak absorptive and implementation capacity. Comparison of the available funding and budgets and expenditures show that despite the delay in the release of funding, the FMOH did have financial

resources to fast-track the implementation in 2009, 2011 and 2012. In these years, funds at the beginning of the year could finance the annual expenditures of the year. Several factors have contributed to this implementation capacity. These include:

- The staff of the PMU in 2011 and 2012 were overburdened by the additional task of preparing the NHSSP and its JANS. In 2013, they were engaged in the preparation of both Gavi new proposal and GF concept note. Given the limited staff available and frequent turnovers, they were overstretched in managing the support, and the situation was worsened by their additional tasks of managing Global Fund HSS support. Interviews with Gavi attributed the later part of the fund transfer delay to delay in undertaking PFM assessment. This shows that there is a need to strengthen the PMU by increasing their number and professional mix.
- The modality of implementation via a central PMU unit showed good progress when compared to previous the MDTF grant with different units directly implementing most of the activities under the grant. However, centralization of the management of the funds at the federal level and inadequate delegation to SMOHs might have contributed to the weak implementation capacity. While risk of liquidation of funding exists at the state level, it is necessary to look into different risk mitigation measures and mechanisms and allow States to help the FMOH fast track the implementation of the activities. There is a need to explore the possibilities of delegating some of the implementation to states with its associated risks and risk mitigation mechanisms to improve absorptive capacity.
- Frequent turnover of staff exacerbated the challenges in the implementation process. There were issues around the flow and management of funds including liquidation. The implementing directors do not submit the technical and financial reports on time, which further delays, the next disbursement. At the federal level, the Human Resources Directorate and the Procurement and civil work were reported to be active in using and reporting the Gavi Support while the rest of the directors were not as much active. In some directorates, Gavi intervention areas were not their top most priorities. At the States level, while Gadaref was punctual in reporting, the other three states were not and some of them felt challenged by frequent turnover of Gavi coordinators. At the beginning there was a misunderstanding in some states that HSS fund was considered as a source of funding to strengthen even other SMOH priorities and there were instances where SMOHs were looking for funding from resources allocated to AHSs.
- The weaknesses in the planning, and budgeting during the proposal writing also affected implementation of some activities, which necessitated a major budget review and reallocation in 2011/12. Rehabilitation of facilities was under budgeted, the budget used for rehabilitation was able to cover the rehabilitation of only one hospital leaving other targets unfunded.
- When Gavi HSS activities are co-funded with other partners, delays occur until the procedures of funders are met. For instance, some Gavi supported HIS, Observatory and planning activities were dependent on completion of activities supported by other projects e.g. GFATM. Hence some intervention is postponed for a while before until procedures are met.
- The effect of Sanctions and GoS decision to shift from dollars to Euro resulted in a significant loss of value. One of the main reasons for some of the delay in transfer is related to the time it took to open the Euro account by the FMOH. The fluctuating rates of Sudanese pounds against Euro exacerbated the situation, although various mitigation measures (keeping the budget in the hard currency, quarterly transfers to implementing units from the euro account when needed) were sought. Nonetheless, this resulted in some savings due to the incentives provided by the Bank of Sudan. A lot of reallocating and re-budgeting were undertaken to ensure available funds finance priorities.
- The time taken to undertake different surveys also had an effect on implementation and delay: the health mapping, the household expenditure and utilization survey, the KAP

survey and the NHA; all of these surveys were used to build the capacities of national institutions, yet also require technical assistance to be carried out. The complexity in managing technical assistance described above further delayed the completion of these surveys on time. Activities depending on the completion of these surveys had to be postponed.

## 5. HSS Support Relevance, Effectiveness, Efficiency and Sustainability of HSS Support

### 5.1. Relevance

The support of Gavi came at the right time when strengthening decentralization was initiated through the MDTF (multi-donor trust fund). At the time, all stakeholders viewed health system inadequacies as vivid in terms of absence of a planning system, weak information and evidence base, shortage and skill imbalance in human resources and more importantly inadequate organizational and institutional capacity of States and localities to lead and manage health service delivery. Besides, it was timely in the sense that some strategic decisions were being made to address these challenges including the establishment of AHS and PHI.

Strengthening organizational capacity, planning and M&E systems remain the major priorities of the HSS in Sudan today. The achievement of AHS and its results in terms of reducing the skill imbalance was, is and will be the core HRH intervention for some time until the right mix is in place. This is specifically true as it helped the country to accelerate its efforts in expanding PHC coverage over the last few years. Reducing inequity among and within states is still a glaring challenge in Sudan.

### 5.2. Effectiveness

The major contribution of Gavi support to health systems strengthening in Sudan was its ability to generate evidence necessary for a significant policy and priority shift in the health sector. This can be verified through a number of cases. First, health mapping exercise clearly documented the fact that resources are being invested in secondary and tertiary rather than primary health facilities. It also highlighted the inequalities of service delivery and availability of human resources among states. These findings were able to shift the strategic direction of the government and the commitment of decision makers towards PHC based Universal Coverage. There is also major emphasis on training allied health cadres to ensure PHCs have adequate human resources. The evidence generated by NHA clearly documented that the contribution of the government to financing health care is limited and far from reaching the Abuja targets. There is currently a better commitment from the Ministry of Finance and National Economy to allocate resources to health. There is evidence that the MOH has fully disbursed the budget for 2014 and

#### Box 5.1: Universal Coverage of EPI services in Blue Nile State

Blue Nile State achieved universal coverage of EPI services in all localities, as measured by PENTA 3. While investment is made in the cold chain systems as part of Gavi ISS support that contributed to this success the management and organization of service delivery is equally important. According to the focus discussion the evaluation team had with relevant stakeholders, the following have been described as the major drivers of success:

- Regular M&E and its associated accountability;
- Outreaches demarcated to specific geographic areas and assigned to vaccinators;
- Strong community relations and motivation scheme and use of female vaccinators when necessary. They trace defaulter and get 20SDG reward per case;
- Mobile team will not start regular EPI services before tracing defaulters
- Provide tracks for EPI services during rainy seasons
- High involvement of stakeholders

The best practice of this successful EPI program needs to be reviewed and documented and can be used as an instrument for scaling up community level service delivery through a unified cadre at the community level in the effort being done to enhance integration in Sudan.

increased allocation to 2015 by 60%. The Gavi resources were also instrumental to encourage Ministry of Finance to allocate additional US \$13 million for PHC expansion.

All these shifts helped the country to achieve and realize the impact and outcome targets set for the Gavi HSS. Of the seven-targeted indicators, 6 scored more than 85 per cent and 1 less than 70% of the target (see Table 5.1)

**Table 5.1: Achievement of HSS targets**

No	Indicator	Baseline 2006	Target (revised 2013)	Achievement	Level of achievement
1	Maternal mortality rate per 100,000 LB	638/100,000	Contribute to reducing MMR by 50% of baseline	360*	
2	% Deliveries attended by skilled personnel	49.2	70%	77.7%	
3	Under five mortality rate (per 1000 LB)	102/1000 LB	Contribute to reducing IMR by 50% of baseline	68/1000 LB (33.3% of baseline)	
4	National DTP3 coverage (%)	66%	90%	93%	
5	% Districts achieving ≥ 80% DTP3 coverage	72%	100%	92%	
6	Use of Oral Dehydration Therapy (ORT)	54.57%	80%	90.4%	
7	% Children 6-59 months received vitamin-A supplementation within last 6 months	76.40%	90%	98%	
	Very good	>85 % of target			
	Satisfactory	>70% and <85%			
	Not satisfactory	<70 %			

In terms of the HSS components, the evaluation team concluded that 4 of the HSS components were effective in delivering the planned system strengthening objectives, while the other two were not satisfactory mainly due to changes and delays in the activity implementation. The performance of the last objective was found inadequate (see table 5.2).

**Table 5.2: Grading of HSS components' performance**

HSS components	Objectives	States of Interventions	Focused health systems strengthening areas (STRATEGIES)	Levels of Achievement
<b>Component 1:</b> Building the institutional, organization and management capacity and system development.	Strengthen/build core systems and capacities (organization and management; health planning and development, health financing; health management information system and monitoring and evaluation) in 15 Northern SMOHs and 20 Localities/districts	All the states of Sudan, excluding the 4 MTFD states.	Improving management and organization	
			Strengthening of health planning capacities	
			Improve capacities and knowledgebase for equitable and sustainable health financing	





health workers in Sudan to inform the development of appropriate government policy towards retention or production of human resources.

The micro-planning exercise supported by Gavi as part of Reach Every District approach, has greatly contributed to having an achievable plan, rational management of resources and close monitoring of implementation and target achievement in EPI. Introduction of defaulter tracing system has been effective in reducing drop-outs (EPI routine report). Establishment of associations such as 'Friends of Immunization', which involves NGOs, religious leaders, and the private sector at state level, facilitated in addressing dropout rates and missed opportunities through creating demand and service utilization. Initiatives related to the introduction into the system of CHW and medical assistants and vaccinators to function as multi- task health workers have been hampered by the limited capacities of training institutions i.e. CPD and AHS and delay in provision of equipment and medical supplies to deliver the services. Activities related to this objective aim to address these challenges. All these contributed to realization of the EPI targets.

The organizational strengthening effort has brought about systems thinking and structures in the Sudanese health system. The basic foundation for establishing structures is in place for further strengthening of the processes and procedures as a result of Gavi HSS support. The planned processes and procedures of planning (One Plan, One Budget), monitoring and evaluation (DHIS, One Report) and health financing will consolidate the gains made in this regard.

The in-service trainings provided by the CPD and PHI helped build individual skills at all levels and there is evidence from some states that this contributed to increasing facilities that provide basic health services. However, the focus is much more on individual skills and not team building. There is no evidence as yet that the investment made in this area is translated into improved service delivery.

### 5.3. Equity

Equity was one of the major strategic directions considered during the design and implementation of the support program. This is reflected in two ways: first, component two fully focused on reducing inequality and improving service delivery in disadvantaged States, contribution of Gavi HSS in the development of PHC Universal Health Coverage plan was a major strategic investment. Second, even in component one some of the interventions like production of HRH took into account the issues of equity in the implementation. Overall, there has been investment to rehabilitate and establish new health facilities in the targeted four states, which helped create access for those that did not have the chance to easily access health care before. However due to the limited investment so far, these states are yet to catch up others in terms of PHC coverage.

The four targets states' population account for about 30% of the Sudanese population. When we look into those people who do not have access to health facilities within 5 kms from their village, they account for 29% in North Kordofan and 20% in Gedarif States, while the other two have % which is lower than the national average, 18.7%. The percentage of facilities that are not functioning are lower in all the four states compared to the national average. The Number of health facilities required to meet the defined package has declined compared to the HSS baseline (see table 5.3). GAVI HSS, the government PHC expansion plan and GF support contributed to this progress.

**Table 5. 3: Some progress towards equity**

		Gedarif	Sinnar	White Nile	North Kordufan	Sudan Total
Functioning	Health units	238	121	200	387	2838
	Health Centers	58	74	120	160	2078
	Hospitals	26	25	37	28	380

Non functioning	Health units	42	32	86	131	905
	Health Centers	0	3	39	14	178
	Hospitals	0	2	0	0	15
% of health facilities not functioning	Health units	15%	21%	30%	25%	24%
	Health Centers	0%	4%	25%	8%	8%
Required Health Facilities	Hospitals	0%	7%	0%	0%	4%
	Required health units	39	49	41	146	684
	Required health centers	8	12	9	23	339
Percentage of the total population with health facilities more than 5 KMs (in percent)		19.7	2.0	15.5	29.2	18.7

Source: Health mapping 2012.

However, there are still people that have not yet been reached and investment and strategies to enhance equity needs to be pursued with vigour.

#### 5.4. Efficiency

There was a deliberate effort to enhance efficiency of the Gavi HSS funding. The project management unit always observe the environment and adjusts the work plan to meet the emerging priorities and context. While this delayed the implementation, it helped push towards immense reforms that produce a positive change to the health system. Some of the delay helped utilize the money in the best way. Gavi HSS funding was well managed to ensure that the project gains from the fluctuation in exchange rates. The management of the fund had and still has complications due to the sanctions imposed on Sudan. The support is budgeted in US dollars, the money is transferred to Sudan in Euro and FMOH has to pay by Sudanese pounds (SDG). With careful management of disbursement in terms of SDG, the support saved about \$0.5 million, which were used to finance under-budgeted expenditures. The FMA did not have serious issues in the financial management and procurement process in Sudan.

One of the targets in immunization was to expand fixed sites against outreach and mobile sites. Experiences from Gavi support revealed that expanding fixed sites are cost effective and sustainable and therefore reducing the high dependency on outreach and mobile services to deliver immunization is desirable. The EPI outreach and mobile strategies managed to reach 51% of the target population, yet the approach has proved to be expensive and unsustainable. The support was able to shift most of the outreaches into fixed sites which enhanced efficiency of the system, but progress is not as good as planned. EPI still depends on the outreach and mobile services particularly in conflict affected areas and hard to reach population.

Harmonization and complementarity of Gavi and GFATM HSS grants through joint management has improved synergy and efficiency of resources utilization and avoiding duplication of efforts.

#### 5.5. Sustainability

In some of the components of the support program there were in-built strategies for sustainability. For instance, strengthening AHS was designed in such a way that there is contractual agreement between the provider (AHS) and the user of service (FMOH), support was provided based on the services offered. It was envisioned that the support would be in the form of strengthening different operational aspects of the AHS (curricula, educational system, and infrastructure library). The modality of HSS support was flexible to allow strengthening of AHS branches in the weakest states. All graduates of AHSs were handed over to SMOHs for deployment. The major success factor for

the AHS was it learnt that it can build its own long term capacity while delivering contracts- a lasting mechanism to produce allied health workforce. The sustainability of AHS branches requires accreditation of Ministry of Higher Education. Gavi supported AHS branches were the first to acquire such accreditation, which has now enabled them to attract more resources for their demands.

Improving the financing of the health sector is one of the major issues in Sudan. Although the government is increasing its funding through the universal coverage plan, it is still inadequate. The health system is unable to absorb the trained allied health cadres despite inadequate numbers in PHC facilities. Some of the essential services like immunization are mainly financed by ISS funding with counterpart funding from the government. It is therefore necessary to rethink about the strategy of how the government in the long term will manage to take over the funding of these services.

The program mainly financed soft HSS components. The gains made so far might not be sustained at the current level without some sort of external support. In this regard, most of the systems put in place can continue with lesser visibility. The major negative of impact of less resources could be on project management systems that is being funded through GAVI and GF.

## **6. Conclusion and Recommendation**

### **6.1. Key findings and conclusions**

Gavi HSS support was timely: the activities and system strengthening areas supported were and still are relevant to strengthening the health system in Sudan. They are in line with government priorities of filling the service delivery gap in the community and are aligned with government's plans and strategies.

The modality of working through the government system has been critical in strengthening the health system. Consequently, other DPs like the Global Fund are also moving towards that direction. The activities supported by Gavi HSS were instrumental in generating evidence that unleashed different policies and strategic shifts in Sudan (PHC Mapping; PHC accelerated plan and NHSSP II, increased government financing), its catalytic role was more imperative than its actual resource contribution.

There are some best practices noted, for example in Gadaref State SMOHs used Gavi support to test interventions and scale up good practices to other localities using their own and other DP resources.

Some of the interventions supported were effective in realizing the intended purposes. The organizational strengthening support and HRH were more effective than some others such as Planning and M&E, which were affected by changing priorities and goal posts that reduced their effectiveness.

The support was delayed by many factors, the most prominent are delays in fund transfer and implementation capacity exacerbated by the sanctions which imposed use of EURO for transfers. The delay in the implementation of some of the programs necessitated re-assessing the structures and management of the HSS funding. GoS has taken a number of measures to ensure that the HSS plans are implemented as intended.

The effort to strengthen capacity through building skills has been exhausted by frequent turnover of the staff and migration. The production of more doctors, specialists and allied health workers alone has failed to ensure availability of human resources for the Sudan health system.

Given that most of the investments of HSS support is on soft HSS components and not on service delivery, there is no much concern over the sustaining the impacts and outcomes gained. However, without adequate support the gains made on strengthening management and leadership may not be maintained at the current level. This is especially the case for planning, budgeting and information systems whose results is yet to impact on other systems.

### **6.2. Best practices and lessons learnt**

The need of clarity and a common understanding of roles, responsibilities and costs between the FMOH and TA provider is one of the major lessons that have been acquired from the pitfalls of the Gavi HSS support. Technical assistance needs to be demand driven, needs to work with and through the national plan and structures while also providing an opportunity for skills transfer. The lack of smooth functioning and the management of technical assistance between MOH and WHO led to the discontinuation of the TA support. It is necessary to explore the major issues around TA provision and chart out how future cooperation, particularly for international TA recruitment could be facilitated. There may be a need to develop a technical assistance guideline that clarifies how technical assistance should be managed and provided through the health system. Some health sectors have developed a TA guideline with principles of making it demand driven, coordinated and aligned, with reduced overhead cost. It further outlines, how TORs should be developed, how advertisement, selection, recruitment and contracting should be made, how remuneration, work planning and management as well as skill transfer and counterpart capacity development should all be done.

Harmonization between Gavi and other HSS projects is possible through the operationalization of one Project Management Unit, one coordination structure (HSCC and CCM HSS sub-committee), one implementation strategy to link different HSS interventions with the NHSSP, and one assets management system.

The commitment to change priorities and course of practice when necessary by the top management without compromising the results in achieving the outcome and impact targets of the program was one of the best practices in Sudan. A good example is the procurement of medicine through Gavi support was shifted to treating anaemia in pregnant women, which the government later on took over and provided free folic acid supplies in the country.

Consolidating coordination of overseeing structures into HSCC/ICC/CCM seems to have reduced the transaction cost and enhanced the alignment of the different funding resources of health systems strengthening. The same structure reviewed and approved the second Gavi HSS proposal and the Global Fund concept note. The focus of their meetings so far was on drafting and approval of those proposals. However, their performance in undertaking regular oversight effectively is not yet verified. While there is a new registered NGO network working with the HSCC, it is very weak, with only 20 members and without any secretariat support (coordinator, office and running budget). Thus, it is necessary to review performance and strengthen the structure after sometime. The functioning of the committee may also require strengthening through increasing the frequency of their meetings (to at least once every quarter) and ensuring that meetings are open and transparent with decisions and arguments made based on evidence generated. As can be seen from Sudan's IHP review, more work needs to be done to ensure CSP participation and mutual assessment mechanisms.

Table 6.1: Sudan's performance in IHP+ monitoring

Sector result framework in place	Government supports meaningful CSP participation	Predictable disbursement of Government funds	Gov't resources are planned for > 1 year	National Health plan jointly assessed	Mutual assessment mechanism in place	Good quality PFM in place
		???				
	<b>Target achieved</b>					
	<b>Evidence of Action</b>					

Source: IHP+, 2014.

In a similar fashion, Gavi has done well in the recent years on disbursement predictability, but needs to either provide necessary information and/or work more on other IHP+ measurement indicators as seen in table 6.2.

Table 6.2: Gavi performance in IHP+ monitoring

IHP Measures	Gavi	
	2011	2013
Use of sector result framework	No data	?
Support meaningful engagement	No	YS
Disbursement of funds predictably	55%	99%
Government received expenditure plans 3 years ahead	No data	No

Support reported on budget	No data	0%
Use of mutual assessment mechanisms	No data	
Use of country PFM system	No data	

Source: IHP+, 2014

The HRH operational research conducted in this Gavi HSS Grant provided insight into the HRH situation in terms of identifying factors that would lead to the attraction and retention of human resources but efforts are still required to translate these results into policy (HRH gender, retention and migration research, 2013). Implementation of decentralized governance system was not accompanied by clear policies to empower both states and localities to exercise full power on resources including finance. Poor working environment at locality level together with shortage of qualified staff and dominance of vertical approach (which in turn requires a huge number of staff to meet the needs of all programs) resulted in poorly performing locality health management teams when available; some localities are still in the phase of planning to form their health management teams' e.g. Matama in River Nile state.

The role of the SMOHs in the development of the HSS proposals was overlooked. While the support has clearly shown the results chain-impact, outcome and output- in the project proposal, the theory of change associated with it was not clear to the evaluation team and is not part of the document.

### 6.3. Recommendations

#### 6.3.1. Government

##### Overall HSS recommendations

- To develop a consistent roadmap for health system strengthening. Continue with the strategic thinking of strengthening HSS and building consensus on the main strategies.
- Strengthen processes and systems that enable development and aid effectiveness through strengthening government ownership and leadership as well as charting out alignment and harmonization mechanisms. There is a need to strengthen efforts to coordinate and bring the major HSS support partners like Gavi, the Global Fund and EU together through open, functional policy and programmatic dialogue. Address the system weaknesses thereof in the areas of financial management and procurement system is very critical. Efforts should be strengthened to support and advocate for strengthening the NGO network to ensure that their plans and resources are well reflected in the plan complementing government efforts. Strengthen the joint decision making forums and processes between the FMOH and the States to translate the aspirations and targets of NHSSP into results.
- The move towards integration is expected to enhance efficiency and effectiveness. However, it is necessary to invest on an integrated system and experience an evident change before eliminating vertical systems.
- With the careful consideration of the available fiscal space in the country, the government needs to continue the trend observed in the recent two years of allocating more resources to the health sector. The co-financing of new vaccine by government is another good example that can be used as means to mobilize resources from states. The FMOH may consider leveraging the mobilized resources from partners like Gavi and GF as means to mobilize counterpart funding for some system strengthening at the State level. The experience of Gadaref State could motivate other states.
- On one hand, addressing migration of the health workforce is one of the major issues to Sudan health system. On the other hand, the Sudanese professionals are contributing to the national economy through remittance and taxes. The Ministry of Finance and Economy and the FMOH may consider undertaking a joint cost-benefit analysis of migration to the overall economy and health sector and develop an appropriate strategy based on the evidence

generated (retention and/or production). The government of Sudan is reported to have successfully negotiated with Saudi Arabia to benefit from the migration. Negotiating with other recipient countries to make them invest in the production of human resources in Sudan may introduce benefits from migration. Involvement in initiatives such as the Medical Training Initiative (MTI) (by the Royal college of Physicians and its partners in Sudan the FMOH and SMSB) that will allow health professionals to receive training and development by working in another country's health system for a couple of years and then return to their home country may be considered as an alternative method to retain health professionals and not completely lose them through migration. Moreover, attention should be made on how to absorb the allied health care cadre in the system to overcome the shortage and fulfil the need especially in remote and hard to reach areas.

- While the PHC approach and the scaling up plan is being implemented, it is also necessary to look into its design to ensure that its components are comprehensive. Some of the investments in CPD can also be transferred to increase the coverage of the PHC package and improve their quality instead of providing different trainings which may not result in the desirable impact on the health system.
- Implementation of a health system in a devolved context is always challenging. The effort to bring bottom up and top down planning process (“one plan”, “one budget”, “one report”, “one review”) by the FMOH and States Steering committee is one of the successful strategies being used in similar countries. This initiative needs to be fast-tracked with investment made to make a real difference in leadership and management at all levels.
- Assess the effectiveness of CPD trainings thus far and devise strategies where not all training focuses on individual skills but also state and locality teams so as to challenge them to improve specific areas of service delivery.
- Enhance implementation of the support through fostering delegation both within the FMOH and in states but at the same time the capacities of the states need to be strengthened (PFM and reporting) so that delegation of the implementation functions is accompanied by accountability. It is therefore necessary to assess PFM risks at the state level and set mitigation measures to strengthen the absorptive capacity.

### Specific HSS recommendations by component of Gavi HSS support

Table 6.3 presents the major specific recommendations that the GoS may consider implementing for further strengthening of the health system.

Table 6.3: Specific recommendations

HSS component	Recommendations
<b>Organization and management</b>	<ul style="list-style-type: none"> <li>• Strengthen locality structures by filling the open positions by the necessary human resources and ensure they are the priority for HSS capacity building</li> <li>• The provision training should be complemented by putting in place the right processes and procedures</li> <li>• Review and assess the potential of future leadership and capacity building interventions shifting the approach from developing individual skills to building teamwork and commitment</li> <li>• Consider human resource task shifting strategy as one of the means of ensuring retention and strengthen the effort and investment on the middle level human resources whose curriculum is geared towards providing primary health care services</li> </ul>
<b>Planning</b>	<ul style="list-style-type: none"> <li>• Shift from developing the biennium plan to using annual operational plans which are linked with the budget at all levels</li> </ul>

	<ul style="list-style-type: none"> <li>• Inform and base the planning process on resource envelopes and ensure that districts and other implementing agencies are given the funding planned for in the one budget</li> <li>• Chart out the process and mechanism of planning and budgeting starting from the community level and how there will be consolidation and agreement by all stakeholder at all levels</li> <li>• Elevate assistance and strengthening of the national NGO coordination body and establish state level NGO coordination structures. Invest on strengthening the capacities of the NGO network to align and harmonize its members' interventions with the government plans and strategies; help establish secretariat of NGO coordination</li> </ul>
<b>Health financing</b>	<ul style="list-style-type: none"> <li>• Fast track the revision of the health financing strategy that is well aligned with the changing landscape and based on the evidence generated so far</li> <li>• Fast track the design, piloting and scaling up of community based health financing for the informal sector as a road map to universal access in Sudan.</li> </ul>
<b>HMIS and M&amp;E</b>	<ul style="list-style-type: none"> <li>• Strengthen the skills and capacities of HMIS work force (statisticians) especially at locality levels to generate, process, analyze and disseminate information.; in the long term migrate out of paper-based information system</li> <li>• The KIIs at the states levels however stated that there are shortages of statistical technicians at PHC levels.</li> <li>• Strengthen the leadership and coordination mechanisms and enforce all producers and users of information to be brought to one platform</li> <li>• Strengthen the use of M&amp;E information by linking the planning and M&amp;E processes to improve the culture of using information at lower levels.</li> <li>• Put in place strong processes and procedures to review and monitor the health sector performance at different levels using agreed annual plan targets</li> <li>• Review the strengths of Gadaref State coordination committee and replicate its best practices to other States.</li> </ul>
<b>Human Resources</b>	<ul style="list-style-type: none"> <li>• Establish the HRH directors in the remaining States of Sudan</li> <li>• Review the challenge of regularly updating the HRH information on the observatory and establish updates using available information</li> <li>• Assess the impact of the PHI training carried out so far and document its results</li> <li>• Re-assess the effectiveness of retention strategies of HR. develop a new one together with Ministry of Finance</li> <li>• Develop strategies to employ trained allied health workers into the health systems in the states; Enhance the commitment and resource availability at the state level to employ, especially community health workers if they remain a priority.</li> <li>• Further develop the capacity of the AHS by recruiting experienced instructors</li> <li>• Reassess and redesign CPD to respond to emerging real service delivery and management challenges in the health sector</li> <li>• Develop a policy on how and when allied health workers are allowed to leave, as the case with doctors</li> </ul>



<b>Coordination and management</b>	<ul style="list-style-type: none"><li>• Strengthen the capacity of the project management at the national level with more human resources</li></ul>
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### 6.3.2. Gavi

The experience of Gavi in Sudan is very positive as a pioneer partner that promoted and supported fundamental health system reforms towards PHC. There is clear recognition at all levels of the health system that the achievements over the last five to six years wouldn't have been materialized without Gavi support. The major recommendations for Gavi are the following:

- Build on its strength of flexibility, using government systems of planning, budgeting, financing and procurement. The difference that such flexibility achieved by convincing the politicians to change and focus on strategic issues might have long term effects on the resources that are invested in the health system.
- As one of the pioneers of the HSS support in Sudan, it may also be necessary to look into and work with other partners to align their activities and work together. Both Gavi and the Global Fund are investing on HSS. The government is also moving towards integration of different vertical programs. It may be necessary to explore some sort of pooled mechanisms in the medium terms to reduce the transaction cost and achieve more value for money for the investments made. In the long term, as Sudan' systems become strengthened, more transparent and accountable, further measures of moving away from project type support could be considered.
- The investments made in the system strengthening in the first round of HSS support have strengthened the overall policy directions and some of the health systems directions. While some of the input based systems benefitted states and localities (human resources, rehabilitation and expansion of services, strengthening structures at state and locality levels), the software part of HSS strengthening (planning and budgeting, M&E and information systems, leadership and management) needs further investment to ensure that they are functioning and leading management teams at all levels that can deliver desired results. Gavi needs to continue investing on those soft areas of HSS.
- Review its fund channelling mechanisms and take actions on the causes of delay to ensure on time completion of support.

### 6.3.3. Gavi and Government together

- With the post MDG agenda moving towards universal health coverage and developing 'health in all policies', it is necessary to agree on how a holistic approach to HSS that is aligned to the country strategies and supports the realization of sustainable development goals (SDGs) can be achieved.
- From the experience of the first HSS support, it may be necessary to consider conducting a midterm review of the second round of Gavi HSS support to ensure that the overall programming considers long term strategic thinking and transformation of health systems.

## Annex 1: Sudan's Gavi HSS Support Evaluation Themes and Questions

Themes of Evaluation	Major issues to be assessed (document review and KIIs)
<b>Overall Sudan and Immunization context</b>	<p>Health sector context, national health sector strategic plan (specifically in relation to MCH and immunization services)</p> <p>What are the policies, strategies and plans guiding the development of the health sector?</p> <p>How and when will the National Health Plan be assessed/evaluated? What are the performance measures included in the National Health Plan?</p> <p>What is the planning cycle? When will the next National Health Plan be prepared?</p> <p>Who are the main donors and organizations in the health sector?</p> <p>Describe on-going health systems strengthening efforts - what donors are involved, where do they work, what is assistance provided for? How much is being provided?</p> <p>Summarize changes in health sector financing, organization/ management, workforce, service packages, service provision, etc.</p> <hr/> <p>Immunization context/ cMYP,</p> <p>What are the main features of the cMYP? What are the modalities for support to the cMYP?</p> <p>What is the role of Government and donors to achieve immunization targets?</p> <p>What is the total level of support from government, UN-organizations, international health initiatives and donors? What are the main modalities for that support?</p>
<b>The Decision to Apply for Gavi HSS Funding</b>	<p>Why was a decision made to apply for Gavi HSS funding? What influenced the decision?</p> <p>When was the decision made to apply for Gavi HSS funding?</p> <p>Who was involved in the decision making process?</p> <p>What was your role in that process?</p> <p>How would you describe the decision making process (an open participative process or a top down decision)?</p> <p>What were the alternative sources of funding available at the time the decision was made to fund HSS?</p> <p>Were there any consultations / opinions sought by the people making the decisions?</p> <p>What was the role of the development partners in making this decision?</p>
<b>The Application Process for Gavi HSS Funding</b>	<p>Would you describe the process as being country or donor driven? Why?</p> <p>What was the role of the development partners in assisting with the development of the application?</p> <p>Who is represented on the HSCC? Does it function effectively? What is the role of country stakeholders in this committee?</p> <p>Are there any linkages between the HSCC and any other health sector planning bodies? If so which ones?</p> <p>Was attention given to the resources available for HSS through other sources at the time of the design – GFATM, bilateral etc. and how these might be used to complement each other?</p> <p>What is the responsibility that the various stakeholders have been assigned in monitoring the implementation of the HSS proposal? Are they fulfilling that responsibility effectively?</p> <p>How time consuming was the proposal development process? Did it divert significant amounts of technical and management time away from other priorities? Did this have any impact on the implementation of the MoH's on-going annual programme of work?</p>
<b>Identification of barriers to immunisation &amp; situation analysis</b>	<p>As a result of the situation analysis etc. were specific criteria developed to support the design of the Gavi HSS proposal? How were the themes and issues selected for the development of the proposal?</p> <p>To what extent does the support focus on the poorest groups?</p> <p>Which groups are missed out in terms of immunisation? (States, sex, social group)? Does the HSS grant support specifically focus efforts on such groups?</p>
<b>Gavi HSS Application Review Process</b>	<p>How was the peer review process structured? What issues were identified in the peer review process? What were the issues? What was done about with these issues?</p>

Themes of Evaluation	Major issues to be assessed (document review and KIIs)
<b>Alignment and Harmonisation of HSS support with Sector and National Plans</b>	<p><b>Alignment</b></p> <p>Was the development of the HSS application effectively linked to and consistent with, a broader national development plan?</p> <p>Was proposal development linked with other existing forums or groups responsible for national and/or health sector planning?</p> <p>Is the proposal content linked to national health priorities and plans to strengthen health systems?</p> <p>How was the Gavi HSS proposal is linked to national health priorities?</p> <p>Was the Gavi HSS proposal linked to the health sector’s financial planning systems? Is the proposal “on plan” and “on budget”? Is there an MTEF or equivalent for the sector? If so is the HSS proposal included in that?</p> <p>To what extent did the Gavi HSS proposal and funding use national systems for monitoring, finance and procurement?</p> <p>Was the Gavi HSS financial year aligned with the MoH financial year? If not, what problems did this create?</p> <p><b>Harmonisation</b></p> <p>To what degree has the HSS support been harmonized with other on-going programmes?</p> <p>What, if any, activities were duplicated by different funding sources? To what extent did the different approaches use common approaches? Were overlap between different funding sources been avoided? If so, how?</p> <p>Did the IHP+ offer an opportunity to improve harmonisation? Has any progress been made in this direction?</p>
<b>Measuring the Results of Gavi HSS Support</b>	<p>Was there a monitoring framework in place to assess progress in implementing HSS? What were its key characteristics? Which indicators were tracked? Was the framework applied effectively? Can this set of indicators demonstrate progress towards health sector strengthening and/or improvements in immunisation coverage?</p> <p>Did the monitoring framework take into account the capacity of Sudan to absorb the additional resources &amp; deliver against the HSS plan?</p> <p>Was the monitoring system integrated into the national reporting system? Where they differ, what was the value added and at what extra expense in terms of additional transaction costs?</p> <p>What was the capacity at country level to monitor and report on Gavi HSS performance?</p> <p>What was the quality of the Annual Performance Review?</p> <p>Was reporting being carried out in an effective and timely way? Who are the recipients of the reports? Are they being distributed widely to other stakeholders within the sector?</p> <p>Does the HSCC and other stakeholders used the data provided effectively for planning and monitoring purposes?</p> <p>What other reports were produced that contributed to HSS monitoring / tracking?</p> <p>What were the systems: health information, financial, management etc. that were used to ensure that Gavi HSS activities are being carried out as planned?</p> <p>To what extent have the reported results acted as a trigger for disbursements? Was a performance based approach used for disbursements?</p> <p>What was the impact of Gavi HSS monitoring requirements on efforts to strengthen HMIS quality and the use of data for planning purposes?</p> <p>Was there any evidence that the process of developing and implementing the HSS proposal has resulted in additional efforts to strengthen health systems or encourage additional donor support?</p>
<b>Implementation of the Gavi HSS proposal</b>	<p><b>The capacity to implement Gavi HSS</b></p> <p>How effective were HMIS and supervisory systems in identifying problem areas/districts and performance gaps? What are the main barriers to effective oversight?</p> <p>Did Gavi HSS funds achieving what they intended to? If not, why not?</p> <p>What were Best practices and lessons learnt in the HSS implementation?</p>

Themes of Evaluation	Major issues to be assessed (document review and KIIs)
	<p><b>Have national, state and locality health teams received the planned technical and other support as planned?</b>            What was its focus? Was it found to be useful? Has it led to changes? How will these impacted on service delivery?            What have been the strengths of national, regional and global support mechanisms in supporting implementation? Which areas still require further improvements?            What role did CSOs, NGOs, the private sector, and national researchers play in implementing HSS activities and in monitoring HSS objectives and activities? In your opinion, are other partners and stakeholders appropriately involved?</p>
<p><b>Sustainability of Gavi HSS Results</b></p>	<p>Was the HSS support realistic? Did the proposal address sustainability through capacity building at the individual, organization and systems levels?            Have long-term recurrent implications been assessed?            What is the role of other funders – both in terms of potential future spending and in terms of what they are currently supporting which also needs to be sustained?            What are the particular sustainability issues raised by the nature of the Gavi HSS support?            What steps were taken to ensure the long-term sustainability of coverage?</p>
<p><b>Gavi HSS Financial Management, Disbursement and Predictability</b></p>	<p>What was the duration of the HSS support and how did this relate to the national planning cycle?            Were funds provided as set out in the programme agreement? If not, what are the reasons?            Can the time elapsed between funding requests and disbursement be measured? What is the average duration between request and disbursement?</p> <p><b>Allocation of funds</b></p> <p><b>Other funding for HSS Procedures</b></p> <p><b>Reporting</b></p>
<p><b>Management and coordination of Gavi HSS funding</b></p>	<p>Who was responsible and accountable (and to whom) in the MoH and at other administrative levels for ensuring the effective delivery and monitoring of the Gavi HSS support? Was it carried out as stipulated in the plan? What were the successes and challenges?</p>
<p><b>Impact of Gavi HSS Funding</b></p>	<p>What were the major impact and outcome level results achieved as a result of the HSS support?            It is possible to realistically attribute improved outputs and outcomes to Gavi support?            Was Gavi support appeared to have been additional? Check by looking at the budget allocation over the years.            Were there any unanticipated consequences or benefits of Gavi HSS on donor coordination and participation, state and locality levels and operational level functioning?            What were the main challenges related to achieving HSS outcomes? What were the most important factors that facilitated success? Include health sector factors as well as contextual or environmental factors.            What are some of the key contextual factors, which influence results?            What would have happened if Gavi HSS had not been created? Is it additional money and does it add value to existing ways of doing business?</p>

## Annex 2: KII Guiding Questions at the National Level

### Main Questions

1. What has been the experience of Sudan with regards to Gavi HSS in terms of each of the following: design, implementation, monitoring, integration (harmonization and alignment), management, and outputs/outcomes?

2. What have been the main strengths of Gavi HSS, and what are specific areas that require further improvement during design and implementation?

### **What results have been achieved on the Outputs and Outcomes components of the inputs-to-impacts framework? Has GHSS achieved its objectives?**

#### **Outputs**

- What changes in system components, positive and negative, have resulted from GHSS in any of policy, financing, human resources, supply system, planning and budgeting and M&E components relevant to immunisation and/or relevant to the wider health system (how well can improvements be attributed to GHSS, and what measures this best)?

#### **Outcomes**

- What changes in immunisation coverage have resulted from GHSS (how well can improvements be attributed to GHSS, and what measures this best)?
- What improvements in unit costs, or delivery efficiencies have been achieved?

### **Why and how have these results been achieved: what aspects are making positive contributions and what are the important constraints on better achievement?**

#### **Resource inputs**

- Was GHSS funding sufficient to make a difference, are improvements sustainable, and was the funding predictable?
- Was it truly additional and not replacing government or other funding? Do other funding sources also fund the support as outlined in the application?
- How was technical support procured? Was technical support relevant, sufficient, timely and of adequate quality – to make a difference to the intended systems? Of not, why?

#### **On Process**

- What motivates Sudan's decision to apply (from 'really relevant to our problems' to 'just another source of money')?
- Were the application guidelines effective? What have you learned from the process?
- Was GHSS project well designed: were they addressing the right bottlenecks or were there higher priorities, were they feasible to implement?
- Who actually designed the application and what were the incentives of participants
- How far have the application design and approval country driven, aligned, harmonised, predictable, additional, inclusive and collaborative, catalytic, innovative, results-oriented and sustainable (note that these are not necessarily compatible with well-designed programmes but they are Gavi sub-objectives in their own right)?
- How was the pre-approval process working, was it constructive, was it an adequate check on the quality of technical support?
- Was implementation and management effective and who are the participants
- Was implementation and management country driven, aligned, harmonised, predictable, additional, inclusive and collaborative, catalytic, innovative, results-oriented and sustainable (same comment as above for design)?
- Was monitoring measuring the right things, integrated with sector monitoring, being done well, being used to improve implementation?

#### **Partner mechanisms**

- How well is the partnership working in Sudan to ensure that all the necessary tasks are done?

#### **Gavi mechanisms**

- Were Gavi's accountability and governance structure and processes conducive to delivering HSS outputs and outcomes, and what would make them better (big issues of project style

support, vertical programmes effects, lack of Gavi presence in country, total reliance on countries and 'partners', country-driven versus accountability)

- How well is the IRC process working, what Sudan's views of this function and its performance?
- How well is the APR process working, what is Sudan's view on this?

### **Is GHSS worth doing – is it improving immunization coverage and/or cost effectiveness of delivery?**

#### Sub-questions:

- Were GHSS objectives (using GHSS to improve immunization) and impact and outcome measures the right ones: are they appropriate to country needs and capacities
- What positive changes are resulting from GHSS in terms of:
  - Outputs of the HSS support
  - Outcomes for services coverage, including immunization
  - Contributing to the impact indicators?
  - Improved delivery system mechanisms or capacity likely to lead to better immunization coverage (outputs)
  - Improvements to sector delivery systems beyond immunization
- What are the successes and achievements and as well as the challenges in strengthening the following health systems through Gavi HSS support?
  - Improving management and organization
  - Strengthening of health planning capacities
  - Improve capacities and knowledgebase for equitable and sustainable health financing
  - Strengthening of health Information system
  - Develop health human resources systems and policies
  - Expanding immunization coverage
  - Improve access to the essential MCH primary health care services at lower PHC facilities and first referral level.
- Are these positive changes worth the money spent and are they sustainable, is the GHSS investment case sound?
- What were the unintended effects of Gavi HSS support (both positive and negative)?

### **Counterfactual: Would it have been done better by other mechanisms, would it have been done at all, would it now be done better by other mechanisms (have new mechanisms emerged that could do it better)?**

#### Sub-questions:

- What would have happened without Gavi HSS?
- What other mechanisms might have done it or might do it now and what are the advantages and disadvantages (does Gavi HSS funding add more or less value)?
- Would another mechanism be doing better at HSS for immunization etc.?
- Would another mechanism be doing better at HSS for wider health services delivery?

## Annex 3: KII Guiding Questions at the SMOHs and Locality Levels:

### Annex 3.1 Questions for Component 2 States and Localities only

Please describe for us the major efforts made over the last six to seven years to rehabilitate, equip and furnish and expand PHC coverage in the state/localities? What were the major successes and challenges in

- Expansion and rehabilitation of hospitals and PHC facilities ?
- Equipping and furnishing them?
- In expanding cold chain management?
- In providing services by removing demand side barriers?

If progress is made in the above areas< do you know the sources of funding of these interventions? Are you aware of Gavi HSS contribution to these efforts?

If you are aware of Gavi support, please describe to us the unique features of Gavi HSS support as compared to other sources of funding in terms of:

- Involvement and prioritization of activities and the relevance of the overall support to your context?
- Alignment and supporting the SMOH's/localities priorities and annual plans?

What were the planning, reporting, and financial management requirements of accessing HSS support from FMOH, if any? As compared to other sources of funding that the SMOH is getting, how cumbersome has been the transaction n cost of the support program in terms of:

- Planning and budgeting?
- Routine performance reporting?
- Financial reporting?

What are the major enabling/ constraining factors that facilitated/ hindered the achievement of the HSS support interventions? Please describe to us how you tried to manage these contextual factors to facilitate implementation?

What were the contribution of the State/locality government in financing and implementation of the HSS support interventions? Has the support, do you think, had any influence either on the allocation of state/locality government resources? If yes please describe? (Probe of additionality/catalytic and or substitution effect)

What were the major success stories and failures in increasing coverage of PHC service in general and EPI services in particular?

## Annex 3.2 Questions for Component 1: All sample States and Localities

Please describe for us the major progresses or changes made at the state and locality levels over the last six to seven months in terms of:

- Organization and management (leadership and management training, provision of equipment's, reorganization, putting job descriptions and structures in the SMOHs and localities)?
- Planning and budgeting?
- HMIS and monitoring and evaluation?
- Health financing?
- Human resources?

Are you aware of the sources of funding for these capacity and HSS strengthening efforts? Are you aware of Gavi HSS support in this regard?

When you get different funding from partners for systems strengthening efforts, how do you coordinate and harmonise them? Please describe any successes/best practice or challenges?

What were the major impacts of the following in the functioning of the SMOH and locality?

- Reorganization and on job how to make health management teams active (decision making, team work)
- Provision of different equipment?
- Training Leadership and management training?
- Definition of the PHC services?
- On job trainings on planning, budgeting, and definitions of planning systems and procedures?
- CPD?
- AHS?
- Design and implementation of community and overall HIS strengthening and development of M&E?

How effective were the capacity building measures in terms of putting in place:

- Systems and structures
- Systems infrastructures (hardware)
- Skills

What were the major facilitative and constraining factors that enables/deter the well functioning of these health systems in the state/locality?

Do you think that the investment in the above health systems has helped you in bringing changes in overall health service coverage in general and in immunisation coverage in particular in the state/locality?

**What would happen if there was no Gavi HSS support?**

- Would it have been done better by other mechanisms? Would it have been done at all?
- What other mechanisms might have done it or might do it now and what are the advantages and disadvantages (does Gavi HSS funding add more or less value)?
- Would another mechanism be doing better at HSS for immunization etc.?
- Would another mechanism be doing better at HSS for wider health services delivery.

## Annex 4 Questions for Development Partners and implementing partners

Do you have any information on the how the HSS proposal was developed? If yes, please describe to us what was the process through which the HSS application, developed, endorsed in Sudan? What were the comments given by the Gavi Independent Reviewed Committee and how was it addressed? What was your organization's role in the design and implementation of the HSS support?

What are the major accomplishments of the Gavi HSS support in Sudan? What worked well, in terms of

- Organization and management (leadership and management training, provision of equipment's, reorganization, putting job descriptions and structures in the SMOHs and localities)?
- Planning and budgeting processes?
- HMIS and monitoring and evaluation?
- Health financing?
- Human resources?
- Increasing access to PHC services in general and EPI services in particular?

How did it work? What factors played a role of achieving the outcomes? What are the good practices? Enabling environments (government an partners commitment, organization and management, resource mobilization, coordination, etc.)

What were the major problems? What did not work well? What lessons would you like to share with us in the following systems?



- a. Organization and management (leadership and management training, provision of equipment's, reorganization, putting job descriptions and structures in the SMOHs and localities)?
- b. Planning and budgeting processes?
- c. HMIS and monitoring and evaluation?
- d. Health financing?
- e. Human resources?
- f. Increasing access to PHC services in general and EPI services in particular

How do you assess the relevance of the HSS support to the government priority: alignment to the HSS challenges as well as country strategies? Addressing equity in some of the focused states?

Effectiveness:

- a) Were the outcome and output targets planned in HSS support achieved (at federal and state levels)? What are the lessons learnt from the Implementing HSS support in health systems strengthening?
- b) Were the technical/organizational assistance planned in the HSS available on time to effectively delivery the outcomes? How adequate was the quality and quantity of the TA provided?
- c) How do you assess the effectiveness of capacity building interventions (trainings, both in service and CPD, provision of equipment and vehicles, development of systems and their implementation)? What should be done to strengthen the capacity in the country?
- d) How effective do you think the Gavi support was in terms of being:
  - Flexible to support emerging HSS priorities?
  - Catalytic to mobilize additional funding from government and/or development partners?
  - Strengthening government PFM systems by working through them?
  - Impact of emergency deployment on the regular services of MHNTs

What support does your agency provide in health systems strengthening? And how was the support given through the Gavi HSS is being harmonized with your support?

What do think level of funding by the government for the health sector in general and the health systems strengthening in particular? How well do you think the HSS support and other resources mobilized were they used?

Did you provide Technical Assistance to HSS support? Overall how do you value the technical support provided under HSS support in terms of its relevance, quality and adequacy? Has it enabled capacity building and were there strategies for skill transfer to the government staff?

Equity:

The second component of the HSS support was aimed at strengthening four targets states to reduce inequitable coverage through the expansion PHC services? How far do you think the equity aspect of the HSS support has been realised? Any successes and challenges on improving access and utilization of services among States and Localities?

### ***Sustainability***

What do you think are the financial and programmatic sustainability of interventions and outcomes achieved through HSS support? What are the major successes and risk factors for sustainability?

Given Sudan is facing the challenge of brain drain in the health sector, what is the implication of the outmigration of health systems workers in the sustainability of the systems being established? What do you think the government of Sudan should do to address this major challenge?

## Annex 5 KIIs or FDGs for the beneficiaries of HSS-

## support related capacity Building trainings

Please describe for us the type of capacity building measures that the Gavi HSS support tried to put in place in the State/Locality?

- Redefinition of new structures, roles and processes
- Provision of support infrastructure and staff
- Building of new tools and skills and practices

What are the skills you have gained from training and skill upgrading courses?

What were the major shifts you observed in yourself and your colleagues (you did differently after going through the training) in the management of the state and locality health systems?

Which training programs were effective? Which were not? And what was the major difference between what you think was effective and what you think was not effective?

What was the major impact that the capacity development instils at:

- At individual level. like yourself?
- On specific health systems targeted for strengthening (leadership, planning. M&E etc.)?
- On institutional level the state and local level?

How many of your colleagues that you trained with are still working in the health system? What do you think should be done to retain the capacities built in the health system?

Do the training programs address the needs in your context or would you prefer other types of trainings?

## Annex 6: Data to be collected and verified from secondary sources

### A2.1 Impact and Outcome Indicators

Indicator	Data Source	Baseline Value	Source	Date of Baseline	Target	Date for Target	Achievement 2013	Comments about achievement of HSS targets
Maternal mortality rate per 100,000 LB	Sudan Household Survey (SHHS)	638/100,000 LB	SHHS	2006	Contribute to reducing MMR by 50% of baseline	2013		
% deliveries attended by skilled personnel	SHHS	49.2	SHHS	2006	70%	2013		
Under five mortality rate (per 1000 LB)	SHHS	102/1000 LB	SHHS	2006	Contribute to reducing IMR by 50% of baseline	2013		
National DTP <sub>3</sub> coverage (%)	SHHS	66%	SHHS	2006	90%	2013		
% districts achieving ≥ 80% DTP <sub>3</sub> coverage	WHO/UNICEF Joint Report	72%	WHO/UNICEF Joint Report	2006	100%	2013		
Use of Oral Dehydration Therapy (ORT)	SHHS	54.57%	SHHS	2006	80%	2013		
% children 6-59 months received vitamin-A supplementation within last 6 months	SHHS	76.40%	SHHS	2006	90%	2013		

### A2.2 Output indicators

Indicator	Numerator	Denominator	Data Source	Baseline	Source	Date of Baseline	Target	Date for Target	Achievement 2013	Comment
<b><i>Institutional capacity, management and organization</i></b>										
% SMOH with functioning organizational structure as per standards	SMOH with organogram positions filled with qualified and trained key staff	15 Northern SMOH	Administrative reports on a standardized checklist	n. a.	Administrative reports	2008	100 %	2011		
% SMOH with functional planning directorates	SMOH with functional planning directorates	15 Northern SMOH	Administrative report on a standardized checklist	n. a.	Administrative reports	2008	100 %	2010		
% States planning directorates using standard planning format	States planning directorates using standard planning format	15 Northern SMOH	"	n. a.	Administrative reports	2008	100 %	2010		
% SMOH with functioning directorates of human resource	SMOH with functioning directorates of human resource	15 Northern state MOH	"	n. a.	Administrative reports	2008	100 %	2010		
<b><i>Services delivery, access and utilization, in 12 northern states excluding the three Darfur States</i></b>										
% health facilities (RH, RHC, UHC, Dispensary/BHU) providing essential PHC package	Number of health facilities (RH, RHC, UHC, Dispensary/BHU) that provide essential PHC packages	PHC health facilities (RH, RHC, UHC, Dispensary/B)	Health facility survey	35%	Health facility survey	2004 (updating planned in 2008)	50	2011		
6.% PHC workers who received integrated in-service training during last 1-year	PHC worker who received in-service integrated training	PHC health facilities (RH, RHC, UHC, Dispensary/BHU)	Health facility survey (human resources)	n. a.	Health facility survey	2008	50 %	2011		

Indicator	Numerator	Denominator	Data Source	Baseline	Source	Date of Baseline	Target	Date for Target	Achievement 2013	Comment
7. Health services utilization rate	Total outpatient consultations in the 15 Northern states	Total population in the 15 northern states	HH health services utilization survey	< 1 per person per year	Annual statistical report – but covers only public sector	2008 – HHS utilization survey + I health expenditure survey	> 1 per person per year	2011		
			Routine annual statistical report							
8.% PHC facilities reported timely for health information	Health facilities that submit statistical report	PHC facilities in the 15 northern states	Annual statistical report	33%	Annual statistical report	2006	60%	2011		

Annex 7: Individuals met

No	Name	Position	Contacts
Khartoum			
1	Dr.Isameldin Mohammed Abdalla	Undersecretary FMOH	<a href="mailto:isam@fmoh.gov.sd">isam@fmoh.gov.sd</a>
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## Annex 8: Terms of reference

### I. SUMMARY OF GAVI/HSS

Sudan Household Health Survey, 2006, revealed that maternal mortality ratio for Sudan was 638 per 100,000 live births, infant mortality 71 per 1,000 live births and under-five mortality 102 per 1,000 live births, one of the reasons for the slow progress in achieving the health related development goals (Millennium Development Goals- MDGs). This situation is due to the increase in childhood illnesses (Malaria, pneumonia, diarrhea, septicemia, malnutrition), including diseases that are vaccine preventable (Measles, Diphtheria, Tetanus, Pertussis), and weak health systems that are incapable of providing primary health care (PHC) services essential for maternal and child health to meet this need, especially in underserved states. Given this background, and to complement other ongoing health system strengthening initiatives (e.g. Decentralized Health Systems Development Project co-financed by the government and the Multi Donor Trust Fund- MDTF) in 2007, the

Federal Ministry of Health (FMOH) applied for support from Gavi Alliance to address system barriers and the weak managerial capacities at state and locality levels that impede access to immunization services. Gavi/HSS project thus aims at contributing to the reduction of child and maternal morbidity and mortality (contributing to the achievement of MDG 4) by increasing access to priority health interventions in underserved states and improving the institutional capacity and performance of the decentralized health system in Sudan.

The project is thus framed into two components:

- Component 1. Building the institutional, organization and management capacity and system development. This component is implemented in all the states of Sudan, excluding the 4 MTDF states.
- Component 2. Improving service delivery and equitable access to quality PHC services

The project focuses on this second component which is mainly implemented in the 4 target states (White Nile, Gadaref, Sinnar, North Kordofan), selected as a result of having the worst indicators compared to national averages (coverage of PHC facilities - population facility ratio; coverage of immunization services-DPT3, Measles; Infant Mortality Rate; Under-5 Mortality Rate; Maternal Mortality Ratio). The project complements and is harmonized with other HSS support, including The Multi Donor Trust Fund, Decentralized Health Systems Development Project, 2008-2012 and GF/HSS Project, 2012-2014.

A Project Management Unit (PMU) at the Directorate General of Planning and International Health, FMOH, manages both Gavi and GF/HSS projects while these are implemented by other FMOH Departments i.e. Planning, PHC and EPI and Human Resources for Health Departments and States Ministries of Health (SMOH). Technical Assistance is provided by WHO and UNICEF which follows up on progress while the whole process is overseen by Health Sector Coordination Committee (HSCC), that includes representatives from WHO, private sector, civil society, UNICEF, WB and Ministry of Finance.

#### **Budget of Gavi/HSS Project**

The total budget for Gavi/HSS support is US\$16.15 million spread over 5 years (2008-12). Implementation was extended until December, 2013 as a result of delayed fund disbursement during 2009-2010.

#### **SPECIFIC OBJECTIVES OF Gavi/HSS:**

By end of 2012:

1. strengthen/build core systems and capacities (organization and management; health planning and development, health financing; health management information system and monitoring and evaluation) in 15 Northern SMOHs and 20 Localities/districts;
2. develop health human resources and strengthen the capacity of 11 SMOH to produce, deploy and retain PHC workers focusing on nurses, midwives, lab technician and multipurpose health workers in;
3. contribute to achieving 90% EPI coverage in all 15 Northern states through increasing fixed site by 25% from the current level of 1,260 facilities; and
4. contribute to achieving 75% equitable coverage and access to quality PHC services necessary for improved maternal health and child survival in the 4 targeted states.

#### **Gavi/HSS SUPPORT STRATEGIES:**

Component 1. Building the institutional, organisation and management capacity and system development. This first component addresses objectives 1 and 2. These are achieved through five subcomponents:

- 1.1: Improving management and organization
- 1.2: Strengthening of health planning capacities



- 1.3: Improve capacities and knowledgebase for equitable and sustainable health financing
- 1.4: Strengthening of health Information system
- 2.1: Develop health human resources systems and policies

Component 2. improving service delivery and equitable access to quality PHC services.

This second component addresses objectives 3 and 4. These are achieved through two subcomponents:

- 3: Expand immunization coverage
- 4: Improve access to the essential MCH primary health care services at lower PHC facilities and first referral level.

## II. AIM/PURPOSE OF THE EVALUATION

Evaluation of Gavi/HSS is part of the project's M&E plan, previously planned to be conducted in 2011 but due to project extension, will now be conducted in September, 2014.

The evaluation aims to assess whether the project's objectives, results were achieved, and determine if unplanned effects have occurred and why. It also aims to provide insight into why some interventions work and others do not and accordingly provide recommendations from the lessons learnt to improve implementation of the new HSS Grant, 2014-18 or potential reprogramming where appropriate.

The evaluation is specifically aimed at the following:

- To determine whether core systems and capacities (organization and management; health planning and development, health financing; health management information system and monitoring and evaluation) have been strengthened/ built among the target population.
- To determine whether systems for Human resources for health have been developed and capacities strengthened for the production, deployment and retention of PHC workers among the targeted SMOH.
- To assess whether Gavi/HSS has contributed to the increase in EPI coverage among the target population.
- To assess whether Gavi/HSS has contributed to the increase in equitable coverage and access to quality PHC services for MCH in the four target states.

## III. SCOPE:

The evaluation will cover the design and implementation (including preparation and submission of annual reports) and results (output, outcome, impact) phases of the project under different themes.

### a) Design and Implementation Phase

- To what extent did HSS application demonstrate clear linkages to immunization outcomes?
- To what extent were CSOs and partners actively involved in implementation?
- To what extent was management of the grant addressing the principles of harmonization (complementarity) and alignment?
- To what extent was implementation in line with the procedures used in the country, in particular financing and procurement Systems?
- To what extent were activities implemented?
- To what extent did the grant succeed in building systems and capacities (in terms of organizational structures and capacities in leadership and management, production of multi-task cadre, development of policies, support to training institutions)
- To what extent were planned activities reprogrammed? How relevant was activity reprogramming? What process was followed for reprogramming?
- What are the lessons learnt during implementation?
- To what extent was the implementation of the grant appropriately and comprehensively monitored (at both country and Gavi Secretariat level)? What were the challenges encountered in monitoring of the grant?

Efficiency

- Where the objectives of Gavi/HSS project achieved on time?
- Were the funds used efficiently and as planned? If not what factors affected the utilization rate of the funds received?
- To what extent were funds for HSS utilized to complement Gavi Immunization Support (ISS)?
- To what extent were Gavi's HSS funds complementary to other funding sources in the health sector (government sources, GF HSS, DHSDP)? What effect did this have on implementation of the grant?

#### Responsiveness

- To what extent was Gavi/HSS Project Management capable of reacting to any difficulties encountered during implementation?
- How appropriate and sensitive to changing contexts was the support provided by the Gavi Secretariat and local partners, during the implementation phase?

#### b) RESULTS

##### Outputs, outcomes and impact

##### Effectiveness

- To what extent were the objectives of Gavi/HSS project achieved?
- What are the major factors influencing the achievement or no-achievement of Gavi/HSS project objectives? (i.e Aide Memoir, TAP, Disbursement of Funds from Gavi Secretariat, FMA)
- What is the value added by Gavi HSS grant compared to other funding sources? What were the positive and negative consequences (intended and unintended) of Gavi/HSS project?

##### Sustainability

- How sustainable (financial and programmatic) are the achievements made by Gavi/HSS project at both national and state level?
- What are the factors that may affect the sustainability or non-achievement of sustainability of Gavi/HSS project (support to training institutions, civil works)?

## IV. METHODOLOGY

A mixed methodology is to be employed for the evaluation, comprising a guided desk review, structured interviews and field visits.

### a) Desk review:

Documents to be reviewed include those related to Gavi/HSS and Federal Ministry of Health:

#### a) Gavi/HSS related documents include, but are not limited to;

- Applications made by Sudan for Gavi/HSS support
- Feedback to applications made for Gavi/HSS support (Independent Review Committee IRC reports)
- Annual Progress Reports 2008-2012, including annexes
- Gavi's Decision Letters
- Financial Reports
- Audit Reports
- Financial Management Assessment Report (FMA),
- Aide Memoire between Gavi and FMOH
- Partnership Framework Agreement
- Progress reports
- Minutes of meeting for NHSCC/sub-CCM
- Contracts with implementing bodies

#### b) Federal Ministry of Health Documents include, but are not limited to:

- EPI Coverage Survey
- Sudan Household Health Survey (secondary analysis to be conducted on vaccination data, so as to be disaggregated by age, gender and place of residence).
- National Health Accounts, 2008
- Federal Ministry of Health Annual Statistical Reports

Review of the above documents should allow for (although not limited to) refining of the questions that will make up the structured interviews.

#### **b) Structured interviews**

Structured interviews will be conducted with all the following implementing bodies and partners: senior ministry of health officials including General Directors of programmes, Gavi/GF focal points, selected individuals from Federal Programmes and Directors General's and Planning Directors at the four Gavi states and with SMOH staff and health managers at facilities receiving Gavi/HSS support etc. HSS local partners (WHO, UNICEF, WB, GF etc.), Gavi Secretariat staff and any others who can contribute to the evaluation. The final list of interviewees will be determined in consultation with the steering Committee.

#### **c) Field visits**

Visits to the four Gavi/HSS target states and selected localities that have received support under the Gavi/HSS will be undertaken. These visits will enable the evaluators to observe and hear from beneficiaries on value-added by Gavi/HSS, in terms of improvement to health indicators, immunization as well as issues related to sustainability. For this purpose, interviews will be conducted with SMOH staff and health managers at facilities receiving Gavi/HSS support.

### **V. EVALUATION PROCESS**

#### **a) Oversight**

The National Health Sector / HSS Sub-CCM Committee will agree upon and endorse the TORs for the evaluation, oversee the evaluation process and endorse the final evaluation report.

A steering Committee, comprising of staff from FMOH, WHO, UNICEF, CSOs and states' representatives, will have the following function;

- develop TORs for the evaluation
- agree on procurement and selection process
- receive/review evaluation draft report and provide feedback

#### **b) Procurement**

This evaluation should be country-led for the purpose of ensuring national ownership and will therefore be led by a team of national consultants. Transparency will be catered for by the involvement of HSS partners and other stakeholders

The evaluation is to be carried out by a team with the following profile:

- i) one international consultant specializing in public health, with a background on Gavi/HSS and Immunization, country context and sound experience of at least five years in the monitoring and evaluation of healthcare projects and programmes;
- ii) two national consultants, one a physician specializing in public health and the other a health economist, with a background on Gavi/HSS and Immunization and at least five years experience in monitoring and evaluation of healthcare projects and programmes;

One of the national consultants will be designated as head of the team. The team of consultants will be responsible for data collection, analysis and review of the report, supported by data collectors and data analyst. The head of the team will be responsible for the quality of the final evaluation document.

The procurement procedure will involve the following:

- Advertisement in national and international newspapers
- WHO and UNICEF will facilitate by sharing CVs of eligible candidates
- Steering Committee will receive CVs and offers, review and select appropriate candidates

## VI. DELIVERABLES

7. The evaluation team must provide:

### a) Preliminary report

A preliminary report of the results will be received and reviewed by the Steering Committee, based on which amendments will be proposed to the evaluation team.

### b) Final report

This report will take into account the comments on the preliminary report and should include recommendations for Gavi and for the Ministry of Health.

Duration and Schedule for the Deliverables

The evaluation exercise will be carried out during April- August, 2014. Precise dates for the submission of deliverables to be agreed upon by Gavi/HSS Management and the evaluation team.

## VII. RESOURCES TO BE MADE AVAILABLE

The PMU will provide the team with assistance; facilitate logistics and coordination with implementers and partners throughout the mission as well as sign contracts with selected candidates.

## VIII. TERMS OF PAYMENT

Financing will be provided by Gavi/HSS Management under the terms negotiated and agreed upon with the consultants.

## IX. IV TIME FRAME FOR THE EVALUATION

Activities for evaluation	Pre evaluation	Evaluation period after implementation,2013				
		August	September	October	November	December
Develop TORs for evaluation						
Hire consultants for evaluation						
Develop evaluation plan						
Develop and Revise evaluation indicators						
Stakeholders analysis for evaluation						
Training of data collectors						
Data collection						
Data Analysis						
Produce reports final, summary, presentations, survey reports						

Dissemination (workshops, meetings)						
Decision making <ul style="list-style-type: none"> <li>• Meeting with Undersecretary for FMOH</li> <li>• Meeting with NHSCC</li> </ul>						

## **Annex 9: Key Reference documents**

Andrew Green and et al, 2011, review of health planning system in the health sector in Sudan

Federal Ministry of Health, 2007, Gavi/HSS application

Federal Ministry of Health, Annual Statistical Reports

Federal Ministry, 2013, National Health Sector Strategic Plan II

FMOH 2010, Assessment of the Organization and Management of Decentralised Health System

FMOH, 2008-2013, Gavi HSS Support Annual Progress Reports 2008-2013

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Verene Oustin 2012, Financial Management Assessment Report (FMA), Gavi Secretariat

WHO IHP +, 2013, Sudan JANS Report

World Bank, 2013, Implementation Completion and Results Report on Decentralized Health Systems Project.

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