



Audit Report

Global Fund Grants in the Republic of Sudan

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29 April 2019
Geneva, Switzerland

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The Office of the Inspector General (OIG) safeguards the assets, investments, reputation and sustainability of the Global Fund by ensuring that it takes the right action to end the epidemics of AIDS, tuberculosis and malaria. Through audits, investigations and advisory work, it promotes good practice, reduces risk and reports fully and transparently on abuse.

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Audit Report

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1. Executive Summary

1.1. Opinion

The Global Fund is a key partner and the largest donor in Sudan, providing funding for 56% of the country's HIV program, 49% of the TB program and 33% of the malaria program for the period 2017 - 2020.

Progress has been registered in the past two years: Indoor Residual Spray targets for the malaria program and key population prevention targets for the HIV program were over-achieved, and 78% of confirmed TB cases were successfully treated. However, the malaria program is struggling to achieve its intended impact on prevention, with an increase in malaria prevalence (from 3.3% in 2012 to 5.9% in 2016)¹. Despite an increased distribution of bed nets, their access and utilization remain low. For HIV, although the number of people on treatment has doubled in the last year, overall treatment coverage remains at 15% of the estimated people living with HIV. Poor data quality, including forecasting and quantifications, is adversely affecting the grants. There are shortcomings related to the quality of services, including the use of clinical symptoms to diagnose malaria, sub-optimal viral load testing for HIV/AIDS patients, and poor progress towards the TB/MDR target (currently at 30% of target). The processes and controls to ensure access to quality services therefore **need significant improvement**.

The audit found serious deficiencies in relation to asset management by both Principal Recipients, the Federal Ministry of Health (FMoH) and United Nations Development Programme (UNDP). In the OIG's sample-based review, assets procured using Global Fund grants totalling around US\$2.75 million were either not recorded, not located, or were registered as damaged without any supporting documentation. Principal Recipient controls over grant assets are either weakly designed (in the case of FMoH) or not effectively implemented (in the case of UNDP). Building work has taken place without proper budget approval or planning, and ineligible payments have been made without Secretariat approval. The selection process for procurement agents did not incorporate revisions in prices and alternative options, which could have provided better value for money.

Most of the capacity building initiatives agreed between UNDP and the FMoH to ensure a smooth transition of Global Fund grants remain unimplemented. Despite this, the main malaria grant has already transitioned; it is unclear whether the transition of HIV and TB grants will be conditional on progress on capacity building initiatives. Temporary staffing arrangements for the FMoH ended in December 2018, compounding capacity-related risks. Implementation, financial and assurance arrangements are therefore **ineffective**.

Weak quantification and forecasting processes are causing frequent overstocks and stock-outs, including a recent nationwide stock-out of antimalarial drugs. While central-level inventory management is efficient, effective and in line with international best practice, it is weak at state and facility levels, due to weak supervision and accountability, and inadequate human resources capacity and training. There is poor monitoring of inventory stock levels, poor or varied inventory records, weak management of expiries, and frequent use of emergency orders. The efficiency and effectiveness of procurement and supply chain processes therefore **need significant improvement**.

1.2. Key Achievements and Good Practices

Efforts to improve malaria prevention, diagnosis and drug resistance: In 2017, 251,000 Long-Lasting Insecticide Nets (LLINs) were distributed through antenatal clinics to ensure universal coverage.² Sudan introduced a tracking system for LLINs in 2016 to monitor LLIN ownership, utilization and durability, and increased the use of Rapid Diagnostic Tests from 10% in 2012 to 31% in

¹ Sudan Malaria Indicator Survey (2016), Federal Ministry of Health

² Out of a total of 5.74 million nets. The remaining 5.49 million were distributed through mass campaigns.

2016.³ Drug adherence guidelines were also introduced to promote the efficient use of drugs, and to monitor drug resistance symptoms in patients.

TB Testing and MDR-TB treatment improvements: Sudan is scaling up the use of GeneXpert Technology to expand diagnosis of presumptive cases; of the 72 GeneXpert machines in the country, 52 are currently functioning. New WHO guidelines on using short-term regimen for Multi-Drugs Resistant tuberculosis (MDR-TB) cases were adopted in 2016, and drug procurement has started.

HIV/AIDS treatment scale-up and prophylaxis introduction: In 2016, Sudan adopted UNAIDS fast tracking (90-90-90) and WHO's test and treat policy in its National Anti-Retroviral Treatment (ART) guidelines. This has resulted in a doubling of the number of people on antiretroviral therapy, reaching 7,630 in 2017. The program has also improved clinical outcomes, reduced HIV transmission rates, and simplified HIV care and treatment. Female sex workers and men who have sex with men are now using Pre-Exposure prophylaxis, an HIV drug, to lower their infection risk.

1.3. Key Issues and Risks

Need for improved asset management and procurement controls: In 2018, the Office of Audit and Investigation of the principal recipient UNDP, acting on internal allegations from the Sudan office, conducted an investigation into the diversion of Global Fund grant fixed assets, and procurement irregularities. The investigation concluded that the allegations were substantiated and, based on the information at the time, quantified the losses as US\$846,000. Based on UNDP's determination of losses, the Global Fund Secretariat signed an agreement for the repayment of this amount by UNDP. The money was subsequently refunded while the OIG audit was in progress.

The OIG audit identified significant fixed-asset issues with both Principal Recipients. In particular, the audit could not locate US\$1.3 million of fixed assets which had been recorded as being at a warehouse. An additional US\$0.35 million of assets had no location identified. Procurements bought with grant funds worth US\$0.3 million were not recorded in registers. Assets worth US\$0.8 million had been recorded as damaged, without further detail. The audit was not able to determine whether there was an overlap between the missing assets identified by the OIG and the missing assets that were covered by the repayment agreement between the Global Fund Secretariat and UNDP. Thus, there is a risk that losses incurred by the Global Fund grants could potentially be higher than those already repaid by UNDP. A referral has been made to OIG Investigations, who will review this further in collaboration with UNDP's Office of Investigation and Audit.

Under the Health Systems strengthening grant, the FMOH increased the budget for building work for Centers for Professional Development from US\$200k to US\$2 million, without proper approval. The FMOH authorized an additional amount of US\$0.8 million as compensation to contractors without obtaining Global Fund approval. One of the sites selected for a building was unsuitable; as a result, construction was aborted and the US\$165k advance payment made to the contractor was lost. The value-for-money analysis performed by the Country Team for the Grant Approval Committee was not resubmitted after assumptions for unit costs for commodities and overhead costs were materially changed, making the initially selected bidder more expensive. Pooled Procurement Mechanism-based arrangements would have been more efficient and sustainable.

Challenges with malaria prevention, data quality and quality of services: Despite an overall three-fold increase in distribution of bed nets between 2015 and 2018, malaria prevalence has increased. The 2016 Malaria Indicator Survey revealed that only 43% of people living in targeted areas had universal access to a bed net⁴, and only 35% of those people actually used them. The FMOH has not identified the reasons for these results, hindering progress on prevention. Compounding the problem, LLINs distributed in 2017 and 2018 were distributed after the peak malaria transmission period, restricting their effectiveness in malaria prevention.

³ Sudan Malaria Indicator Survey (2016), Federal Ministry of Health

⁴ Defined as one bed net for every two people

Inconsistent and unreliable malaria data are affecting forecasting and quantification, leading to expiries and stock-outs. This is mainly due to poor accountability, lack of supervision and frequent stock-outs of registers. As a result, the Secretariat and in-country stakeholders have had to exclude new malaria indicators from routine reporting as an interim measure⁵, instead tracking performance through planned health facility surveys. This arrangement is costly and cannot replace routine reporting on service delivery indicators in the long-term.

Quality of service issues were noted, including the use of clinical diagnosis rather than laboratory confirmation, and excessive drug prescribing, both of which can contribute to drug resistance. The absence of regular viral load tests for HIV patients also risks unnecessary patient deaths and drug resistance. There is a need to improve External Quality Assurance for TB diagnosis and to expand MDR-TB diagnosis.

Gaps in quantification and forecasting, supply chain and inventory management at states and health facilities: Sudan has been suffering from a nationwide stock-out of antimalarial drugs since September 2018. Contributing factors include lack of meetings of quantification and forecasting committees, the minimum and maximum stock levels policy not being applied, missing or erroneous reporting, lack of record keeping at health facilities, and weak management of expiries. Supply chain personnel have received minimal training, and supervision visits are rare and inadequate. These factors have resulted in inefficiencies at the state level and monthly emergency orders.

Unaddressed capacity and implementation gaps: Following the 2015 OIG audit, UNDP put together a capacity development plan, with the participation of other stakeholders including the FMOH. This was followed by a transition plan to transfer the PR to the FMOH, which was finalized in 2017. However, there have been delays in implementing key capacity-building activities, including recruiting key positions, finalizing the project operating manual, and conducting state-level capacity assessments and capacity development planning.

Despite these delays, the malaria grant has been transferred to FMOH, although the health product procurements and LLIN distribution components have been outsourced, while the TB and HIV grants are scheduled to transition in 2019 and 2020 respectively. Due to a lack of clarity and accountability, capacity initiatives are not being prioritized, and there is inadequate oversight on the transition plan's progress from the Country Team and the Country Coordinating Mechanism.

1.4. Rating

	<p>Objective 1: the implementation, financial and assurance arrangements in supporting the achievement of grant objectives.</p> <p>OIG rating: Ineffective</p>
	<p>Objective 2: the systems, processes and controls in place to ensure access to quality services to beneficiaries, including the data to aid decision-making.</p> <p>OIG rating: Needs significant improvement.</p>
	<p>Objective 3: the efficiency and effectiveness of procurement and supply chain processes and systems to ensure the timely availability of quality medicines, health and non-health products.</p> <p>OIG rating: Needs significant improvement.</p>

⁵ These indicators include: 1) Proportion of malaria cases (presumed and confirmed) that received first line antimalarial treatment at public sector health facilities; 2) Proportion of health facilities without stock-outs of key commodities during the reporting period; 3) Proportion of suspected malaria cases that receive a parasitological test at public sector health facilities; and 4) Proportion of confirmed malaria cases that received first-line antimalarial treatment at public sector health facilities.

1.5. Summary of Agreed Management Actions

The Secretariat, in collaboration with the Federal Ministry of Health (FMoH), will improve grant asset management and procurement controls by including budget monitoring, procurement review, asset management and contracting in the Fiscal Agent's scope of work, and including asset management assurance in the Local Fund Agent's work. The Secretariat will also re-analyze the procurement implementation options for health products, determining future procurement arrangements during the Country Portfolio Review.

The Secretariat will support efforts to improve program and data quality across the three disease programs by ensuring that the FMoH conducts surveillance system assessments, develops a quality of services improvement plan based on Health Facility Survey results, and develops an improvement plan to address the malaria resurgence. The Secretariat will also support efforts to improve quantification, forecasting and supervision of health commodities by strengthening the forecasting and quantification committee's terms of reference and their implementation, and clarifying supervision roles and responsibilities. The Secretariat will also work with FMoH, UNDP and other country stakeholders to update the transition plan. Accountability for implementing the plan is with the FMoH, with the Secretariat responsible for monitoring progress.

2. Background and Context

2.1. Overall Context

The Republic of the Sudan is the third largest country in Africa, and has a population of 39 million. A federal state, it is comprised of 18 States divided into 184 localities. Classified as a lower income country by the World Bank, Sudan ranks 167 out of 189 countries in the 2018 UNDP Human Development Index and 175 out of 180 in Transparency International's 2017 Corruption Perception Index.

A 2005 peace agreement led to Sudan's southern states seceding in 2011 to create the Republic of South Sudan. Sudan has suffered multiple economic challenges, notably through the secession of oil revenue (which accounted for the majority of government revenue and 95% of exports) to South Sudan, and US economic sanctions, in place since 1997. Regular double-digit annual inflation peaked at 61% in 2018, according to the Sudanese Central Bureau of Statistics.

Armed clashes continue in certain areas (South Kordofan, Blue Nile, and Darfur) and two million people are displaced, affecting access to health services and grant implementation.

2.2. Differentiation Category for Country Audits

The Global Fund has classified the countries in which it finances programs into three overall portfolio categories: focused, core and high impact. These categories are primarily defined by allocation amount size, disease burden and impact on the Global Fund's mission to end the three epidemics.

Countries can also be classed into two cross-cutting categories: Challenging Operating Environments and those under the Additional Safeguard Policy. Challenging Operating Environments are countries or regions characterized by weak governance, poor access to health services, and manmade or natural crises. The Additional Safeguard Policy is a set of extra measures that the Global Fund can put in place to strengthen fiscal and oversight controls in a particularly risky environment. Sudan is:

	Focused: (Smaller portfolios, lower disease burden, lower mission risk)
	Core: (Larger portfolios, higher disease burden, higher risk)⁶
	High Impact: (Very large portfolio, mission critical disease burden)
	Challenging Operating Environment
	Additional Safeguard Policy

2.3. Global Fund Grants in the Country

The Global Fund has signed grants for over US\$666 million and disbursed over US\$572 million to Sudan since 2005. There are currently three active grants:

Principal Recipient	Grant Number	Component	Grant Period	Grant Signed Amount US\$	Grants Disbursed to date
Federal Ministry of Health of the Republic of Sudan	SDN-M-MOH	Malaria/RSSH	Jan 2018-Dec 2020	100,783,761	29,391,539
United Nations Development Programme	SDN-T-UNDP	TB	Jan 2018-Dec 2020	12,262,049	3,675,435

⁶ Sudan portfolio was categorized as "high impact" until June 2018 when the Secretariat decided to change the categorization to "core"

Principal Recipient	Grant Number	Component	Grant Period	Grant Signed Amount US\$	Grants Disbursed to date
United Nations Development Programme	SDN-H-UNDP	HIV/AIDS	Jan 2018- Dec 2020	16,578,954	2,711,759
Total				129,624,764	35,778,733

The Health System Strengthening grant transitioned from UNDP to the Federal Ministry of Health (the FMOH) in 2015. In January 2018, the current Malaria/RSSH grant (SDN-M-MOH) transitioned to the FMOH, although US\$55 million relating to health procurements continue to be managed by international partners, including UNDP and UNICEF. A plan to transition the remaining grants has been agreed: the TB grant will transition as of 1 January 2020, and HIV from 2021. UNDP and the FMOH have developed a transition and systems development plan to ensure the smooth transition of UNDP grants to the FMOH.

2.4. The Three Diseases



Malaria: The country is considered a high burden and high risk country for malaria, representing 70% of the total cases in WHO's Eastern Mediterranean regional office. The country is among the top 25 worldwide in terms of estimated malaria cases.

5,740,000 Insecticide-treated nets distributed in 2017⁸

1,775,306 confirmed cases reported in 2016⁹

Malaria accounts for 8.7% of all outpatient consultations and 11% of all inpatient admissions⁷, and remains one of the biggest causes of illness and death in children under five.



HIV/AIDS: HIV prevalence in the general population is relatively low at less than 1%, but is slightly higher among key populations, who remain stigmatized and in some cases criminalized. Prevalence among Female Sex Workers and Men who have Sex With Men is 1.2% and 1.1% respectively.¹⁰

51,000 people living with HIV in 2017¹¹

4,700 new HIV infections and **2,600** AIDS-related deaths in 2017¹²

The country adopted UNAIDS' ambitious treatment target to help end the epidemic (90-90-90) and WHO's test and treat policy in 2016. The number of people receiving antiretroviral treatment has doubled in the last two years.

7,630 people on antiretroviral therapy in 2017¹⁰



Tuberculosis: TB has remained a major problem in Sudan during the last decade, with the number of new and relapsed cases ranging from 19,817 – 22,097 per annum.¹³

TB incidence of **77** per 100,000 population, representing **31,750** people in 2017¹³. **21,054** people with TB treated in 2017.

In 2017, 104 patients were diagnosed with MDR-TB and 102 enrolled in treatment.

In 2017, TB/HIV co-infection mortality was low: 0.56 per 100,000, with 1.8 TB-HIV incidents per 100,000.

Treatment success rate in 2016 of **78%**

⁷ Analysis of Tropical Medicine and Public Health- African research organization

⁸ The Federal Ministry of Health of Sudan, distributed LLINs through mass campaigns and routine distribution.

⁹ ibid

¹⁰ Integrated Bio-Behavioral HIV Surveillance Survey (IBBS)2015, Sudanese National AIDS Program (SNAP)

¹¹ UNAIDS Sudan Country factsheet 2017, <http://www.unaids.org/en/regionscountries/countries/sudan>

¹² The Federal Ministry of Health of Sudan, routine reports from the health facilities

¹³ UNAIDS Sudan Country factsheet 2017, <http://www.unaids.org/en/regionscountries/countries/sudan>

¹³ World Health Organization, Sudan TB fact sheet

3. The Audit at a Glance

3.1. Objectives

The audit aimed to provide assurance on:

- the implementation, financial and assurance arrangements for achieving grant objectives;
- the systems, processes and controls in place to ensure access to quality services to beneficiaries, including the data to aid decision-making;
- the efficiency and effectiveness of procurement and supply chain processes and systems to ensure the timely availability of quality medicines, health and non-health products.

3.2. Scope

The audit was performed in accordance with the methodology described in Annex B and covered the period from June 2016 to June 2018. The audit covered the grants implemented by the two Principal Recipients – the Federal Ministry of Health (the FMoH) and United Nations Development Programme (UNDP), and their sub-recipients. OIG auditors visited 21 localities, health facilities, hospitals and three state warehouses in Khartoum, Gezira and White Nile states.

Exclusion from scope

The United Nations General Assembly has adopted a framework known as the “single audit principle”, whereby the UN and its subsidiaries cannot consent to third parties accessing their books and records. All audits and investigations are conducted by the UN’s own oversight bodies. Accordingly, the OIG cannot provide assurance on activities or procurements directly implemented by UN agencies. However, all other activities (including management of assets procured and transferred to FMoH) and sub-recipient activities were part of the scope.

3.3. Progress on Previously Identified Issues

A 2015 OIG audit of Global Fund grants to Sudan highlighted the following issues:

1. The lack of a formal, time-bound plan to build capacity at the Federal Ministry of Health and other national stakeholders. Since the audit, a transition plan has been established which includes actions to build the grant management capacity of relevant national institutions. However, key activities in the plan have not been implemented, including key staff recruitment, finalizing a project operational manual, state-level capacity assessments and capacity development activities, hands-on quantification and forecasting training, and leadership development. Thus, the underlying issues remain mostly unaddressed.

Previous relevant OIG audit work

[Audit of Global Fund grants to the republic of Sudan](#)

2. Programmatic and procurement risks leading to compromised efficiency and effectiveness of grants. The Sudan Country Team subsequently updated its risk mitigation and assurance measures through a grant-specific Qualitative Risk Assessment, Action Planning and Tracking Tool in 2015.

3. Lack of a timely and quality capacity assessment to ensure proper transition of grant implementation from UNDP to the Federal Ministry of Health. The Global Fund Secretariat has since enhanced its Capacity Assessment Tool (CAT) guidance to ensure that major risks are tackled in grant making. In particular, the assessment of new PRs is to be prioritized and completed as early as possible in grant making.

4. Findings

4.1. Weak asset management and poor procurement controls are failing to safeguard Global Fund investments

In response to the 2016 capacity building plan, a number of identified weaknesses in financial controls were addressed, including the automation of the financial accounting system and the reorganization of the Communicable and Non-Communicable Disease Department (CNCD/CD), a key grant sub-recipient responsible for implementation. After the Global Fund malaria grant transitioned to the FMOH in 2018, capacity building measures were adopted, including seconding UN staff to transfer their knowledge and experience, and to build staff capacity. The Fiscal Agent's services were expanded to include a capacity assessment of FMOH staff and further capacity building activities.

Despite the above, significant weaknesses remain in asset management and procurement processes and controls:

Unrecorded and missing assets: The OIG reviewed the registered assets procured by UNDP and the FMOH, physically inspecting a sample of recorded assets. For UNDP, the OIG found:

- US\$1.3 million of assets recorded as located at a warehouse could not be physically verified. Warehouse staff reported that the assets had been distributed to requisitioning teams some years previously, but could not provide evidence of this or their current location. UNDP's own annual asset verification exercise, most recently conducted in early 2018 and updated by UNDP in September 2018, did not identify or report these missing assets.
- US\$800k of assets such as vehicles, motorcycles and IT equipment were categorized as damaged or lost by the UNDP physical inspection team and written off the fixed asset register, without sufficient supporting documents or any technical assessment available for audit review.
- Due to the single audit principle, the OIG team could not verify the completeness and accuracy of the list of assets procured by UNDP. However, multiple variances between the list of assets shared by UNDP and the fixed asset register were identified. For example, for 2016-17:
 - US\$73k of procurements were in the list of procured items shared by UNDP but were not in the fixed assets register;
 - US\$377k extra assets were in the register but not in the list of procured items;
 - US\$50k of assets had no information about their location in the fixed assets register.

Similar asset management weaknesses exist for assets procured by the FMOH, where:

- US\$233k of procured items were found to be missing from the fixed assets register;
- US\$294k of assets had no information on their location and could therefore not be traced;
- US\$35k of assets were recorded in the register but were not physically at the specified locations;
- A government number plate for a car worth US\$29k, procured to support the RSSH program, had been replaced with a private number, and the car was being used for non-program purposes.

These items have been referred to OIG's Investigations team for further review.

Unclear budget approval processes and contracting irregularities: The Health System Strengthening grant included a budget of US\$228k for the refurbishment of 12 Centers for Professional Development (CPDs) to provide training activities. However, after the grant signature, the FMOH amended the activity to construct three new CPDs instead, increasing the budget to US\$800k. An additional US\$1.2 million was committed to build two Academies for Health Sciences (AHS) in Gezira and River Nile states, despite health academies not being part of the approved budget. No approval from the Global Fund's Grants Approval Committee (GAC) was sought for these revisions, as the

Country Team did not consider them a material programmatic reprogramming to the original funding request/grant.

For the AHS in Gezira state, a contractor was selected and paid a mobilization advance of US\$165k, despite the allocated site being marshland and unfit for building. Subsequently, the FMOH instructed the contractor to move the construction to Sennar state; the Country Team, however, asked for the contract to be cancelled, as they were not satisfied with the process being followed. The contractor refused to refund the initial advance, having fulfilled his contractual obligations. The FMOH was not able to share the letters of guarantee required by the contract; thus, no guarantees can be invoked to recover the advance, resulting in a loss of grant funds.

Despite a non-escalation clause in the signed contracts, the LFA report on the civil works assessment did not highlight this restriction. Subsequently the FMOH increased the amounts of the CPD and AHS contracts (from US\$2 million to US\$2.8 million), and the increase was cleared by the fiscal agent, without Global Fund Secretariat approval. US\$530k of the increased amount has already been paid.

Value for money analysis: During their review of the request to transition the malaria/RSSH grant to the FMOH, GAC requested value-for-money analysis of the potential drug procurement agents: UNDP, UNICEF and PPM were considered, while National Medical Supply Fund (NMSF) was excluded due to international restrictions on Sudanese entities. A number of issues were identified:

- Entity A was selected to procure case management commodities and LLINs due to its extensive experience and competitive proposal. However, when the actual budget for Entity A was approved two months later, higher PSM and unit costs had been agreed compared to those used in the GAC value-for-money analysis, and the Secretariat did not revert to the GAC with the changes. The new costs materially changed the price comparisons, which could have affected GAC decisions. For example, the value-for-money analysis showed Entity A was cheaper by US\$500k for case management commodities, but with the revised costs, Entity B would have been cheaper.
- For Long Lasting Insecticide Treated Nets (LLINs), Entity A's mass distribution costs were omitted from the comparison: incorporating this cost would have made their bid US\$1.4 million more expensive than Entity B in the analysis presented to the GAC. The Secretariat explained that the selection of Entity A was based on multiple considerations besides costs, including the availability of a Long Term Agreement, and 10 years' experience of performing the activity.
- The Global Fund's Pooled Procurement Mechanism (PPM) had cheaper reference prices for case management commodities, but it was decided not to consider PPM due to supply and importation complexities. These could however have been managed by NMSF, who had already received significant technical assistance from the Global Fund throughout the previous 10 years and who currently manage the in-country supply chain component for all commodities except LLINs (excluding port clearance for Global Fund procurements). The partnership between the Global Fund and NMSF could have significantly lowered costs, while also contributing to building national capacity and sustainability.

Agreed Management Action 1:

The Secretariat will support the Federal Ministry of Health in improving asset management and procurement controls to safeguard Global Fund investments, consistent with the terms and conditions of the existing Grant Agreement. Specifically, the Secretariat will:

- revise the scope of the Fiscal Agent's work to strengthen the role and responsibility related to budget monitoring, procurement review, asset management and contracting;
- include assurance on effectiveness of the asset management function within the scope of LFA's work.

Owner: Head Grant Management Division

Due date: 31 December 2019

Agreed Management Action 2:

The Secretariat will update the analysis of the procurement implementation options for health products financed by the Global Fund for Sudan. The analysis will be presented at the Country Portfolio Review for information and to aid grant decision on the procurement arrangements in the next allocation cycle.

Owner: Head Grant Management Division

Due date: 31 December 2020

4.2. Low bed net usage and gaps in data quality are hampering programmatic success, particularly against malaria

Sudan has achieved notable successes in the fight against the three diseases. The Global Fund provides antimalarial drugs for 93% of public health facilities in Sudan. In 2017, 3.6 million malaria cases were treated with medicines from the Global Fund (more than 120% of target).¹⁴ For TB, there has been a significant reduction in tuberculosis-related mortality, and a decline in incidence and prevalence.¹⁵ Sudan is in the process of decentralizing MDR-TB diagnosis and treatment to seven states and initiated transition to the short treatment regimen¹⁶ in December 2017. For HIV/AIDS, 2011 and 2015 IBBS¹⁷ results show progress in condom use, comprehensive knowledge, and HIV testing among Female Sex Workers and Men who have Sex with Men.

However, the following challenges continue to affect prevention, data quality and the quality of services across the three diseases:

Weak progress on malaria prevention: malaria prevalence increased from 3.3% in 2012 to 5.9% in 2016.¹⁸ This increase is mainly attributable to low universal bed net coverage (only 41% of people have access to bed nets) and low utilization (only 37% of people who have access to a bed net actually use it) in the targeted areas.¹⁹

Following LLIN mass distribution, periodic assessment surveys are meant to be conducted. However, no reports are being produced to evidence the survey results, or to identify corrective actions. Knowledge and behavioral change is deemed key to improving bed net utilization, and the National Malaria Strategic Plan (2014 -2016) included a specific related objective. However, behavioral change results are not being monitored and reviewed against targets.

Approximately 3.3 million and 1.7 million (61% and 55% of the total quantity) LLINs distributed in 2017 and 2018 respectively, were distributed after the peak malaria transmission period, restricting their effectiveness in malaria prevention.

Gaps in the quality and availability of data affect decision-making: reported data on patients treated at health facilities, a routine data source, have inconsistencies and are unreliable. As a result, the Communicable and non-Communicable Diseases Control Department (CNCDCD) reported the number of malaria cases treated using the drugs consumption data reported by the National Medical Supply Fund.

The main causes of unreliable data include:

- Lack of human resources – all 19 facilities visited had only one staff member managing both treatment and programmatic reporting;
- Poor implementation of training and supervision - less than 50% of facility staff had ever received data reporting training or supervision from localities or states;
- Regular stock-outs of HMIS Tools (Registers and Forms) – observed in 75% of facilities visited.

Grant funds were invested in rolling out a Health Management Information System (DHIS2) in 2015-17 to improve programmatic reporting. For malaria, DHIS2 is currently used in almost all 18 states²⁰ but not in their health facilities. Program results from health facilities are manually consolidated and then entered in DHIS2; only 32% of health facilities were included by states in DHIS2, generally due to

¹⁵ WHO Sudan Health Profile 2015 report, page 8

¹⁶ The standardized short MDR-TB regimen is less onerous with seven drugs and a treatment duration of 9-12 months, compared to the standard total treatment duration of at least 20 months.

¹⁷ Integrated Biological and Behavioral Surveillance (IBBS) is a nationwide community based bio-behavioral surveillance.

¹⁸ As per Malaria Indicator Surveys (MIS) for 2012 and 2016. Federal Ministry of Health

¹⁹ 2016 Malaria Indicator Survey, Federal Ministry of Health

²⁰ Excludes Khartoum, which has a more comprehensive system in place

delayed reporting by health facilities. DHIS2 is only used for malaria indicators and has not yet been extended to TB and HIV (roll out is planned for 2019 and 2020 respectively).

Due to the lack of complete and reliable data, the Country Team and the FMOH decided to temporarily use a Health Facility Survey (HFS) to report on key malaria indicators, with the first results due in Q1 2019. However, HFS is costly (the survey costs approximately US\$317k), time-consuming and not sustainable, and therefore routine programmatic reporting is needed in the long-term. Despite ongoing improvements, there is a risk that the FMOH/PR will not be able to transition to using HMIS/DHIS2 for malaria results by the agreed timeline of June 2019.

Quality of services challenges: a number of challenges exist with the quality of services provided at funded facilities:

Malaria: Of the facilities visited that provide malaria services, 53% did not have sufficient records to evidence how malaria was diagnosed (clinically or through tests). For the ones where records were available, 45% (8/17 facilities) diagnosed malaria through clinical diagnosis²¹, despite the availability of either rapid diagnostic tests (“mRDTs”) or microscopy. None of the 17 facilities had mRDT testing guidelines available. Cases were identified where patients were given 200% to 250% of the recommended adult dose of malaria medicines. Treatment without confirmed diagnosis, and overdosing, can lead to drug resistance.

HIV: WHO guidelines are not being complied with effectively in monitoring HIV patients’ viral load. For Khartoum, which has 50% of the national patient burden, GeneXpert machines were due to be rolled out for viral load testing, while continuing the use of PCR machines²² for testing during transition. However, CNCDCD later instructed ART centers to use PCR for Early Infant Diagnosis and quality assurance only, while GeneXpert machines remained undistributed in Khartoum state for over a year. The PCR machine in Khartoum is not functional, breaking down regularly. PCR machines and kits are not being used optimally due to coordination issues between CNCDCD, who collect the samples, and the National Public Health Laboratory (NPHL) who test and report results.

These gaps are contributing to high mortality and treatment disruption. 2015 cohort analysis reported that nearly one third of people living with HIV who started treatment in the previous 12 months either died or were lost to follow up. Retention rates drop further to 59% and 44% at 24 and 60 months after treatment initiation respectively. Late enrollment in care, and the lack of a documented system for patient tracking, are contributing to higher mortality among People Living with HIV.

Tuberculosis: Grant funds have been allocated to improve the quality of TB lab services, including for states to conduct External Quality Assurance (EQA) for TB detection. In the first half of 2018, only 46% (46 of 118) of target TB Monitoring Units could conduct EQA activities, mainly due to ineffective fund flow arrangements from CNCDCD causing funding shortages at state level.

For MDR-TB, GeneXpert Machines are not being optimally used, meaning bacteriologically confirmed MDR-TB cases go un-notified. In 2017, the program notified only 104 against a target of 350 cases (30%), a reduction from 143 cases notified in 2016. MDR-TB patients are thus not receiving treatment on a timely basis, risking unnecessary infections.

²¹ The estimated identification of the disease based merely on physical signs, symptoms and medical history of the patient rather than on laboratory examination or medical imaging.

²² Polymerase Chain Reaction (PCR) tests can detect very early HIV infections by detecting HIV’s genetic material called RNA. These tests can be used to detect very early infections before antibodies have been developed.

Agreed Management Action 3:

The Secretariat, in collaboration with the Federal Ministry of Health and partners, will support efforts to improve program and data quality across the three disease programs, by:

- Ensuring that the Federal Ministry of Health conducts surveillance system assessments for Malaria, TB and HIV data in addition to a general review of the HMIS.
- Ensuring that the Federal Ministry of Health develops a costed and time-bound quality of services improvement plan following the results and recommendations of the ongoing Health Facility Survey (“HFA”).
- Ensuring that the Federal Ministry of Health obtains technical assistance to conduct a technical evaluation to assess the quality of the current rolling mass campaigns, root causes of low bed net utilization, and other viable options to address the root causes identified for the malaria prevalence resurge. A costed time-bound action plan will be developed based on the technical evaluation findings.

Owner: Head Grant Management Division

Due date: 30 June 2020

4.3. Quantification and forecasting, and inventory management processes require improvement and optimization

The National Medical Supply Fund (NMSF), the lead agency providing procurement and supply chain services in Sudan's public health sector, has received technical assistance from the Global Fund for the last 10 years. The agency currently maintains high-quality warehouses, with robust processes and controls, at the central and sub-national levels. NMSF has expanded to retail pharmacy services, offering a range of medicines and health products at low cost to the general public. It has recently opened a state-of-the-art regional training center to build supply chain capacity for government staff. NMSF also manages all government-funded health and non-health procurements in Sudan; however, NMSF has not yet been utilized in other areas such as international procurements, due to the prevailing international restrictions on Sudanese entities.

Despite these improvements, the following supply chain challenges were noted:

Gaps in quantification and forecasting: Drugs quantification in Sudan is based on an epidemiological estimation, with minor adjustments for actual consumption. A committee comprising NMSF, CNCDCD and UNDP is required to meet quarterly to update quantification and forecasting data, but this is not routinely occurring. Consequently, treatment disruptions and expiries are commonplace: for example, the malaria committee only met for the first time after the nationwide stock-out of ACTs in September 2018, which caused treatment disruptions in all 19 facilities visited, with average stock-outs exceeding 30 days.

Inventory management deficiencies: NMSF uses an electronic commodity management information system at central and state levels, except in Khartoum and Gezira states, which are managed directly by the state Ministry of Health. This system enables weekly reporting of stock levels by all health facilities, and can support efficient and effective stock monitoring and replenishment. However, the following issues were noted during OIG field visits, establishing the need for stronger inventory management controls:

- **Poor inventory management:** While there was 17 months' stock of first line HIV drugs at central level, the drugs were stocked out in several state warehouses. In October 2018, even the central warehouse had several commodities at very low levels, including a key TB drug with only 1.8 months' stock. These issues exist because minimum stock levels have not been defined at state levels, and are defined but not rigorously enforced at central levels.
- **Stock variances between physical stocks and records:** More than 20% variances were identified between physical stock levels and inventory records for six of the 18 facilities visited, while the remaining facilities did not have any records on the physical stocks held.
- **Erroneous reporting:** Some stock reports from facilities to Gezira State warehouse were denominated in tablets while others used doses; however, the two different measures were consolidated without adjustment when reporting stock levels in the Enterprise Resource Planning system.
- **Significant variances between health facility and state/locality records:** in 5 out of 6 facilities with inventory records, variances of up to 40% were detected between the consumption/stock levels reported by health facilities and those reported by localities or states. For example, for March 2018, Madani Hospital reported the consumption of 11,940 TLE tablets (a first line HIV drug), but the State recorded 7,140 tablets consumed at the hospital for the same period.
- **Weak management of expired commodities:** 78% of the health facilities visited did not have any records of expiries. In Gezira State warehouse, 1,500 HIV test kits expired in March 2018 but were not removed from the system, overstating available stock balances and risking the use of expired test kits. Similarly, 340 expired HIV kits were not separated from usable kits at Bahari teaching hospital, 35 boxes of expired RHZ drugs²³ were found on a dispensing table at Al Omal health center, and 29 boxes of expired RH drugs²⁴ were found at Mahereeba health center.

²³ rifampicin + isoniazid + pyrazinamide (RHZ) is a fixed-dose combination from the WHO Model List of Essential Medicine for treatment of tuberculosis

²⁴ rifampicin + isoniazid (RH) is a medication used to treat tuberculosis

- Emergency orders: on average, more than one emergency order was placed every month, causing inefficiencies and higher delivery costs.
- Telephone reporting and ordering: Six facilities reported consumption and ordered drugs over the telephone, without any documented records. An anti-malaria drug was not included on the new printed tool and could not be recorded, so its consumption could not be tracked. The country is working to launch a mobile application (eVIN) enabling health facilities to capture LMIS data, to formalize ordering.
- Missing supporting documentation: Of the 18 facilities visited, 66% (12 facilities) were lacking waybills/delivery notes or updated stock records, making it impossible to reconcile drugs. Hasaheesa locality did not have any record of LMIS reports from facilities, or goods received notes for malaria commodities, for the entire year of 2018.
- Inaccurate performance reporting: The malaria program reported 100% on the indicator “percentage of localities which have reported no stock-outs of ACTs and RDTs for more than 1 week in the last 3 months”. However, all four localities visited reported stock-out periods for ACTs of more than one month during 2018.

The main contributing factor to these issues is weak supervision. No evidence of supervision visits on LMIS components was available from Locality/State level to Health Facility level, the only exception being a TB facility in White Nile. Further, for the three states visited, the staff managing inventories had not been trained.

Agreed Management Action 4

The Secretariat, in collaboration with the Federal Ministry of Health and partners, will support efforts to improve quantification, forecasting and supervision of health commodities funded by the Global Fund grants. Specifically, the Secretariat will ensure that the Federal Ministry of Health:

- strengthens the terms of reference of the multi-stakeholder forecasting and quantification committee, including that the committee holds regular meetings to carry out its function;
- updates the LMIS supervision checklists and TORs, including clearly defined roles and responsibilities.

Owner: Head Grant Management Division

Due date: 31 March 2020

4.4. Ministry of Health and partners need to collaborate effectively to tackle unaddressed capacity and implementation gaps

After the 2015 OIG audit, UNDP, with participation from other stakeholders including the FMOH, constructed a capacity development plan, followed by a transition plan, which was finalized in 2017. The main focus of these plans was to:

- conduct joint transition activities, including planning and review meetings, progress updates finalization, and joint assessment of transition and capacity development activities;
- strengthen FMOH systems to ensure they could absorb the increase in funding and other activities resulting from transition.

Delays in capacity building initiatives: Various key activities in the plan have not been implemented, including the recruitment of six key positions, finalization of a project operational manual, and planning state-level capacity assessments and capacity development activities. Joint quantification and forecasting activities planned with UNDP to provide hands-on training have not been implemented. Leadership development for senior level FMOH managers, finalization of the NMSF staff development strategy, and training at local and facility levels on key areas also remain outstanding.

These gaps are significantly affecting FMOH's implementation capacity. Four UNDP staff were on loan to the FMOH to build capacity of FMOH staff members; as their contracts ended in December 2018 and were not renewed, FMOH capacity gaps are likely to be more pronounced in 2019. For the planned transition of HIV and TB grants to the FMOH in 2019-2020, the increased workload will exacerbate FMOH capacity needs, impacting grant performance.

The transitioning of grants has continued despite poor progress on capacity building activities: the approved capacity building and transition plans required sufficient progress on capacity initiatives before grants transitioned to the FMOH. However, the transition dates remain fixed in the grant agreement for the three diseases, with certain provisions on progress related to implementation capacity. The malaria/RSSH grant (approximately US\$100 million, more than 75% of Sudan's allocation), has already transitioned to the FMOH despite the highlighted delays in capacity initiatives, health product procurements and LLIN distribution components being outsourced to UN agencies. This has contributed to a general expectation in-country that transition will continue as per the grant agreement dates, despite the lack of progress on capacity initiatives.

UNDP assumed a central role in developing the transition plan, with help from the main stakeholders including the FMOH. However, the plan was not endorsed and signed off by the FMOH to confirm agreement on the prioritized capacity-building activities. There is ambiguity regarding which activities are included within the plan, contributing to limited ownership and progress. This has been exacerbated by inadequate oversight from the CCM and the Country Team on progress towards the transition plan.

Agreed Management Action 5

The Secretariat will, in collaboration with the Federal Ministry of Health, UNDP and other country stakeholders, ensure that the existing Transition and Systems Development Plan 2018-2020 is reviewed and updated. The ownership of, and accountability for, the Revised Transition and Systems Development Plan, including its elaboration, endorsement and implementation, rests primarily with the Federal Ministry of Health. UNDP will provide the necessary technical assistance and capacity building support. The Secretariat will be responsible for monitoring the implementation of the plan to ensure it remains on track.

Owner: Head Grant Management Division

Due date: 31 December 2019

5. Table of Agreed Actions

Agreed Management Action	Target date	Owner
<p>1. The Secretariat will support the Federal Ministry of Health in improving asset management and procurement controls to safeguard Global Fund investments, consistent with the terms and conditions of the existing Grant Agreement. Specifically, the Secretariat will:</p> <ul style="list-style-type: none"> • revise the scope of the Fiscal Agent’s work to strengthen the role and responsibility related to budget monitoring, procurement review, asset management and contracting; • include assurance on effectiveness of the asset management function within the scope of LFA’s work. 	31 December 2019	Head Grant Management
<p>2. The Secretariat will update the analysis of the procurement implementation options for health products financed by the Global Fund for Sudan. The analysis will be presented at the Country Portfolio Review for information and to aid grant decision on the procurement arrangements in the next allocation cycle.</p>	31 December 2020	Head Grant Management
<p>3. The Secretariat, in collaboration with the Federal Ministry of Health and partners, will support efforts to improve program and data quality across the three disease programs, by:</p> <ul style="list-style-type: none"> • Ensuring that the Federal Ministry of Health conducts surveillance system assessments for Malaria, TB and HIV data in addition to a general review of the HMIS. • Ensuring that the Federal Ministry of Health develops a costed and time-bound quality of services improvement plan following the results and recommendations of the ongoing Health Facility Survey (“HFA”). • Ensuring that the Federal Ministry of Health obtains technical assistance to conduct a technical evaluation to assess the quality of the current rolling mass campaigns, root causes of low bed net utilization, and other viable options to address the root causes identified for the malaria prevalence resurge. A costed time-bound action plan will be developed based on the technical evaluation findings. 	30 June 2020	Head Grant Management
<p>4. The Secretariat, in collaboration with the Federal Ministry of Health and partners, will support efforts to improve quantification, forecasting and supervision of health commodities funded by the Global Fund grants. Specifically, the Secretariat will ensure that the Federal Ministry of Health:</p> <ul style="list-style-type: none"> • strengthens the terms of reference of the multi-stakeholder forecasting and quantification committee, including that the committee holds regular meetings to carry out its function; • updates the LMIS supervision checklists and TORs, including clearly defined roles and responsibilities. 	31 March 2020	Head Grant Management

<p>5. The Secretariat will, in collaboration with the Federal Ministry of Health, UNDP and other country stakeholders, ensure that the existing Transition and Systems Development Plan 2018-2020 is reviewed and updated. The ownership of and accountability for the Revised Transition and Systems Development Plan, including its elaboration, endorsement and implementation, rests primarily with the Federal Ministry of Health. UNDP will provide the necessary technical assistance and capacity building support. The Secretariat will be responsible for monitoring the implementation of the plan to ensure it remains on track.</p>	<p>31 December 2019</p>	<p>Head Grant Management</p>
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Annex A: General Audit Rating Classification

<p>Effective</p>	<p>No issues or few minor issues noted. Internal controls, governance and risk management processes are adequately designed, consistently well implemented, and effective to provide reasonable assurance that the objectives will be met.</p>
<p>Partially Effective</p>	<p>Moderate issues noted. Internal controls, governance and risk management practices are adequately designed, generally well implemented, but one or a limited number of issues were identified that may present a moderate risk to the achievement of the objectives.</p>
<p>Needs significant improvement</p>	<p>One or few significant issues noted. Internal controls, governance and risk management practices have some weaknesses in design or operating effectiveness such that, until they are addressed, there is not yet reasonable assurance that the objectives are likely to be met.</p>
<p>Ineffective</p>	<p>Multiple significant and/or (a) material issue(s) noted. Internal controls, governance and risk management processes are not adequately designed and/or are not generally effective. The nature of these issues is such that the achievement of objectives is seriously compromised.</p>

Annex B: Methodology

The OIG audits in accordance with the global Institute of Internal Auditors' (IIA) definition of internal auditing, international standards for the professional practice of internal auditing (Standards) and code of ethics. These standards help ensure the quality and professionalism of the OIG's work.

The principles and details of the OIG's audit approach are described in its Charter, Audit Manual, Code of Conduct and specific terms of reference for each engagement. These documents help our auditors to provide high quality professional work, and to operate efficiently and effectively. They also help safeguard the independence of the OIG's auditors and the integrity of their work. The OIG's Audit Manual contains detailed instructions for carrying out its audits, in line with the appropriate standards and expected quality.

The scope of OIG audits may be specific or broad, depending on the context, and covers risk management, governance and internal controls. Audits test and evaluate supervisory and control systems to determine whether risk is managed appropriately. Detailed testing takes place at the Global Fund as well as in country, and is used to provide specific assessments of the different areas of the organization's activities. Other sources of evidence, such as the work of other auditors/assurance providers, are also used to support the conclusions.

OIG audits typically involve an examination of programs, operations, management systems and procedures of bodies and institutions that manage Global Fund funds, to assess whether they are achieving economy, efficiency and effectiveness in the use of those resources. They may include a review of inputs (financial, human, material, organizational or regulatory means needed for the implementation of the program), outputs (deliverables of the program), results (immediate effects of the program on beneficiaries) and impacts (long-term changes in society that are attributable to Global Fund support).

Audits cover a wide range of topics with a particular focus on issues related to the impact of Global Fund investments, procurement and supply chain management, change management, and key financial and fiduciary controls.